

University of Maryland, College Park  
National Pollutant Discharge Elimination  
System MS4 Phase II  
FY2024 Annual Report  
General Discharge Permit #13-SF-5501

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## List of Acronyms

AWRP	Anacostia Watershed Restoration Partnership
AWS	Anacostia Watershed Society
BLM	Facilities Management—Department of Building & Landscape Maintenance
BMP	Best Management Practice
BWPFS	Baltimore-Washington Partners for Forest Stewardship
CAD	Computer-Aided Design
CBLP	Chesapeake Bay Landscape Professionals
CBT	Chesapeake Bay Trust
COG	Metropolitan Washington Council of Governments
P&C	Facilities Management—Department of Planning & Construction
DESSR	Department of Environmental Safety, Sustainability & Risk
E&E	Facility Management—Department of Engineering & Energy
E&SC	Erosion & Sediment Control
ESD	Environmental Site Design
FM	Facilities Management
FP	Facilities Management—Department of Facilities Planning
GIS	Geographic Information Systems software
IBBR	Institute for Bioscience and Biotechnology Research
HVAC	Heating, Ventilation, and Air Conditioning
IDDE	Illicit Discharge Detection and Elimination
IPM	Integrated Pest Management
MCM	Minimum Control Measure
MDE	Maryland Department of the Environment
MEP	Maximum Extent Practicable
MES	Maryland Environmental Services
MS4	Municipal Separate Storm Sewer System
NNI	Non-Native Invasive
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
OM&U	Facility Management – Operations, Maintenance and Utilities
OS	Office of Sustainability
SOP	Standard Operating Procedure
SPCC Plan	Spill Prevention Control and Countermeasure Plan
SWPPP	Stormwater Pollution Prevention Plan
UMD	University of Maryland, College Park
USG	Universities at Shady Grove

## **I. NPDES MS4 PERMIT UMD AUTHORIZATION**

The University of Maryland-College Park (UMD) owns and operates a municipal separate storm sewer system (MS4) and, therefore, must comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from State and Federal Small Municipal Separate Storm Sewer Systems. Maryland Department of the Environment (MDE) has regulatory authority to implement this program under their General Discharge Permit No. 13-SF-5501, which took effect on October 31, 2018 and expired on October 30, 2023. The permit is administratively extended, and all permit conditions remain in effect until a new permit is issued.

The NPDES MS4 permit requires that permit holders implement Best Management Practices (BMPs) for the following Minimum Control Measures (MCMs):

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

In addition, the permit requires restoration efforts for twenty percent of existing developed lands that have little or no stormwater management by 2025. These efforts may include:

- Developing planning strategies
- Identifying water quality improvement opportunities
- Securing appropriate funding
- Development of an implementation schedule for achieving the 20% restoration requirement
- Implementing water quality improvement projects

This annual report presents progress made on each of these MCMs and the restoration requirement, as well as challenges faced and steps taken to improve future performance.

## **II. NOTICE OF INTENT**

UMD submitted a Notice of Intent (NOI) in October 2018, which identified all UMD properties in College Park that were eligible for MS4 coverage. An amendment was submitted in October 2019 to include the Institute for Bioscience and Biotechnology Research (IBBR) facility located on the campus of The Universities at Shady Grove, Maryland.

## **III. UMD MS4 PERMIT ADMINISTRATION**

### **A. Reporting Period**

This fifth annual report begins from the end of the previous period starting November 1, 2023 and reflects activities for the Impervious Restoration Program through June 30, 2024. However, since the previous report did not require progress on the six MCMs, this report includes the MCM activities from July 1, 2022 through June 30, 2024.

### **B. Contact Information**

Agency Name: University of Maryland, College Park

Contact Person and Title: Christopher Ho, Civil Engineer

Mailing Address: 7401 Baltimore Avenue, 4<sup>th</sup> Floor, College Park, MD 20740

Phone Number: (301) 405-9969

Email: [hocyho@umd.edu](mailto:hocyho@umd.edu)

### **C. UMD NPDES MS4 Organizational Structure**

UMD Facilities Management-Facilities Planning (FM-FP) managed and administered the NPDES MS4 permit during the reporting period. Several units/departments helped implement MS4 permit requirements; however, the following units/departments are instrumental in implementing the BMPs within the six MCMs:

- Department of Environmental Safety, Sustainability & Risk (DESSR) – Environmental Affairs
- Facilities Management – Department of Building & Landscape Management (FM-BLM)
- Facilities Management – Department of Planning & Construction (FM-P&C)
- Facilities Management – Department of Engineering & Energy (FM-E&E)
- DESSR – Office of Sustainability (OS)

## **D. Staffing Resources**

Compliance with the NPDES MS4 program requires significant funding, which is provided through both operational and capital budgets. The MS4 requirements are largely implemented by UMD staff that are either fully or partially dedicated to this effort. The following departments dedicate staff to this program as follows:

- DESSR: Four employees share MS4/stormwater responsibilities and spend the amount of time equivalent to 2.5 full-time staff members.
- FM-BLM: One full-time staff inspects and maintains stormwater facilities, and several other staff dedicate time to public outreach and volunteer events, forest/tree management, and landscape maintenance.
- FM-FP: One full-time staff dedicates at least 50 percent of the time to MS4 permit and stormwater regulations. In addition, several other staff members are partially dedicated to supporting stormwater inventory and geographic information system (GIS) efforts.
- FM-E&E: Two full-time staff members dedicate at least 20 percent of the time to engineering and water-related issues

## **IV. IMPLEMENTATION OF THE SIX MINIMUM CONTROL MEASURES**

This section presents progress made on each of the six MCMs during the reporting period (July 1, 2022 thru June 30, 2024). Measurable progress towards implementing each MCM is documented and future steps to better implement each MCM are discussed.

### **A. Personnel Education and Outreach**

UMD is first and foremost an academic and research institution. As such, the over 50,000 students, faculty, and staff that come to campus every day have the opportunity to get involved in dozens of departments, classes, groups, and activities related to water resources. It would be impossible to accurately track all these activities and, therefore, progress for this MCM is likely to be significantly underreported. The general discussion provided below summarizes how UMD is implementing this BMP. Refer to Table 1 for specific BMPs and measurable progress.

The overarching goal for this MCM is to educate as many students, faculty, and staff as possible about the impacts of stormwater. In addition, it is important for everyone to know what they can do to reduce the impacts of stormwater as well as what UMD is doing to address these concerns.



UMD Staff Giving a Tour of a Constructed Rain Gardens

UMD students can select from over 30 major, minor, and graduate degree programs that focus on environmental issues, including water resources. In addition, there are approximately 50 courses that over three thousand students take every year that introduce these topics to the student population. FM personnel regularly work with several professors to provide materials and even in-classroom presentations. In fact, FM and DESSR staff have personally reached well over 2,000 students. Faculty and staff also collaborate on student research projects to promote stormwater awareness. For example, staff is currently working with a group of engineering students to design and

construct a microbioretention facility on campus that will be added to the MS4 stormwater inventory when completed.

In 2014, UMD created the Sustainable Water Use and Watershed Workgroup to address water-related issues, including stormwater runoff and the MS4 permit. The workgroup consists of technical staff and senior managers, and meetings were held throughout the reporting period to address important issues related to water resources and how each unit can make improvements. These recommendations have been summarized in annual reports, presented to UMD administration, and the reports are made available to the public via the Office of Sustainability website.

DESSR-Environmental Affairs works with the campus community on proper material handling and disposal. In addition, they are responsible for emergency spill response and provide information on helping campus departments order and maintain spill kits. They have developed an “Emergency Response Guide” that is available on their website (<https://essr.umd.edu/emergency-response-guide>) and provide training to UMD staff in classroom settings, as well as online.

Table 1 below provides information on specific Education and Outreach training performed, as well as progress made during the reporting period.

**Table 1: MCM #1 - Personnel Education and Outreach**

1. Does the permittee maintain a process and phone number for the public and/or staff to report water quality complaints?

Yes  No

Number of complaints received:

Describe the actions taken to address the complaints:

*Department of Environmental Affairs investigated all complaints, coordinated with P&C or any other responsible parties to have the complaints addressed, and filled out an IDDE investigation report.*

2. Describe training to employees to reduce pollutants to the MS4:

***DESSR Training programs included PowerPoint presentations and online training on the following subjects:***

- ***Annual Stormwater Pollution Prevention Training***
- ***Annual Illicit Discharge Detection and Elimination Training***
- ***Annual Spill Prevention Control and Countermeasure Training***
- ***Annual Regulated Waste Training (Biological, Radioactive, General, and Hazardous Waste)***

***In addition, BLM have 22 additional employees that have completed the Chesapeake Bay Landscape Professionals (CBLP) Tier 1 training. All landscape crews have also received education on the importance of keeping storm drains clear, and the difference between storm drain inlets and BMP inlets.***

3. Describe the target audience(s):

***Different training programs are customized for the target audience which includes the campus community including students, staff, faculty, visitors, and administrators. Programs and presentations were tailored for the intended audience. The training materials discuss how to reduce the amount and number of spills as well as preventative maintenance, which reduce pollutants reaching the waterways.***

**Table 1: MCM #1 - Personnel Education and Outreach**

4. Are examples of educational/training materials attached with this report?

Yes  No

Provide the number and type of educational materials distributed:

*The University of Maryland uses the BioRAFT/SciShield platform to centrally manage safety inspections, training and Institutional Biosafety Committee protocol submissions. This platform streamlines compliance by allowing both ESSR and our customers to manage safety through a single portal.*

*Between July 1, 2022 and June 30, 2024, the record of trainings completed through BioRAFT/SciShield is as follows:*

- *MS4 Illicit Discharge Detection and Elimination (IDDE)- 71 records*
- *Stormwater Pollution and Prevention Plan- 100 records*
- *Spill Prevention Control & Countermeasures (Initial and Annual Refresher)- 290 records*
- *Annual Hazardous Waste Training*
  - *Hazardous Waste Generator – 6,480 records*
  - *Biohazard Waste Disposal Training - 959 records*
  - *Radioactive Waste Generator Training - 298 records*
  - *General (Universal Waste Training Program) -154 records*

Describe how the personnel education program is appropriate for the target audience(s):

*Different training programs are customized for the target audience which includes the campus community including students, staff, faculty, visitors, and administrators. Programs and presentations were tailored for the intended audience. The training materials discuss how to reduce the amount and number of spills as well as preventative maintenance, which reduce pollutants reaching the waterways.*

*CBLP training is designed to educate landscape professionals in BMP identification and maintenance. In-house training is meant to make landscape crews and their supervisors aware of stormwater management facilities and their unique maintenance requirements.*

**Table 1: MCM #1 - Personnel Education and Outreach**

5. Describe how stormwater education materials were distributed to the public and/or staff (e.g., newsletters, website):

***UMD has several websites with information on stormwater and the MS4 permit. The permit and past annual reports are available on the Department of Environmental Safety, Sustainability & Risk's website (<https://essr.umd.edu/environmental-affairs/stormwater-management>) while information on stormwater can be found on the Office of Sustainability's website (<https://sustainability.umd.edu/campus/water>).***

***Annual Training to individual groups is provided by ESSR on Spill Prevention, Control, and Countermeasures (SPCC); the MS4 program, and Stormwater Pollution Prevention per the 20-SW permit. These trainings are facilitated through the University's training platform, BioRaft/SciShield ([umd.bioraft.com](http://umd.bioraft.com) and [umd.scishield.com](http://umd.scishield.com))***

6. Describe how educational programs facilitated efforts to reduce pollutants in stormwater runoff:

***UMD continues to implement practices that reduce pollutants in stormwater runoff. Efforts include maintaining stormwater management facilities, building new stormwater management facilities, using integrated pest management plans to reduce pesticide applications, and conducting outreach and education to the campus community. The training materials provided establishes awareness of the harm from pollutants in stormwater runoff and has led to a proactive community awareness that leads to support for projects that provide reduction in pollutant runoff.***

***Landscape crews are made aware of the importance of removing trash and debris, especially around inlets and BMP structures.***

**Table 1: MCM #1 - Personnel Education and Outreach**

7. Provide a summary of activities planned for the next reporting cycle:

***UMD plans to continue our educational and outreach efforts, including making improvements on information available on the web.***

***Continue training efforts, with more participants attending CBLP training.  
Continued in-house training of landscape maintenance professionals.***

8. List the total cost of implementing this MCM over the permit term:

***Estimated \$20,000***

**B. Public Involvement and Participation**

UMD offers many opportunities for public involvement and participation related to stormwater activities. While public involvement is often in the form of UMD student and faculty volunteerism, staff also work with our local and regional neighbors on a variety of environmental and stormwater issues. Due to the number of student groups and public events held on campus it is likely that progress for this MCM is significantly underreported. Table 2 presents specific actions and progress made during the reporting period.

**Table 2: MCM #2 - Public or Personnel Involvement and Participation**

<p>1. Describe how the public or personnel involvement and participation program is appropriate for the target audience(s):</p> <p><b><i>The public or personnel involvement and participation program is tailored for the target audience of UMD students, faculty and staff. A variety of events throughout the year are intended to encourage participation and education. Events include Earth Day programs, stream cleanups, Pollution Prevention training, and Good Neighbor Day. These events allow participants to engage as little or as much as desired, while still achieving the desired outcome of participation.</i></b></p> <p><b><i>Numerous volunteer events include stormwater management facilities tours, stormwater talks, creek cleanups, and volunteer BMP maintenance events. Participants at these events help with campus stormwater management efforts and learn about the significance of their efforts, and the importance of good housekeeping for the health of our waterways and the Bay. A calendar of events can be found at: <a href="http://arboretum.umd.edu/get-involved/volunteer-events-programs">arboretum.umd.edu/get-involved/volunteer-events-programs</a>.</i></b></p>
<p>2. Quantify and report public and/or staff involvement and participation efforts as shown below where applicable.</p> <p>Number of participants at public and/or staff events: <input type="text" value="6.065"/></p> <p>Quantity of trash and debris removed at clean up events: <input type="text" value="482 bags"/></p> <p>Number of employee volunteers participating in sponsored events: <input type="text" value="0"/> (all staff were paid)</p>

**Table 2: MCM #2 - Public or Personnel Involvement and Participation**

Number of trees planted:	675
Length of stream cleaned (feet):	~40,000
Number of storm drains stenciled:	0
Number of public notices published to facilitate public and/or staff participation:	
<p><b><i>Public Notifications are posted at <a href="https://essr.umd.edu/environmental-affairs/public-notifications">essr.umd.edu/environmental-affairs/public-notifications</a>. A calendar of events can be found at: <a href="https://arboretum.umd.edu/get-involved/volunteer-events-programs">arboretum.umd.edu/get-involved/volunteer-events-programs</a>.</i></b></p>	
Number of public and/or staff meetings organized:	
	339
Total number of attendees at all public and/or staff meetings:	
	6,404+
Describe the agenda, items discussed, and collaboration efforts with interested parties for public and/or staff meetings:	
<p><b><i>Public and/or staff meetings include meetings and presentations with students, faculty, and staff. The agenda items discussed include: stormwater runoff and the background on why it impacts water quality; streams and watershed including the Chesapeake Bay; the MS4 permit including the 6 minimum control measures; and what UMD is doing to address the MS4 permit.</i></b></p> <p><b><i>Tours and speaking events covered topics from watershed boundaries, aquifers, effects of stormwater mitigation onsite to the Bay, and BMP types and functions.</i></b></p>	
Describe how public and/or staff comments have been incorporated into the permittee's MS4 program, including water quality improvement projects to address impervious area restoration requirements:	
<p><b><i>All previous MS4 annual reports are available to public and staff for review at <a href="https://essr.umd.edu/environmental-affairs/stormwater-management">https://essr.umd.edu/environmental-affairs/stormwater-management</a>.</i></b></p>	

**Table 2: MCM #2 - Public or Personnel Involvement and Participation**

***UMD staff meet work with students and faculty to evaluate potential stormwater management BMPs. This includes studying the watershed, evaluating locations for potential BMPs, and even constructing new BMPs.***

Describe any additional events and activities if applicable:

***Sustainable Ocean Alliance student group holds weekly stream clean ups of Paint Branch while the fall and spring semesters are in session***

***Arbor Day – 4/12/2023, 4/10/2024***

***World Migratory Bird Day – 10/14/2023, 5/11/2024***

***Maryland Day – 4/29/2023, 4/27/2023***

***Good Neighbor Day community volunteer outreach event – 11/12/2022, 10/21/2023***

3. Provide a summary of activities planned for the next reporting cycle:

***Continue holding events, planting trees, volunteer efforts and education efforts. For the next reporting cycle, we will offer Weed Warriors on Campus education and volunteer sessions, which aim to remove invasive species from a wetland area adjacent to LotRR2, part of the wetland and floodplain area surrounding Paint Branch.***

4. List the total cost of implementing this MCM for the permit term:

***~\$5,000***

**C. Illicit Discharge Detection and Elimination (IDDE)**

The goal of a comprehensive IDDE program is to identify unregulated discharges going through the storm drain system. The main components of an IDDE program are an accurate storm drain map/inventory and regular inspections, and procedures to eliminate illicit discharges. Proper disposal of hazardous waste and stringent spill cleanup procedures is also important parts of the IDDE program. Table 3 presents specific BMPs and measurable progress during the reporting period.

**Table 3: MCM #3 - Illicit Discharge Detection and Elimination (IDDE)**

<p>1. Does the permittee maintain a map of the MS4 owned or operated by the permittee, including stormwater conveyances, outfalls, stormwater best management practices (BMPs), and waters of the U.S. receiving stormwater discharges?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes, attach the map to this report and provide a progress update on any features that are still being mapped. (If submitting a map would compromise the operational security of an agency, indicate that the map is available for MDE review on site.) If No, detail the current status of map development and provide an estimated date of submission to MDE:</p> <p><b><i>The updated campus georeferenced storm drain map is included in Attachment A. A GIS database has also been developed for the program to identify all BMPs.</i></b></p>
<p>2. Does the permittee have a policy, or other agency directive, that prohibits illicit discharges?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If Yes, describe the policy utilized for enforcement by the permittee (alternatively, a link may be provided to the permittee’s webpage where this information is available). If No, describe the permittee’s plan, including approximate time frame, to establish a policy that prohibits illicit discharges into the storm sewer system:</p> <p><b><i>University of Maryland’s Policies and Procedures Section VI-21.00(A) states that all operations shall be conducted in “compliance with all applicable laws, regulations and appropriate recommendations.” Per this policy, UMD’s Department of Environmental Safety, Sustainability &amp; Risk (DESSR) is responsible for administration of this policy and is accountable for UMD’s compliance with all environmental regulations. DESSR’s website (<a href="http://essr.umd.edu/environmental-affairs/stormwater-management">essr.umd.edu/environmental-affairs/stormwater-management</a>) has information on environmental regulations, including UMD’s IDDE plan. It is noted that illicit discharges are also prohibited by other NPDES permits as well.</i></b></p>

**Table 3: MCM #3 - Illicit Discharge Detection and Elimination (IDDE)**

<p>3. Did the permittee submit to MDE standard operating procedures (SOPs) in accordance with Part IV.C of the permit?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If No, provide a proposed date that SOPs will be submitted to MDE. MDE may require more frequent reports for delays in program development:</p> <p>Did MDE approve the submitted SOPs?  <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If No, describe the status of requested SOP revisions and approximate date of resubmission for MDE approval:</p> <p><b><i>UMD submitted an SOP for our IDDE program as part of the 2018 and 2020 annual reports. The updated SOP is included in Attachment B.</i></b></p>
<p>4. Describe how the permittee prioritized screening locations in areas of high pollutant potential and identify the areas within which screenings were conducted during this reporting period:</p> <p><b><i>Any outfall within the drainage area that had construction were potential sources of illicit discharges. 13 outfalls are routinely inspected each month, and additionally SWPPP quarterly inspections are conducted in 6 industrial activity areas. The remaining outfalls are randomly screened on an annual basis to fulfil the requirement that 50% of the outfalls be monitored.</i></b></p>
<p>5. Answers to the following questions must reflect this two-year reporting period.</p> <p>How many outfalls were identified on the map? <input type="text" value="98"/></p> <p>How many outfalls were required to be screened for dry weather flows to meet the minimum numeric requirement based on property size? <input type="text" value="49"/></p> <p>How many outfalls were screened for dry weather flows? <input type="text" value="50/52"/> (2022/2023)</p> <p>Per the permittee's SOP, how frequently were outfalls required to be screened?</p> <p><b><i>Annually</i></b></p>

**Table 3: MCM #3 - Illicit Discharge Detection and Elimination (IDDE)**

<p>At what frequency were outfalls screened during the reporting period?</p> <p style="text-align: center;"><b>Annually</b></p> <p>How many dry weather flows were observed? <input type="text" value="9/14"/> (2022/2023)</p> <p>If dry weather flows were observed, how many were determined to be illicit discharges? <input type="text" value="0"/></p> <p>Describe the investigation process to track and eliminate each suspected illicit discharge and report the status of resolution:</p> <p><b><i>Receive the call/email, go to site, and take photos/video of the illicit discharge. Identify where the illicit discharge is coming from and, if necessary, use dye testing to back track the source. Once the source is identified, contact the appropriate department (FM, P&amp;C, etc.) on what the illicit discharge is, why it is wrong, and that it needs to cease. Provide them with ways to prevent this from happening again. Complete an illicit discharge tracking form and email a copy to all parties involved.</i></b></p>
<p>6. Describe maintenance or corrective actions undertaken during this reporting period to address erosion, debris buildup, sediment accumulation, or blockage problems:</p> <p><b><i>When erosion, sediment or debris is found during routine inspection, the appropriate corrective action is scheduled. Erosion is addressed by replacing soil as needed and then planting to stabilize the site. Trash is collected and disposed of. Fallen logs, leaves and other debris are removed to free water flow, unclog inlets/outfalls, or to otherwise free the facility from obstruction. Sediment is either removed by hand with shovels and wheelbarrows, or for larger jobs that require heavy equipment, the contractor is scheduled to properly remove the buildup. Spoils are generally moved to an appropriate off-campus disposal site.</i></b></p>
<p>7. Is the permittee maintaining all IDDE inspection records and are they available to MDE during site inspections?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>

**Table 3: MCM #3 - Illicit Discharge Detection and Elimination (IDDE)**

<p>8. If spills, illicit discharges, and illegal dumping occurred during this reporting period, describe the corrective actions taken, including enforcement activities, and indicate the status of resolution:</p> <p><b><i>For those discharges that violated our individual NPDES permit, we contacted MDE and made them aware. For sewage illicit discharges, the line was jetted to be cleared, hay bales were placed around the inlets, and lime was applied to saturated soil.</i></b></p> <p><b><i>For construction related illicit discharges, FM and P&amp;C were made aware of the illicit discharge and we would provide them with suggestions on how to improve their BMPs. FM/PNC were then charged with the responsibility to enforce these changes on the BMPs to prevent future illicit discharges. All illicit discharges during this monitoring period have been resolved.</i></b></p>
<p>9. Attach to this report specific examples of educational materials distributed to the public and/or staff related to illicit discharge reporting, illegal dumping, and spill prevention. If these are not available, describe plans to develop public and/or staff education materials and submit examples with the next Progress Report:</p> <p><b><i>See Attachment C for Example Education Materials.</i></b></p>
<p>10. Specify the number of employees trained in illicit discharge detection and spill prevention: <input type="text" value="461"/></p>
<p>11. Provide examples of training materials. If not available, describe plans to develop employee training and submit examples with the next Progress Report:</p> <p><b><i>All training material examples are included as Attachment C. UMD also developed audience-specific training materials for several target groups including dining services, students, farms, and facilities management.</i></b></p>
<p>12. List the cost of implementing this MCM during this permit term:</p> <p><b><i>Estimated \$300,000 over 2 years for monitoring, inspections, training</i></b></p>

Future Progress: UMD will continue to implement the IDDE Plan, focusing efforts on potential hotspots including dining halls, fueling areas, maintenance areas, and other industrial use sites.

**D. Construction Site Stormwater Runoff Control**

UMD complies with all applicable MDE construction site stormwater runoff requirements. This includes obtaining Erosion & Sediment Control (E&SC) permits for all projects with limits of disturbance greater than 5,000 square feet or 100 cubic yards and NPDES Permits for Construction Activities on projects greater than one acre. All E&SC devices are designed and installed in accordance with the latest MDE E&SC standards and specifications.

MDE inspects and enforces the E&SC plan throughout the construction process; however, UMD also has several construction inspectors that regularly visit construction sites. These inspectors have the authority to make the contractor implement corrective actions if any E&SC are deemed to be insufficient or failing. In addition, UMD implemented a more robust IDDE tracking system to better respond to any identified illicit discharges, especially associated with construction projects (see Section III(C) above).

Table 4 below shows specific projects that received required E&SC permits, projects that began or continued to be under construction for the reporting period, as well as the number of staff that received specialized E&SC training.

**Table 4: MCM #4 - Construction Site Stormwater Runoff Control**

<p>1. Does the permittee have a process for receiving, investigating, and resolving complaints from interested parties related to construction activities and erosion and sediment control?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Describe the process:</p> <p><b><i>UMD has developed a Stormwater Hotline (301-405-2222) for concerned individuals to call in complaints related to construction activities. This number is staffed 24 hours a day/7 days a week and provides service for the entire campus. Emails are also accepted at <a href="mailto:stormwater@umd.edu">stormwater@umd.edu</a>. Calls received are logged and then forwarded to the project manager in charge of the project and subsequently addressed with the contractor. The actions to remediate the problems are then relayed back to the concerned parties and the project manager follows through with the contractor to ensure the problems are addressed within seven days.</i></b></p> <p><b><i>In addition, UMD implemented a more robust IDDE tracking system to better respond to any identified illicit discharges, especially associated with construction projects (see Section III(C) above).</i></b></p>
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**Table 4: MCM #4 - Construction Site Stormwater Runoff Control**

Provide a list of all complaints and a summary of actions taken to resolve them:

**07/12/2022: DESSR notified P&C and FM of a TRC exceedance at Outfall #005. The elevated TRC was believed to be the result of dewatering activities from the Purple Line Utility Construction or the State Highway Administration's Baltimore Ave improvements, both located within the drainage area for Outfall 005. Project Managers were instructed to mitigate their stormwater runoff and implement proper BMPs.**

**10/19/2022: DESSR notified FM of a TRC exceedance at Outfall #005, as well as excess gravel within the outfall. The elevated TRC was believed to be the result of the Purple Line Utility Construction in UMD parking lot J2. During the investigation, University staff observed dewatering discharging into a nearby stormwater inlet and construction gravel surrounding the worksite. Project Managers were instructed to mitigate their stormwater runoff and implement proper BMPs.**

**03/06/2023: DESSR observed Purple Line construction performing work within the underground conveyance system associated with Outfall #005 resulting in a sediment discharge and an exceedance of the pH permit limit.**

**03/31/2023: DESSR notified FM of a contractor discharging steam condensate into the section of Campus Creek adjacent to the Biomolecular Sciences Building. The contractor was instructed to cease discharge.**

**05/11/2023: After a DESSR team conducted the monthly NPDES sampling on May 11, 2023, lab tests showed an exceedance in Oil & Grease. A visual inspection resulted in no information on the source. A follow up sample was taken on 05/22/2023 with results below the permit limit.**

**06/29/2023: DESSR observed a discharge of white sediment from an uncovered dumpster into the stormwater inlet associated with Outfall #019. This is believed to be associated with pool resurfacing projects. Construction managers were contacted for proper corrective actions.**

**10/23/2023: Water main break resulting in sediment discharge to Outfalls #012 and #014. Water main was repaired.**

**11/14/2023: During the November 14, 2023 monthly sampling for NPDES, the pH recorded at Outfall 005 was 10.22 standard units. DESSR observed concrete pouring**

**Table 4: MCM #4 - Construction Site Stormwater Runoff Control**

*activities associated with the Purple Line Construction located within the Outfall's drainage area.*

*12/07/2023: DESSR observed leachate discharging from roll-off dumpsters behind the Yahentamitsi Dining Hall. This occurred while the dumpsters were being swapped by University of Maryland roll-off trucks.*

*02/15/2024: During the monthly sampling for NPDES on February 15, 2024, the pH recorded at Outfall 005 was in exceedance of the permit limits. DESSR observed concrete demolition associated with the Purple Line Construction within the Outfall's drainage area.*

*05/21/2024: During our routine monthly NPDES sampling, the pH level at Outfall 004 was in exceedance of the permit limits. Subsequent investigation revealed a potential connection between the elevated pH levels and nearby construction activities associated with Zupnik Hall, as well as utility work performed near a stormwater inlet. Contractors were instructed to follow sediment and erosion control permits.*

*05/31/2024: Water main break on Preinkert Drive resulting in sediment discharge to Outfalls #012 and #014. Sediment bags were implemented and the main was repaired.*

*06/26/2024: Repeat water main break on Preinkert Drive resulting in sediment discharge to Outfalls #012 and #014. The main was repaired.*

1. Total number of active construction projects within the reporting period:

17

Provide a list of all construction projects and tabulate the total disturbed area:

1. **Chemistry Wing 1 Replacement (20-SF-0184) – 1.6 ac**
2. **Campus Drive Steam Line Replacement (22-SF-0164) – 0.6 ac**
3. **Campus Drive Storm Drain Upgrade (22-SF-0138) – 1.7 ac**
4. **Preinkert Drive Steam Upgrade (22-SF-0137) – 1.3 ac**
5. **Campus Drive Steam Line Replacement (22-SF-0164)**
6. **Interdisciplinary Engineering Building (23-SF-0001) – 3.1 ac**

**Table 4: MCM #4 - Construction Site Stormwater Runoff Control**

- 7. Throwing Fields (17-SF-0191) – 2.45 ac**
- 8. Lacrosse/Field Hockey Renovations (22-SF-0016) – 0.7 ac**
- 9. Basketball Performance Facility (21-SF-0165) – 3.0 ac**
- 10. Baseball Player Development Facility (24-SF-0054) – 0.4 ac**
- 11. Lot R3 Pedestrian Improvements (23-SF-0044) – 0.8 ac**
- 12. Purple Line (17-PL-0009) – 25 ac**
- 13. SCUB 3 (22-SF-0026) – 0.9 ac**
- 14. Graduate Student Housing (23-SF-0172) – 9.72 ac**
- 15. School of Public Policy (19-SF-0062) – 4.6 ac**
- 16. UMD Regional Sand Filter Renovation (21-SF-0112) – 1.0 ac**
- 17. MH403a Replacement (22-SF-0109) – 0.1 ac**

2. Total number of violation notices issued by MDE related to this MCM on the agency's property:

Describe the status of enforcement activities:

***Contractors are instructed to immediately address issues of non-compliance on construction sites. The MDE inspector continues to conduct periodic site compliance inspections.***

Describe how the permittee communicates and collaborates with MDE to maintain compliance with this MCM for all active construction projects on the agency's property:

***Every project begins with a preconstruction meeting with MDE to ensure lines of communications and expectations are clear. MDE periodically inspects the construction sites for compliance with the E&SC plan throughout the construction process; however, UMD also has several construction inspectors that regularly monitor construction sites. Our inspectors have MDE Responsible Personnel Certification training and have the authority to ensure the construction is in accordance with the approved plans. The MDE inspector is notified of any repeated any compliance issues or deviations from the approved plans.***

***Construction site runoff is ultimately the responsibility of the contractor who assumes control of the project site. For projects over 1 acre of disturbance, both UMD and the contractor holds a separate 20-CP NPDES permit and accepts liability and enforcement of the sediment control. UMD inspectors and project managers provide oversight to ensure all requirements are being met by the contractor. In***

**Table 4: MCM #4 - Construction Site Stormwater Runoff Control**

<p><b><i>case of emergency spills or violations, the university has staff and on-call contractors to provide abatement as necessary.</i></b></p> <p>Are erosion and sediment control inspection records retained and available to MDE during field review of the agency MS4 program?  <input checked="" type="checkbox"/> Yes   <input type="checkbox"/> No</p> <p>If No, explain:</p>	
3. Number of staff trained in MDE’s Responsible Personnel Certification:	11
<p><b><i>In addition to the IDDE training provided by DESSR, BLM and FM staff are vigilant to monitor construction activity across campus. Any potential violations are immediately reported so that the responsible project manager or contractor is notified and the proper actions can be taken to address. Responsible Personnel Certification training is required for all construction management staff.</i></b></p>	
4. Describe the coordination with other entities regarding implementation of this MCM:	<p><b><i>Coordinated with Department of Environmental Safety, Sustainability &amp; Risk to address compliance issues. Coordinated with all university campus projects, as well as Purple Line and MTA for compliance.</i></b></p>
5. List the total cost of implementing this MCM over the permit term:	<p><b><i>Costs exceeded \$200,000 to implement ESC on construction projects</i></b></p>

Future Progress: UMD will continue to coordinate and comply with all MDE erosion and sediment control requirements for all campus construction sites.

**E. Post Construction Stormwater Management**

Post construction stormwater management includes providing stormwater management for new construction projects as well as redevelopment projects, and ensuring that all stormwater BMPs are properly maintained in order to achieve maximum stormwater treatment. In addition, UMD personnel look for opportunities to retrofit existing impervious areas with stormwater management wherever possible. Table 5 presents specific BMPs and measurable progress.

During the design of new construction projects and redevelopment projects, UMD complies with all MDE stormwater management regulations. This includes providing Environmental Site Design (ESD) stormwater management facilities to the maximum extent practicable (MEP) for all projects, and incorporating other stormwater BMPs as needed. All projects incorporated required stormwater management facilities and the design plans were reviewed and approved by MDE.

A robust stormwater management maintenance program is necessary to ensure these facilities are operating at peak performance. UMD continued to make progress in this area during the reporting period. FM-BLM is responsible for inspection and maintenance of all stormwater BMPs. One full-time staff member is dedicated to managing this program; however, several staff members from other departments (e.g., DESSR, Facilities Planning) assist. Staff and student volunteers are able to perform a significant amount of maintenance; however, it is necessary to supplement this work with contractors. UMD has allocated funds to hire maintenance contractors to assist with needed repairs.

UMD follows the MDE procedural guidance for performing inspections, including inspection intervals and checklists. All BMPs were visually inspected per the inspection program, and many of them were maintained as part of routine UMD landscape management or were part of volunteer maintenance projects. UMD also has retained MES to provide supplemental inspection, as well as obtaining as-built certifications for legacy projects in accordance with MDE requirements. All inspections are now recorded real time and directly uploaded to the UMD Stormwater GIS database.

**Table 5: MCM #5 - Post Construction Stormwater Management**

1.	Has an Urban BMP database been submitted in accordance with the database structure in Appendix B, Tables B.1.a, b, and c as a Microsoft Excel file? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
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**Table 5: MCM #5 - Post Construction Stormwater Management**

Describe the status of the database, efforts to complete all data fields, and provide a date as to when the required information will be submitted to MDE:

***The updated database is included in Attachment G.***

Total number of plans submitted to MDE for review and approval:

15

- 1. Fuel Oil Line Replacement (24-SF-0017)**
- 2. Baseball Player Development (24-SF-0054)**
- 3. Graduate Student Housing (23-SF-0172)**
- 4. Basketball Performance Center (21-SF-0165)**
- 5. Softball Player Development Facility (24-SF-0047)**
- 6. Lot R3 Pedestrian Improvements (23-SF-0044)**
- 7. Valley Drive Improvements (23-SF-0119)**
- 8. Lacrosse/Field Hockey Renovations (22-SF-0016)**
- 9. Paint Branch Building Exterior Modifications (24-SF-0072)**
- 10. Interdisciplinary Engineering Building (23-SF-0001)**
- 11. Campus Drive Storm Drain Upgrade (22-SF-0138)**
- 12. Preinkert Drive Steam Upgrade (22-SF-0137)**
- 13. Animal Sciences Pond Renewal (22-SF-0063)**
- 14. Campus Creek Phase 2 Stream Restoration (23-SF-0010)**
- 15. Vehicle Wash Station (718) (24-SF-0009)**

Total number of as-built plans submitted to MDE:

4

- 1. New Residence Hall and Dining Facility (19-SF-0094)**
- 2. Throwing Event Relocation (17-SF-0191)**
- 3. School of Public Policy (19-SF-0062)**
- 4. Lacrosse/Field Hockey Renovations (22-SF-0016)**

Number of submitted as-built plans approved by MDE:

4

- 1. New Residence Hall and Dining Facility (19-SF-0094)**
- 2. Throwing Event Relocation (17-SF-0191)**
- 3. School of Public Policy (19-SF-0062)**
- 4. Lacrosse/Field Hockey Renovations (22-SF-0016)**

**Table 5: MCM #5 - Post Construction Stormwater Management**

2. Total number of BMPs located on each property covered under the general permit (list individual property, and total BMPs for that property – provide separate attachment if necessary):

**IBBR:6 BMPs**

**UMCP Main Campus: 199 BMPs**

Does the permittee perform inspections for all structural BMPs in accordance with the Dam Inspection Checklist in Maryland Pond Code 378 at least once every three years?

Yes  No

If No, describe efforts to train staff and develop a program to perform these required inspections on a triennial basis:

Are BMP inspection records retained and available to MDE during field review of local programs?

Yes  No

3. Provide a summary of routine maintenance activities for all BMPs:

***All maintenance activities are in compliance with, and closely follow MDE recommendations for each stormwater facility type. Activities include removal of dead and overgrown plant material, policing of trash and debris, removal of minor clogs and blockages, and inspection for proper function.***

Are BMP maintenance procedures consistent with maintenance requirements on MDE approved plans?

Yes  No

Are completed BMP maintenance checklists available to MDE during field review of local programs?

Yes  No

If either answer is No, describe planned actions to implement maintenance checklists and procedures and provide formal documentation of these activities:

**Table 5: MCM #5 - Post Construction Stormwater Management**

<p>Describe all problems discovered during routine maintenance operations and repair work performed to restore the function of the BMP(s) (attach photos and additional documentation as needed):</p> <p><b><i>Sediment buildup, invasive plant removal, and clogged inlets and outfalls are the primary routine maintenance tasks. See Attachment E for BMP inspection reports.</i></b></p>
<p>4. Number of staff trained in proper BMP design, performance, inspection, and routine maintenance: <input type="text" value="10"/></p> <p><b><i>Design of SWM BMPs associated with site development projects are performed by professional consultants retained by the university. In addition to the CBLP training as mentioned in Table 1 and IDDE training in Table 3, all staff responsible for inspection and maintenance are trained on importance of keeping storm drains clear and differences between storm drain conveyance structures and BMP inlets.</i></b></p>
<p>5. Provide a summary of activities planned for the next reporting cycle:</p> <p><b><i>Continue updating GIS database on inspection and maintenance of BMPs. Continue routine maintenance and prioritize repair items to accommodate budgetary constraints.</i></b></p>
<p>6. List the total cost of implementing this MCM over the permit term:</p> <p><b><i>\$277,000 combined, with \$81,000 on underground facilities, \$158,000 on above ground facilities and \$38,000 on green roofs</i></b></p>

Future Progress: UMD will continue to comply with all MDE stormwater management regulations for construction projects. New stormwater BMPs are incorporated into the inspection and maintenance program as it continues to expand and improve.

**F. Pollution Prevention and Good Housekeeping**

UMD is required to implement and maintain pollution prevention and good housekeeping practices to reduce pollution from all operations. During the reporting period, progress was made towards reducing pollution and ensuring UMD has appropriate coverage under various State and Federal water pollution control programs. Table 6 presents specific BMPs and measurable progress.

During the reporting period, several other measures were taken to reduce the potential for pollution from entering the storm drain system, including street sweeping, maintaining healthy tree canopies, and reducing pesticide applications.

**Table 6: MCM #6 - Pollution Prevention and Good Housekeeping**

1. Provide a list of topics covered during the last training session related to pollution prevention and good housekeeping, and attach to this report specific examples of training materials:

*Between July 1, 2022 and June 30, 2024, the record of trainings completed through BioRAFT/SciShield is as follows:*

- *MS4 Illicit Discharge Detection and Elimination (IDDE)-71 records*
- *Stormwater Pollution and Prevention Plan- 100 records*
- *Spill Prevention Control & Countermeasures (Initial and Annual Refresher)- 290 records*
- *Annual Hazardous Waste Training*
  - *Hazardous Waste Generator - 6,480 records*
  - *Biohazard Waste Disposal Training - 1,959 records*
  - *Radioactive Waste Generator Training - 298 records*
  - *General (Universal Waste Training Program) -154 records*

***SPCC and SWPPP training materials are included in Attachment C.***

List all training dates within this two-year reporting period:

***Since training is now administered completely on-line and on-demand, participants have the flexibility of taking the training as schedules allow. Therefore, attendance dates vary widely and can span multiple days for each participant and training session.***

Number of staff attended:

**Table 6: MCM #6 - Pollution Prevention and Good Housekeeping**

2. Are the good housekeeping plan and inspection records at each property retained and available to MDE during field review of the local program?  Yes  No

*All SWPPP quarterly and annual inspections along with the monthly SPCC inspections are housed within the Seneca Building and on the K: drive (network share drive).*

If No, explain:

Provide details of all discharges, releases, leaks, or spills that occurred in the past reporting period using the following format (attach additional sheets if necessary).

***07/12/2022: DESSR notified P&C and FM of a TRC exceedance at Outfall #005. The elevated TRC was believed to be the result of dewatering activities from the Purple Line Utility Construction or the State Highway Administration's Baltimore Ave improvements, both located within the drainage area for Outfall 005. Project Managers were instructed to mitigate their stormwater runoff and implement proper BMPs.***

***10/19/2022: DESSR notified FM of a TRC exceedance at Outfall #005, as well as excess gravel within the outfall. The elevated TRC was believed to be the result of the Purple Line Utility Construction in UMD parking lot J2. During the investigation, University staff observed dewatering discharging into a nearby stormwater inlet and construction gravel surrounding the worksite. Project Managers were instructed to mitigate their stormwater runoff and implement proper BMPs.***

***03/06/2023: DESSR observed Purple Line construction performing work within the underground conveyance system associated with Outfall #005 resulting in a sediment discharge and an exceedance of the pH permit limit.***

***03/31/2023: DESSR notified FM of a contractor discharging steam condensate into the section of Campus Creek adjacent to the Biomolecular Sciences Building. The contractor was instructed to cease discharge.***

***05/11/2023: After a DESSR team conducted the monthly NPDES sampling on May 11, 2023, lab tests showed an exceedance in Oil & Grease. A visual inspection resulted in no information on the source. A follow up sample was taken on 05/22/2023 with results below the permit limit.***

**Table 6: MCM #6 - Pollution Prevention and Good Housekeeping**

***06/29/2023: DESSR observed a discharge of white sediment from an uncovered dumpster into the stormwater inlet associated with Outfall #019. This is believed to be associated with pool resurfacing projects. Construction managers were contacted for proper corrective actions.***

***10/23/2023: Water main break resulting in sediment discharge to Outfalls #012 and #014. Water main was repaired.***

***11/14/2023: During the November 14, 2023 monthly sampling for NPDES, the pH recorded at Outfall 005 was 10.22 standard units. DESSR observed concrete pouring activities associated with the Purple Line Construction located within the Outfall's drainage area.***

***12/07/2023: DESSR observed leachate discharging from roll-off dumpsters behind the Yahentamitsi Dining Hall. This occurred while the dumpsters were being swapped by University of Maryland roll-off trucks.***

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***05/21/2024: During our routine monthly NPDES sampling, the pH level at Outfall 004 was in exceedance of the permit limits. Subsequent investigation revealed a potential connection between the elevated pH levels and nearby construction activities associated with Zupnik Hall, as well as utility work performed near a stormwater inlet. Contractors were instructed to follow sediment and erosion control permits.***

***05/31/2024: Water main break on Preinkert Drive resulting in sediment discharge to Outfalls #012 and #014. Sediment bags were implemented and the main was repaired.***

***06/26/2024: Repeat water main break on Preinkert Drive resulting in sediment discharge to Outfalls #012 and #014. The main was repaired.***

**Table 6: MCM #6 - Pollution Prevention and Good Housekeeping**

3. Quantify and report property management efforts as shown below, where applicable (attach additional sheets if necessary).

Number of miles swept:

Amount of debris collected from sweeping (indicate units):

If roads and streets are swept, describe the strategy the permittee has implemented to maximize efficiency and target high priority areas:

Number of inlets cleaned:

Amount of debris collected from inlet cleaning (indicate units):

Describe how trash and hazardous waste materials are disposed of at permittee owned and operated property(ies), including debris collected from street sweeping and inlet cleaning:

***Based on waste qualities-Subtitle C regulates all waste (chemical waste) and Subtitle D (solid waste) dictates how waste is picked up, transported, stored, and disposed of. Since UMD is a treatment, storage, and disposal facility (TSDF), we handle regulated waste regularly and accordingly.***

Does the permittee have a current State of Maryland public agency permit to apply pesticides?

Yes  No

If No, explain (e.g., contractor applies pesticides):

Does the permittee employ at least one individual certified in pesticide application?

Yes  No

If Yes, list name(s):

**Table 6: MCM #6 - Pollution Prevention and Good Housekeeping**

***Karen Petroff, Edward Williams, Luis Alfonzo, Bleriot Kuiken, Oscar Ferrer, Michael Ellis, Scott Rupert, Ray Hargadon, Carlos Ramos, Jean Nana, Darrick Davis, Thomas Adams, Michael Carmichael, Meg Smolinski, Sam Bahr, Richard Jones, Christopher Erb, Jairo Fuentes***

If the permittee applied pesticides during the reporting year, describe good housekeeping methods (e.g., integrated pest management, alternative materials/techniques):

***Integrated pest management is the standard operating procedure with organic land management where feasible. Mixing of chemicals occurs in a centralized location with spill prevention and control measures implemented.***

If the permittee applied fertilizer during the reporting year, describe good housekeeping methods (e.g., application methods, chemical storage, native or low maintenance species, training):

***Maryland Professional Fertilizer Applicators supervise all applications and follow the strict application regulations of the state of Maryland. Recent applications have employed EEF technology ensuring a release rate of no more than 0.7 lb N per month.***

***UMD currently has 18 Professional Fertilizer Applicators and 21 train applicators on staff. All state practices are followed.***

If the permittee applied materials for snow and ice control during the reporting year, describe good housekeeping methods (e.g., pre-treatment, truck calibration and storage, salt domes):

***Road salt is stored and dispatched from a salt dome and spreaders are calibrated as needed. Clearing occurs prior to material application to minimize amount of material required to maintain safe conditions. A detailed snow management plan is established to ensure policies and procedures are followed. UMD participated in the pilot MDE "Smart Salting" certification training program for 2023.***

Describe good housekeeping BMP alternatives not listed above:

**Table 6: MCM #6 - Pollution Prevention and Good Housekeeping**

<p>4. If applicable, provide a status update for permittee owned or operated properties regarding coverage under the Maryland General Permit for Stormwater Discharges Associated with Industrial Activity or an individual industrial surface water discharge permit:</p> <p><b><i>UMD currently has a Maryland General Permit for Stormwater Discharges Associated with Industrial Activity for 6 industrial sites around campus (MDR003281). Additionally, UMD has an Individual State Discharge Permit (MD0063801) which expired in October 31, 2017 but has been currently administratively extended while MDE reviews the permit application for the 2017 permit renewal. UMD staff is working with MDE to adjust their permit limits under the Individual State Discharge Permit for total copper.</i></b></p>
<p>5. List the total cost of implementing this MCM over the permit term:</p> <p><b><i>\$85,000 for training and certifications</i></b></p>

Future Progress: UMD will continue to implement the 20-SW permit to reduce discharges from industrial facilities. Progress will continue to be made on tree plantings, street sweeping, and other pollution prevention measures. UMD will expand the “Smart Salting” certification training program for all snow removal Team Leaders and share with UMD contractors for the 2024 winter season.

## V. CHESAPEAKE BAY RESTORATION AND MEETING TOTAL MAXIMUM DAILY LOADS

The University of Maryland is committed to contributing towards the nutrient and sediment load reductions as specified by Maryland’s Watershed Implementation Plan to address the Chesapeake Bay TMDL.

The Baseline Impervious Area Treatment and Restoration Requirements were updated with this report.

### A. Baseline Impervious Area Treatment

This section presents the updated Baseline Impervious Area Assessment. All of the UMD properties to be regulated as identified in the NOI were imported into a GIS mapping database. Mapping features delineated included all impervious and pervious areas within the properties, locations of existing Best Management Practices (BMPs), and drainage areas to the BMPs. Previously unidentified BMPs were added and impervious areas were updated to reflect development projects completed during the reporting period

The previous annual report provided identification and inspection of all existing surface BMPs known at the time. Additional progress was made since the last year by identifying additional previously unknown BMPs constructed with legacy projects. Inspection of all green roofs and underground structures were also completed.

A summary of the baseline information is follows. Note all values are in acres.

Reporting Year	2019	2020	2021	2022	2023	2024
Total impervious covered by permit	458.4	459.33	464.16	465.84	465.92	456.04
Total impervious treated by BMPs	15.5	26.36	38.30	40.37	56.25	59.79
Total impervious acres untreated	442.9	432.97	425.86	425.47	409.67	396.25
20% restoration requirement by 2025	88.58	86.59	85.17	85.09	81.93	79.25
10% restoration by 2030	-	-	-	-	-	39.63

In the 2019 report, UMD identified and inspected 121 BMPs on the College Park Campus that were reported in the stormwater database. Of these facilities, 33 were identified as passing inspection; however, only 13 of these BMPs were assumed to be eligible for baseline or redevelopment credit as they did not have as-built plans or would be surveyed during the permit term.

In 2020, additional facilities were identified by cross checking legacy projects with the MDE permit database and searching UMD archives for records. BMPs constructed for leased projects

on university owned properties were also added to the database. The IBBR BMPs were also incorporated in the UMD BMP database. Finally, inspection efforts and further research led to reclassification or separation of a few facilities. Overall, 44 facilities were added to the BMP database for a total of 165 BMPs in the 2020 report.

In 2021, the university reported a total number of 174 BMPs, of which 105 facilities were officially permitted with MDE for site development projects. Inspection records were completed for all of the permitted water quality treatment BMPs.

In 2022, the university reported a total number of 193 BMPs in the database inventory. However, 9 of the facilities associated with the Kim Engineering construction were removed and consolidated to UMCP22BMP0301 for the reconstruction of the plaza. 113 facilities are now officially permitted with MDE for site development projects. 12 as-built verification plans were submitted to the MDE Water & Science Administration, Sediment & Stormwater Plan Review Division for approval.

In 2023, a total of 196 BMPs are reported in the database inventory. UMD completed the dam breach analyses required for as-built verification of legacy embankment facilities. The analyses and as-builts are currently in review at MDE.

For 2024, a total of 205 BMPs are reported in the database inventory. A 13.33 acres reduction in baseline impervious was recorded due to property transactions and coordination with Prince George's County maintained BMPs that manages a portion of UMD property runoff on University Research Court and Physics Ellipse Court.

See **Attachment D** for the full Baseline Impervious Area Assessment Report.

Based on 456.04 acres of existing impervious area and 59.79 ac of treatment, 20% of the remaining 396.25 acres of untreated impervious area requires 79.25 acres of restoration.

See **Attachment E** for a summary report of the inspections completed by the university and MES, with copies of the full inspection reports.

**Table 7: Section I - Impervious Area Restoration Reporting**

<p>1. a. Was the impervious area baseline assessment submitted in year 1? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>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:</p> <p>c. Has the baseline been adjusted since the previous reporting year?</p>
--

Yes  No

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

Total impervious acres of area covered under this permit:

456.04

UMD 451.52 acres + IBBR 4.52 acres

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

59.79

UMD 38.03 acres + IBBR 2.34 acres

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

13.57

UMD 11.32 acres + IBBR 2.25 acres

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

0.18

UMD 0.15 acre + IBBR 0.03 acre

Total impervious acres untreated:

396.25

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

79.25

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:

***All BMPs included in the treatment total have proper verification documentation and inspection records supporting that these facilities will provide water quality treatment in their current condition. Impervious area draining to BMPs without as-built plans or proper verification documentation were included in the untreated impervious acres total. Impervious area draining to BMPs reported as failing were also included in the untreated impervious acres total.***

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

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:

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:

***In year 4, UMD submitted 15 as-built verification plans to MDE Sediment & Stormwater Plan Review Division to satisfy as-built requirements outlined in Technical Memo #16. Additionally, UMD is in the process of completing dam breach analysis for 6 ponds on the campus to complete submissions for heritage 378 pond as-built documentation. Credit for these facilities are currently contributing toward UMD's baseline treatment and restoration goal (credit assigned appropriately as explained in the attached memo) as verification survey was completed in previous reporting years.***

***UMD continued efforts to restore failing facilities across the campus. Following inspection to confirm facility has been restored to design, credit for provided treatment has been incorporated into UMD's baseline assessment.***

***UMD was awarded grant funds from the Chesapeake Bay Trust Watershed Assistance Grant Program for the design of Phase II of the Campus Creek Restoration and retrofit of the Animal Science dry pond. The design phase for both projects continued throughout Year 4, with construction beginning in Year 6 (2024).***

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

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:

***UMD has provided a full list of completed projects that exceed their restoration goal. UMD continues to update this list annually as additional restoration projects expected to be completed by 2025 are planned. Furthermore, UMD will continue to update the RAS with additional planned projects through 2030 as recommended by MDE. Current planned projects meet the recommended additional 10% restoration goal.***

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

***The Campus Creek Stream Restoration was completed in November 2019. Required documentation for the stream restoration was submitted to MDE in year 1. The stream restoration provides a maximum credit of 105.8 acres. One acre of credit has been shared with SHA, reducing the maximum credit to 104.8 acres. This exceeds UMD restoration requirement of 79.25 acres.***

***Even though UMD has surpassed the restoration requirement, UMD has continued efforts to identify additional restoration opportunities across campus. This includes analysis of failing BMPs to develop restoration concepts to restore the BMP to design conditions or retrofit to update the facility to current MDE standards, when applicable. Additionally, the design phase for both Phase II of the Campus Creek Restoration and retrofit of the Animal Science dry pond were recently completed, with construction expected to begin in 2024. These projects combined will provide an estimated additional restoration credit of 54.15 acres.***

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?

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:

***UMD is continuing efforts to update maintenance and inspection dates. UMD has established a workflow utilizing Survey123 to document inspections and maintenance. UMD will continue utilizing this workflow to establish records for all facilities missing inspection or maintenance dates.***

***Additionally, UMD added new BMPs to the database following recently completed construction. As as-builts are completed and treatment is verified, the database will be updated to include all missing data for the new facilities.***

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

***Perform repairs on existing facilities that are not functional. Continue utilizing Survey123 for inspection and maintenance. Begin construction of the Animal Science Pond retrofit and Campus Creek Phase II restoration. See attached restoration activity schedule.***

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

***In 2023, UMD purchased the Riverside property located at Physics Ellipse Drive. This property, in addition to other UMD property, is currently treated by two stormwater management ponds managed by Prince George's County. UMD is coordinating with the County to properly document the responsibility and distribution of water quality credits. Currently, the County is reporting 13.33 acres of UMD impervious within their MS4 crediting. Therefore, this acreage is not included within UMD's baseline.***

***UMD is also in discussions with MTA for credit sharing of SWM facilities being proposed for Purple Line construction.***

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

***Year 1: Consultant cost \$168,232  
Year 2: Consultant cost \$297,472  
Year 3: Consultant cost \$141,278  
Year 4: Consultant cost \$129,231  
Year 5: Consultant cost \$70,076  
Year 6: Consultant cost \$42,750***

## B. Impervious Area Restoration Work Plan

The restoration work plan required to be submitted with the MS4 progress report describes the plans and future activities proposed, as well as progress completed, over the course of the permit term towards meeting the restoration requirement.

**Table 8: Restoration Work Plan**

<p><b>Year 1 (FY19)</b></p>	<ul style="list-style-type: none"> <li>• Import entire UMD campus properties into GIS mapping.</li> <li>• Delineate all property lines, impervious areas, pervious area surfaces, BMP locations and drainage areas for baseline assessment.</li> <li>• Inspect the entire UMD inventory of SWM BMP facilities and assess for compliance with the MS4 permit requirements.</li> <li>• Research archives at UMD and MDE. Compile all available design plans, as-built plans, stormwater reports and maintenance records for each BMP.</li> <li>• Rate each facility based on the condition, availability of design plans, as-built plans, and maintenance records.</li> <li>• Establish a priority list of BMP repairs based on the lowest cost and greatest potential treatment areas.</li> <li>• Establish a BMP maintenance tracking program.</li> <li>• Program budgets for Year 2 surveys, designs, and repairs.</li> </ul>
<p><b>Year 2 (FY20)</b></p>	<ul style="list-style-type: none"> <li>• Complete MS4 BMP database.</li> <li>• Incorporate IBBR impervious and BMP inventory into UMD MS4 BMP database.</li> <li>• Update GIS impervious layer to incorporate completed construction projects.</li> <li>• Begin BMP verification survey for facilities without as-built documentation.</li> <li>• Begin developing a remediation plan or restoration concepts for failing BMPs.</li> <li>• Develop priority ranking for non-permitted facilities to determine if facility should be restored/retrofit and permitted.</li> <li>• Update baseline assessment and restoration goal.</li> <li>• Update restoration activity schedule for completed and proposed projects.</li> <li>• Develop program budgets for Year 3 surveys, designs, and repairs.</li> </ul>

<p><b>Year 3 (FY21)</b></p>	<ul style="list-style-type: none"> <li>• Inspect and evaluate treatment for additional BMPs added to the BMP database during the year 2 analysis.</li> <li>• Continue BMP verification survey for facilities without as-built documentation.</li> <li>• Complete inspection for high priority non-permitted facilities to identify repair requirements or retrofit opportunities.</li> <li>• Develop priority ranking for permitted facilities to develop refined restoration schedule.</li> <li>• Begin repairs for BMPs requiring remediation.</li> <li>• Begin implementing projects identified on the restoration activity schedule.</li> <li>• Update GIS impervious layer to incorporate completed construction projects.</li> <li>• Update baseline assessment and restoration goal.</li> <li>• Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs.</li> <li>• Update restoration activity schedule on completed and proposed projects.</li> <li>• Develop program budgets for Year 4 surveys, designs, and repairs.</li> </ul>
<p><b>Year 4 (FY22)</b></p>	<ul style="list-style-type: none"> <li>• Complete BMP verification survey for facilities without as-built documentation.</li> <li>• Begin restoration efforts for high priority non-permitted BMPs.</li> <li>• Continue repair efforts for facilities requiring remediation.</li> <li>• Continue implementing projects identified in the restoration activity schedule.</li> <li>• Update GIS impervious layer to incorporate completed construction projects.</li> <li>• Update baseline assessment and restoration goal.</li> <li>• Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs.</li> <li>• Update restoration activity schedule on completed and proposed projects.</li> <li>• Develop program budgets for Year 5 designs and repairs.</li> </ul>

<p><b>Year 5 (FY23)</b></p>	<ul style="list-style-type: none"> <li>• Continue repair efforts for facilities requiring remediation.</li> <li>• Continue routine BMP inspections and establishing inspection records for newly constructed facilities.</li> <li>• Continue implementing projects identified in the restoration activity schedule.</li> <li>• Update GIS impervious layer to incorporate completed construction projects.</li> <li>• Update baseline assessment and restoration goal.</li> <li>• Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs.</li> <li>• Develop program budgets for proposed restoration projects.</li> <li>• Update restoration activity schedule for completed and proposed projects. Planning to be extended through 2030 for additional 10% restoration goal.</li> </ul>
<p><b>Year 6 (FY24)</b></p>	<ul style="list-style-type: none"> <li>• Continue repair efforts for facilities requiring remediation.</li> <li>• Continue routine BMP inspections and establishing inspection records for newly constructed facilities.</li> <li>• Continue implementing projects identified in the restoration activity schedule.</li> <li>• Update GIS impervious layer to incorporate completed construction projects.</li> <li>• Update baseline assessment and restoration goal.</li> <li>• Update and submit Urban BMP database and documented maintenance and inspection status for all BMPs.</li> <li>• Develop program budgets for proposed restoration projects.</li> <li>• Update restoration activity schedule for completed and proposed projects. Planning to be extended through 2030 for additional 10% restoration goal</li> </ul>

### **C. Restoration Activity Schedule**

The Restoration Activity Schedule shows the status of projects that will be implemented to meet the MS4 permit restoration requirements. This table shows the proposed list of projects and identifies if they are in planning, construction or completed. The table is updated every year to show the balance towards achieving the restoration requirement.

For the FY2024 report, the Restoration Activity schedule was updated to include completed and planned restoration projects through 2030.

The complete schedule is shown on Table 9 and an enlarged view can be found in **Attachment F**.

Table 9: MS4 Restoration Activity Schedule

Phase II MS4 Restoration Activity Schedule									
Total Acreage (1327); Impervious Acre Baseline (456.04); 20% Restoration Target ( 79.25 acres)									
Type of Restoration Project	BMP Code	BMP ID	Cost (\$K)	Imperv Acres Treated	Imperv Acre Target and Balance	Project Status	Year Complete or Projected Implementation Year (by 2025)	MD Grid Coordinates (Northing/Easting)	
					79.25				
IBBR Outfall Stabilization	OUT	USG19BMP00004	10	0.50	78.75	C	2006	158456.27	382786.21
University House Southern Micro-Bioretenion	MMBR	UMCP19BMP0040	10	0.03	78.72	C	2011	146679.14	404093.23
Denton Courtyard Micro-Bioretenion	MMBR	UMCP19BMP0122	15	0.10	78.62	C	2012	147179.85	404313.09
Shuttle Facility Green Roof	AGRE	UMCP19BMP0016	50	0.11	78.51	C	2012	147510.65	405436.50
Shuttle Facility Green Roof	AGRE	UMCP19BMP0017	50	0.11	78.40	C	2012	147512.86	405458.48
Shuttle Facility Dry Swale	ODSW	UMCP19BMP0026	30	1.71	76.69	C	2012	147485.93	405590.45
Heavy Equipment Building Micro-Bioretenion	MMBR	UMCP19BMP0055	15	0.10	76.59	C	2012	147573.67	404943.77
Denton Dining Micro-Bioretenion	MMBR	UMCP19BMP0059	30	0.24	76.35	C	2012	147173.55	404348.39
Denton Quad Micro-Bioretenion 3	MMBR	UMCP19BMP0070	15	0.07	76.28	C	2012	147151.76	404275.04
Shuttle Bus Pond	PWET	UMCP19BMP0106	40	0.14	76.14	C	2012	147494.20	405574.94
Physical Science Complex Green Roof	AGRE	UMCP19BMP0078	100	0.21	75.93	C	2013	147002.04	405068.40
Computer and Space Sciences Green Roof	AGRE	UMCP19BMP0049	35	0.08	75.85	C	2013	147031.24	405023.82
Prince Frederick Hall Micro-Bioretenion Cell 1	MMBR	UMCP19BMP0124	30	0.14	75.71	C	2014	146101.64	404687.09
Impervious Surface Removal to Pervious 4100 Metzerott Rd	IMPP	UMCP20BMP0288	5	0.17	75.54	C	2016	148038.42	405387.54
West Side of Edward St. John Green Roof	AGRE	UMCP19BMP0157	50	0.06	75.48	C	2017	146559.97	405023.75
West Side of Edward St. John Green Roof	AGRE	UMCP19BMP0158	50	0.06	75.42	C	2017	146560.89	405040.90
Impervious Surface Removal to Pervious 4109 Metzerott Rd	IMPP	UMCP20BMP0289	5	0.03	75.40	C	2017	147899.26	405369.20
Clark Hall Bioretention 1	MMBR	UMCP19BMP0231	60.0	0.33	75.07	C	2017	147129.96	405375.41
Clark Hall Micro-Bioretenion 2	MMBR	UMCP19BMP0232	50	0.29	74.78	C	2017	147109.93	405375.62
M Square SGW 1	MSGW	UMCP20BMP0258	90	1.86	72.92	C	2018	144408.70	405905.68
M Square SGW 2	MSGW	UMCP20BMP0259	40	0.72	72.20	C	2018	144567.14	405880.11
M Square MBR1	MMBR	UMCP20BMP0260	30	0.35	71.85	C	2018	144555.93	406065.15
A.V. Williams Micro-Bioretenion	MMBR	UMCP19BMP0152	25	0.27	71.58	C	2018	146930.84	405581.69
A.V. Williams Micro-Bioretenion	MMBR	UMCP19BMP0153	15	0.14	71.44	C	2018	147007.47	405562.48
A.V. Williams Micro-Bioretenion	MMBR	UMCP19BMP0154	35	0.31	71.13	C	2018	146975.71	405568.77
Brendan Iribe Micro-Bioretenion 1	MMBR	UMCP19BMP0241	30	0.27	70.86	C	2019	146906.29	405596.76
Brendan Iribe Micro-Bioretenion 2	MMBR	UMCP19BMP0242	40	0.32	70.54	C	2019	146855.63	405574.14
Brendan Iribe 4	APRP	UMCP19BMP0244	20	0.15	70.39	C	2019	146849.94	405510.90
Brendan Iribe 5	AGRI	UMCP19BMP0245	20	0.14	70.25	C	2019	146819.29	405548.24
Campus Creek Stream Restoration Phase 1	STRE	UMCP19BMP0249	1200	104.80	-34.56	C	2019	147429.67	404606.19
Regenerative Step Pool Conveyance	SPSC	UMCP19BMP0250	20	0.58	-35.14	C	2019	147431.84	404451.93
Regenerative Step Pool Conveyance	SPSC	UMCP20BMP0290	20	0.31	-35.45	C	2019	147441.85	404475.02
Stormwater Bar	OUT	UMCP20BMP0291	10	0.13	-35.58	C	2019	147345.11	404978.06
Wooded Hilllock Impervious Removal 3	IMPP	UMCP21BMP0296	5	0.02	-35.60	C	2020	147957.18	404955.17
Wooded Hilllock Impervious Removal 2	IMPP	UMCP21BMP0297	5	0.02	-35.61	C	2020	147940.09	404868.38
Wooded Hilllock Impervious Removal 1	IMPP	UMCP21BMP0298	5	0.05	-35.66	C	2020	147868.97	404758.74
Knight Hall	MRWH	UMCP19BMP0082	50	0.39	-36.05	C	2020	146527.74	404476.54
Cole Field House Impervious Removal	IMPP	UMCP21BMP0300	500	2.30	-38.35	C	2021	146705.18	404486.51
4103 Metzerott Rd Impervious Removal	IMPP	UMCP21BMP0299	15	0.07	-38.42	C	2021	147959.30	405348.54
Presidents house Disconnect 1	NDNR	UMCP19BMP0239	10	0.01	-38.43	C	2021	146721.81	404139.61
Prince Frederick Hall Bioretention Cell 2	MMBR	UMCP19BMP0125	45.2	0.33	-38.76	C	2022	146116.11	404734.63
Brendan Iribe 3	MSWB	UMCP19BMP0243	25	0.19	-38.95	C	2023	146803.50	405608.07
School of Public Policy Bioretention 1	MMBR	UMCP22BMP0321	30	0.16	-39.11	C	2023	146340.64	405239.55
School of Public Policy Bioretention 2	MMBR	UMCP22BMP0322	30	0.30	-39.41	C	2023	146385.29	405356.00
School of Public Policy Pocket Wetland 1	WPKT	UMCP22BMP0323	40	0.55	-39.96	C	2023	146347.72	405349.05
School of Public Policy Non-Rooftop Disconnect 1	NDNR	UMCP22BMP0324	5	0.04	-40.00	C	2023	146304.01	405341.42
Cole Field House Green Roof 1	AGRI	UMCP21BMP0292	50	0.32	-40.32	C	2021	146766.15	404615.60
Cole Field House Green Roof 2	AGRI	UMCP21BMP0293	50	0.07	-40.39	C	2021	146766.74	404556.07
Cole Field House Green Roof 3	AGRI	UMCP21BMP0294	50	0.37	-40.76	C	2021	146672.51	404557.39
Cole Field House Green Roof 4	AGRI	UMCP21BMP0295	50	0.86	-41.62	C	2021	146626.26	404516.83
Idea Factory Micro-Bioretenion 4	MMBR	UMCP22BMP0301	30	0.08	-41.70	C	2021	146933.90	405411.70
Idea Factory Micro-Bioretenion 2	MMBR	UMCP22BMP0302	30	0.06	-41.76	C	2021	146926.50	405335.62
Idea Factory Micro-Bioretenion 1	MMBR	UMCP22BMP0303	30	0.07	-41.83	C	2021	146926.84	405357.94
Idea Factory Micro-Bioretenion 3	MMBR	UMCP22BMP0304	30	0.04	-41.87	C	2021	146926.96	405378.99
UMCP Field Hockey & Lacrosse Complex	MMBR	UMCP22BMP0328	50	0.25	-42.12	C	2024	147395.18	405446.70
Chemistry Wing 1 Micro-bioretenion	MMBR	UMCP22BMP0329	40	0.36	-42.48	C	2024	146865.77	405274.92
Chemistry Wing 1 Non-rooftop Disconnect 1A	NDNR	UMCP22BMP0330	5	0.01	-42.49	C	2024	146911.60	405288.65
Chemistry Wing 1 Non-rooftop Disconnect 1B	NDNR	UMCP22BMP0331	5	0.02	-42.51	C	2024	146888.61	405307.84
Animal Science pond	PWET	UMCP19BMP0021	338.8	8.95	-51.46	P	2025	147226.59	405331.71
Campus Creek Stream Restoration Phase 2	STRE		1700	45.20	-96.66	P	2025	147351.99	404982.82
<b>Total Restoration Credit =</b>				<b>175.91</b>					

## D. BMP Database Tracking

The data tables specified in the MS4 permit have been completed for all identified BMPs within the permit area. A GIS system was established with these data tables so that the corresponding information can be recorded, updated, and tracked to be associated with an electronically mapped BMP feature.

UMD also implemented a field inspection app which allows real time updates to the database as inspections are conducted. The database also stores the previous inspection records, as well as maintains a historical account.

See **Attachment G** for the Urban Best Management Practice Database. An electronic version of this information will also be transmitted to MDE.

The application has been further developed to incorporate additional fields to allow the field inspection tool to be used by more contractors and field personnel.

Additional information such as cost data, priority updates and maintenance tracking will be added in future versions to establish a more adaptive management approach for maintaining the BMPs. It will provide better data for managing, planning, budgeting and tracking of the UMD BMP inventory.

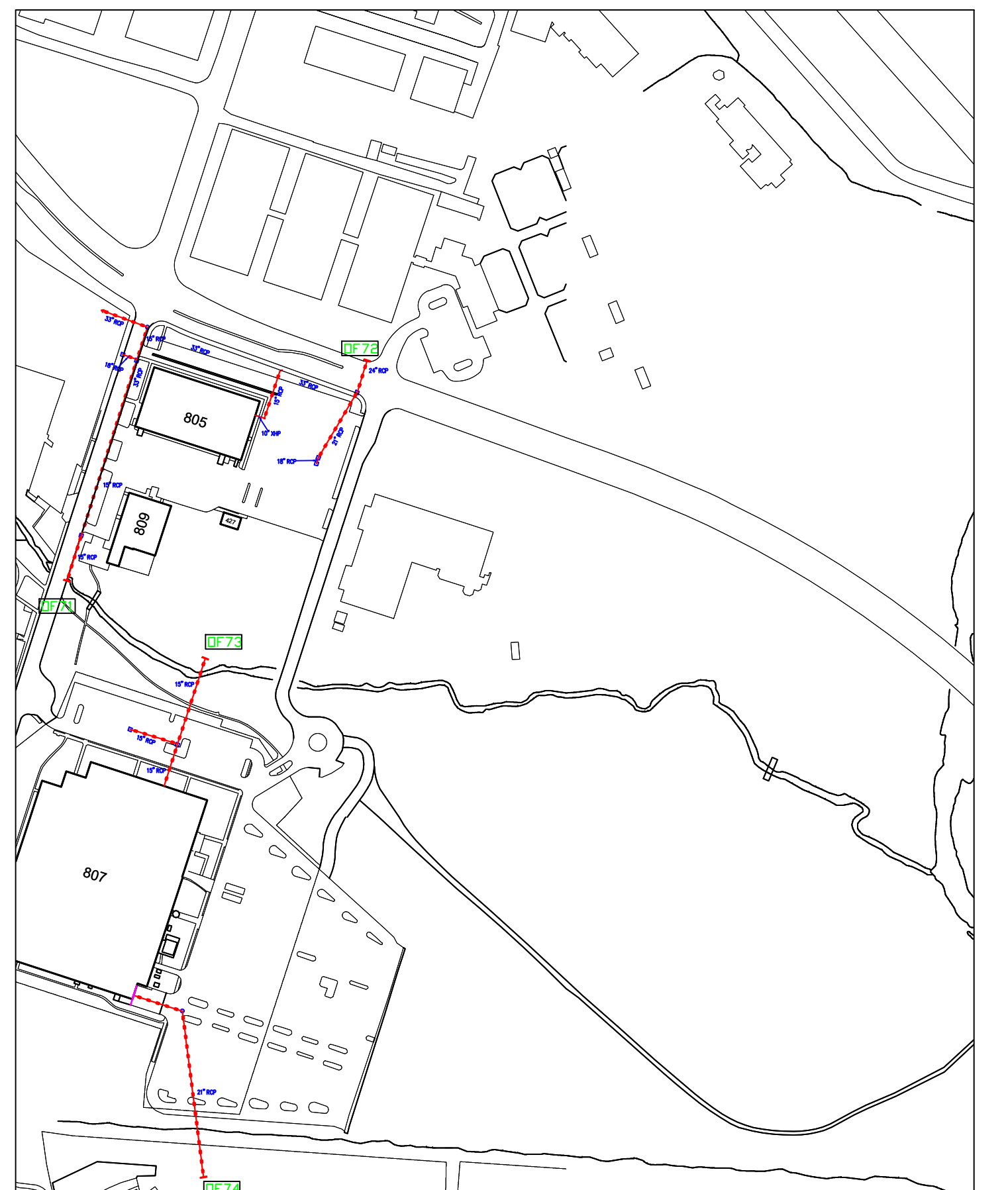
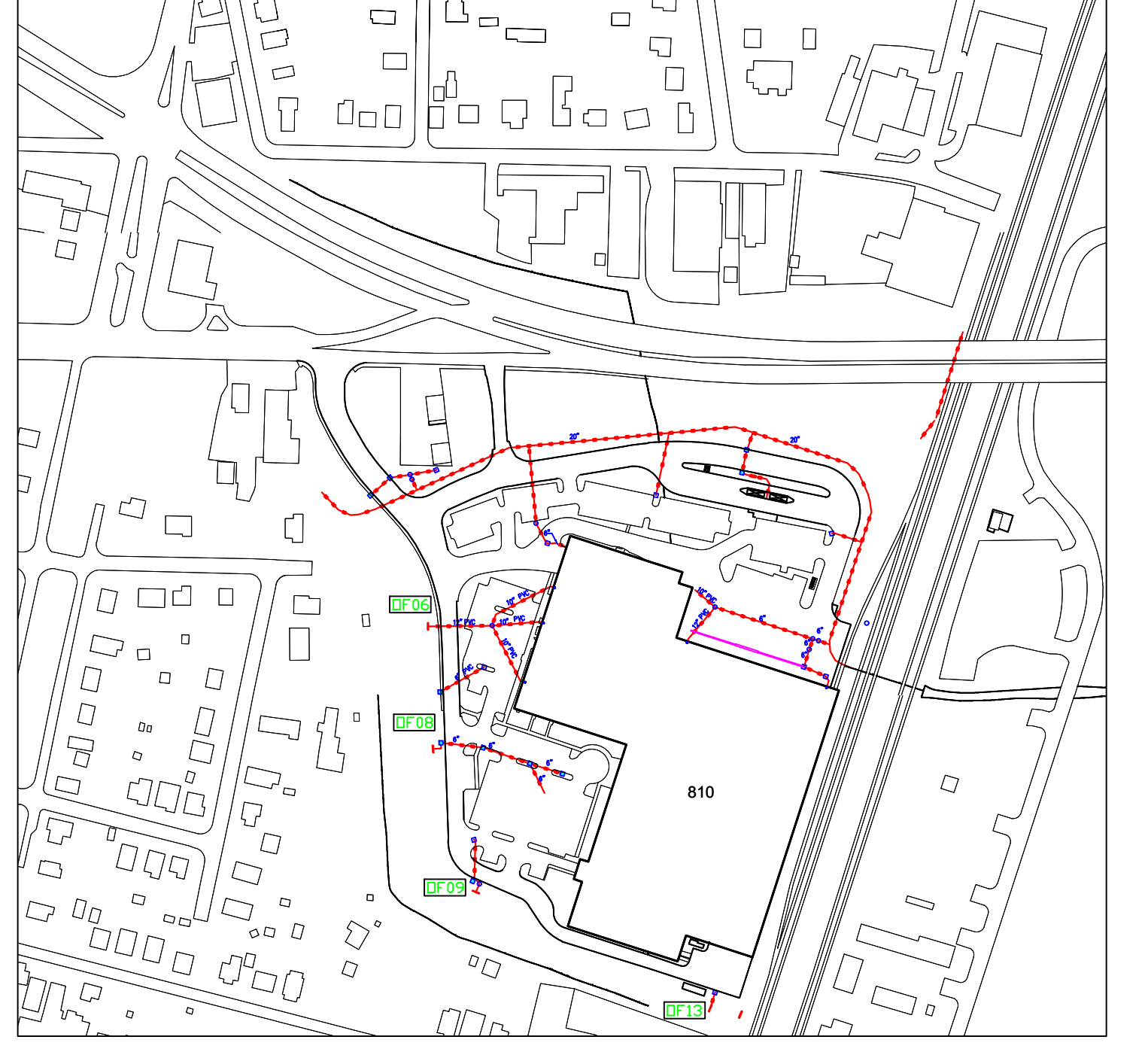
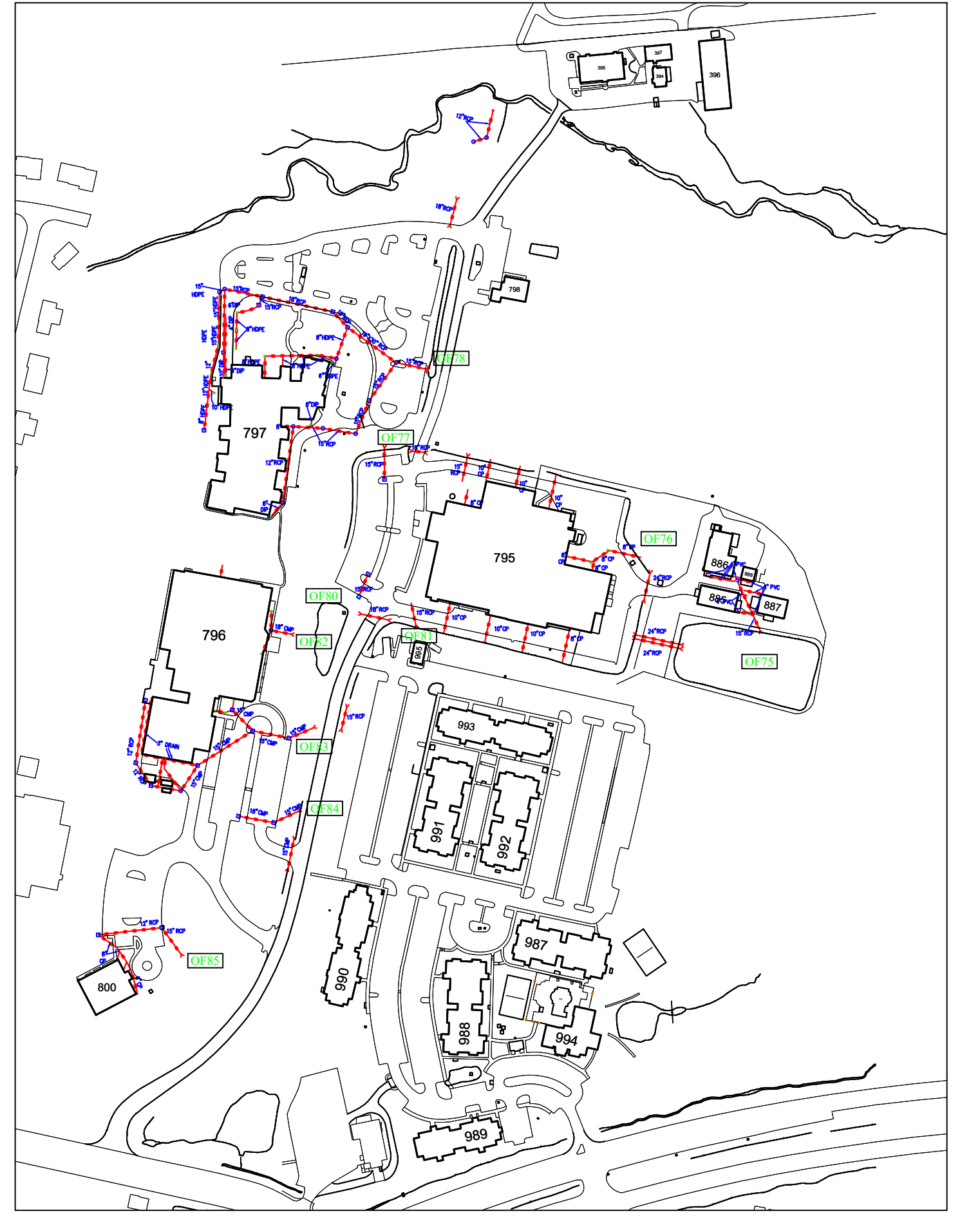
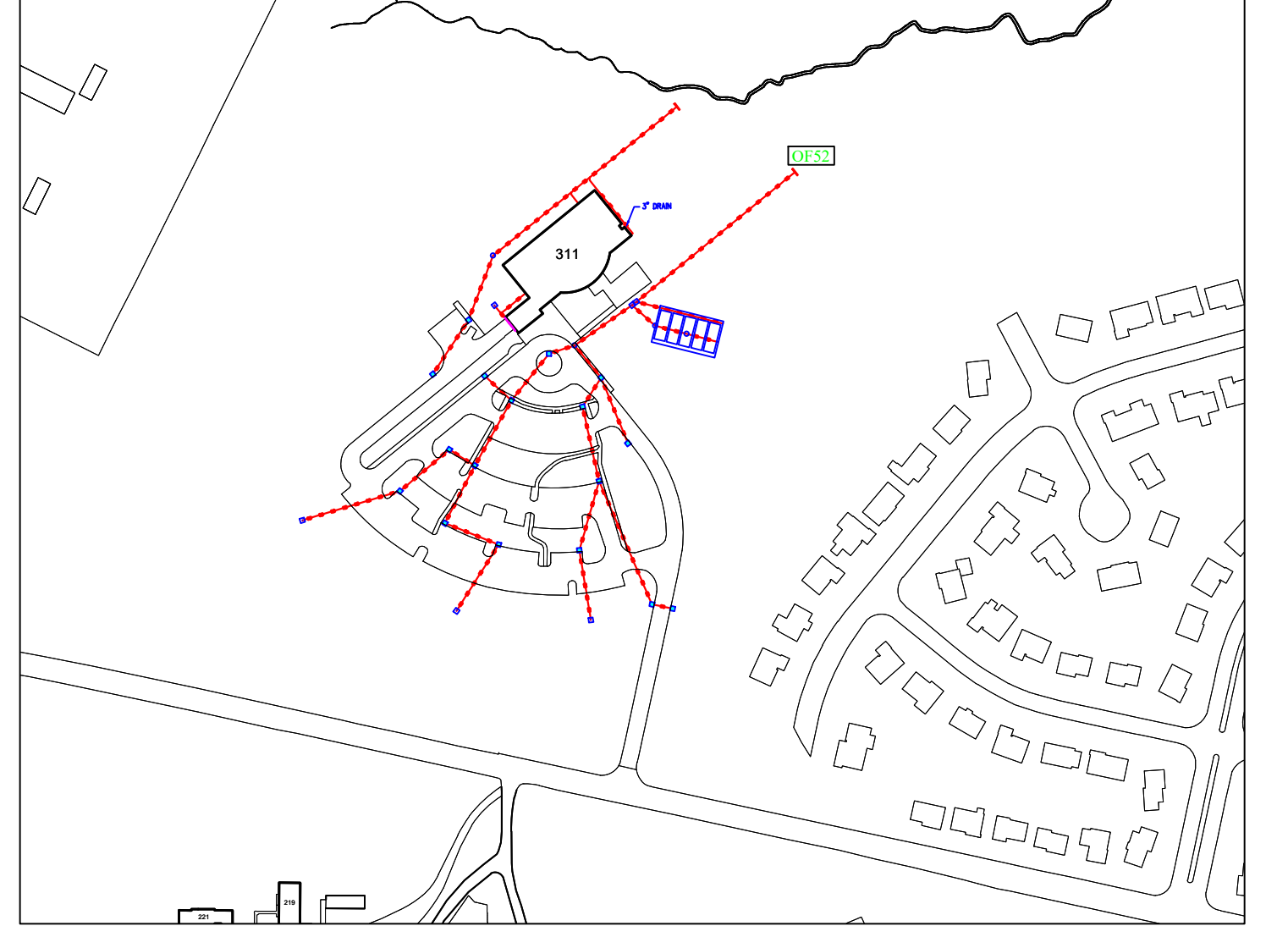
## VI. CONCLUSION

The FY2024 General Discharge Permit #13-SF-5501 annual report provides updates on the progress the University of Maryland, College Park has achieved with the Chesapeake Bay Restoration requirements.

Overall, the university continues to maintain programs related to education, involvement, IDDE, runoff control, stormwater management and pollution prevention related to the MS4 permit.

Although the university has met the Chesapeake Bay Restoration requirements for this permit term, the university continues to progress with documentation, restoration and maintenance of existing stormwater facilities on campus to further improve its stormwater program and to be prepared for the next permit term. The construction of Phase 2 of the Campus Creek restoration and the retrofit of Animal Science Pond, funded in part by the Chesapeake & Atlantic Coastal Bay Trust Fund Program will provide an additional estimated combined restoration credit of 54 acres.

ATTACHMENT A  
UMD OUTFALL MAP



**LEGEND: STORM**

CATCH BASIN	(Symbol)
CCMS MANHOLE	(Symbol)
CLEAN OUT	(Symbol)
CONDENSATE MANHOLE	(Symbol)
DRAIN	(Symbol)
DRY MANHOLE	(Symbol)
GUTTER DRAIN	(Symbol)
HEAD WALL	(Symbol)
INLET W/ MANHOLE COVER	(Symbol)
LINE BREAK	(Symbol)
PUMPING STATION	(Symbol)
STEAM MANHOLE	(Symbol)
STORM DRAIN MANHOLE	(Symbol)
TRENCH DRAIN	(Symbol)
UNDERGROUND TANK	(Symbol)
FOOTER DRAIN PIPE	(Symbol)
STORM DRAIN	(Symbol)
STORM DRAIN - ABANDONED	(Symbol)

**ABBREVIATIONS**

CAST IRON PIPE	DATE	HDPE
CORRUGATED METAL PIPE	CMP	POLYETHYLENE PIPE
DUCTILE IRON PIPE	DIP	PVC
HIGH DENSITY POLYETHYLENE PIPE	HDPE	REINFORCED CONCRETE PIPE
POLYETHYLENE PIPE	PVC	RYCP
POLYVINYL CHLORIDE PIPE	PVC	VCP
REINFORCED CONCRETE PIPE	RYCP	
VITRIFIED CLAY PIPE	VCP	

SCALE 1"=400'

**STORMWATER UTILITIES**

- STORMWATER PIPE
- ROOF DRAIN / UNDERDRAIN
- > FLOW DIRECTION
- MANHOLE
- INLET

**Legend of Ownership**

- > \*OF-# IBBR
- > \*OF-# USG & IBBR



ATTACHMENT B  
ILLICIT DISCHARGE DETECTION AND  
ELIMINATION (IDDE) PLAN

# UNIVERSITY OF MARYLAND

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*Department of Environmental Safety,  
Sustainability, and Risk*

The background features a large, light gray watermark of the University of Maryland seal. The seal is circular and contains the text "UNIVERSITY OF MARYLAND" around the top and "1856" on the sides. In the center is a shield with a yellow and black checkered pattern on the left and a pink and white pattern on the right, topped with a red and white crest.

## **ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PLAN**

**October 2022**

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**Appendix A**      General Location Map

**Appendix B**      Site Map and Outfall Photo Log

**Appendix C**      UMD Illicit Discharge and Connection Stormwater Ordinance

**Appendix D**      UMD Illicit Discharge Incident Tracking Sheet

**Appendix E**      IDDE Outfall Inspection Form

**Appendix F**      IDDE Training Materials

**Appendix G**      Institute for Bioscience and Biotechnology Research (IBBR)

Addendum

## **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 University of Maryland (UMD) 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. 05-SF-5501).

This Illicit Discharge Detection and Elimination (IDDE) plan is designed to identify and effectively eliminate illicit discharges and connections to UMD'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 UMD's IDDE program, along with public outreach and reporting, helps combat these potential illicit discharges. UMD treats some of its

stormwater discharges using various BMPs, including oil-water separators, retention ponds, swales, and stormceptors.

UMD was chartered in 1856 as an agricultural college and has gradually evolved into the distinct higher education system that it is today. The campus is located in a suburban area, bounded by a mixture of commercial and residential areas on all sides. UMD is bordered by University Boulevard to the north and west, Paint Branch Parkway to the east, and Knox Road to the south. Baltimore Avenue (Route 1) bisects the southeastern portion of the campus. The campus currently consists of numerous buildings on 1,335 acres of land. A site vicinity map is included in Appendix A.

The stormwater drainage system at UMD consists of intermittent surface flow and catch basins located throughout the campus. Approximately 40% of the campus is considered impervious. The campus maintains an MS4 that consists of approximately fifty-four (54) outfalls. The outfalls discharge to Campus Creek, Guilford Run, Paint Branch stream, as well as several unnamed tributaries. Water from these discharge points ultimately flows to the Anacostia River, which later empties into the Potomac River, a tributary of the Chesapeake Bay. Additionally, there are multiple internal outfalls and monitoring points within the property boundaries that do not discharge to the waters of the State. These are used to help determine the sources of any illicit discharges detected at an outfall. 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.

The University discharges contact and non-contact cooling water, boiler blowdown and condensate from various buildings onsite to the MS4 in accordance with State Discharge Permit No. 08-DP-2618 (NPDES Permit No. MD0063801).

Additionally, UMD is authorized to discharge water from pesticide applications for weeds and algae in accordance with Maryland General Permit for Discharges from the Application of Pesticides No. 17PE0195 (NPDES Permit No. MDG87).

In addition to UMD, the University of Maryland - Institute for Bioscience and Biotechnology Research (IBBR) located at 9600 Gudelsky Dr, Rockville, MD 20850 is covered by UMD's MS4 permit and follows the regulations laid out in this IDDE plan. Located in Appendix G is the IBBR addendum containing IBBR's site specific description and site maps.

### ***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 UMD 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.

UMD and IBBR will utilize AutoCAD, GPS, and GIS technologies to map all conveyance systems and outfalls. All outfall locations will then be incorporated into UMD'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. UMD 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 of 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](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 UMD's IDDE. However, Prince George's County Code of Ordinances Subtitle 32, Division 3 encompasses its stormwater management ordinances. These ordinances can be found at:

[https://www.municode.com/library/md/prince\\_george's\\_county/codes/code\\_of\\_ordinances](https://www.municode.com/library/md/prince_george's_county/codes/code_of_ordinances)

### ***3.3 City Ordinances***

There are currently no city ordinances that apply to UMD's IDDE. However, Cite of College Park's Code of Ordinances Part 2, Chapter 87, Part 16B encompasses its wastewater management in relations to building construction drainage ordinances. These ordinances can be found at:

<https://ecode360.com/9897166>

### ***3.4 University Policies***

While the University of Maryland and University of Maryland - Institute for Bioscience and Biotechnology Research do not have a specific ordinance relating to illicit discharge detection and elimination, Section VI of the UMD Policies grants authority to the Department of Environmental Safety, Sustainability and Risk (ESSR), which was formerly known as the Department of Environmental Safety, to ensure compliance with all environmental regulations. Therefore, ESSR 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. UMD and IBBR will not consider items listed in Table 1 as illicit discharges. If UMD determines any of these activities to be illicit discharges in the future, UMD 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

**Table 2.**  
**Non-Stormwater Discharges Authorized by Other Permits**

<u>Source</u>	<u>Permit Number</u>
Dechlorinated discharges from potable water sources	08-DP-2618 (MD0063801)
Air conditioning condensate	08-DP-2618 (MD0063801)
Steam Condensate	08-DP-2618 (MD0063801)
Contact / Non-contact cooling water	08-DP-2618 (MD0063801)
Pesticide application for weeds and algae	17-PE-0195 (MDG87)

## ***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 the illicit discharge hotline (Environmental Affairs Unit) at 301-405-3990. Reported spills will be tracked by Environmental Affairs in the Illicit Discharge Incident Tracking Sheet in Appendix D of this Plan.

Currently, in the event of an illicit discharge at IBBR, the discharge will be reported to either the Director of IBBR Facilities and Lab Services or Lab and Safety Coordinator at IBBR. IBBR will then contact UMD's illicit discharge hotline.

Spill procedures regarding emergency actions, such as radiation, chemical, or biological, can be found at this link: <https://www.essr.umd.edu/documents>

### **4.3.2 Reporting**

If an illicit discharge is identified during a routine inspection or while responding to a notification, ESSR will write a report for each illicit discharge and its location. ESSR will maintain a database that documents all activities associated with the UMD'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 UMD's annual report.

Any illicit discharges in violation of UMD'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 for at least 50% 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.

Additionally, in accordance with UMD’s State Discharge Permit No. 08-DP-2618 (NPDES Permit No. MD0063801), each month the twelve (12) regulated outfalls (Outfalls 001-005, 007, 010, 012, 014, 016, 018, 019) will be tested for the required in-field parameters and laboratory analyses. These parameters can be found in Table 3. Additional inspections may be required depending upon the results of initial inspection. UMD will also conduct outfall inspections in response to community, student, and employee complaints, as deemed appropriate.

**Table 3.**  
**Water Quality Test Parameters and Uses**

Water Quality Test	Permit Limitations	Method
Temperature	<90°F (32°C) *	In-field thermometer
pH	6.5-8.5	pH meter in field
Total Residual Chlorine	0.011 mg/l**	TRC meter in field
Discharge Flow	REPORT VALUE	Calculated in field
Total Copper	9.0 mg/l	Laboratory analysis
Total Nitrogen	REPORT VALUE	Laboratory analysis
Oil & Grease	15 mg/L***	Laboratory analysis
Total Phosphorus	REPORT VALUE	Laboratory analysis
Total Kjeldahl Nitrogen	REPORT VALUE	Laboratory analysis
Nitrate/Nitrite as N	REPORT VALUE	Laboratory analysis

\*Temperature is only monitored in June, July and August.

\*\*Total Residual Chlorine reporting limit of 0.01 is unattainable in field settings, so a value of 0.1 mg/l is used as the reporting limit.

\*\*\*Oil and Grease is only tested on four (4) of the twelve (12) outfalls.

#### **4.4.2 Source Identification**

When identifying any illicit discharges or the source of any violations for their NPDES permit, ESSR 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. ESSR 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, ESSR can determine the direction from which the discharge originates, ESSR 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 ESSR 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 University's Environmental Affairs Unit at (301)-405-3990 as soon as possible. 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 UMD's or IBBR'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:

<https://www.essr.umd.edu/documents>

#### **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 UMD ESSR staff from the general public;
- A report from a UMD staff member or student; or
- Results of outfall screening.

The determination of if an illicit discharge has occurred will be made by UMD ESSR staff. In all cases of an illicit discharge, the UMD 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 UMD 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 UMD 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 UMD outfall mapping to identify the drainage area of the illicit discharge. Cross reference the mapping with the UMD 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.

UMD 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 UMD to keep records of all stormwater program activities and IDDE records for a minimum of five (5) years. UMD 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 UMD ESSR office. Electronic copies will be available on demand.

## **SECTION 5: CORRECTIVE ACTIONS & ENFORCEMENT**

In order to maintain compliance with the permit, ESSR has the authority to notify entities within the UMD 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 UMD, ESSR 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-UMD entities are involved in the deficiencies and/or illicit discharges, ESSR 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. UMD's ESSR department will enforce compliance with the IDDE Plan and work with the party/parties to obtain compliance. ESSR, 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 University of Maryland Police Department for further action, in conjunction with referral to MDE.

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

## **SECTION 6: PUBLIC EDUCATION**

### ***6.1 Public Education and Outreach***

UMD and IBBR 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 UMD'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 citizens and staff can contribute to UMD'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***

UMD shall implement and maintain a public involvement and participation program. UMD 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, UMD 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. UMD and IBBR requires stormwater training for staff involved in activities that are considered a high risk for potential stormwater pollution, such as those facilities that are covered

by the 12-SW General Permit for Stormwater Associated with Industrial Activity. UMD also participates in a storm drain inlet marking program.

## **SECTION 7: STAFF TRAINING**

The MS4 Permit requires UMD and IBBR to provide annual training to applicable field personnel in recognition and reporting of illicit discharges. UMD requires stormwater training for staff involved in activities that are considered a high risk for potential stormwater pollution, such as those facilities that are covered by the 12-SW General Permit for Stormwater Associated with Industrial Activity. UMD ESSR 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, UMD ESSR 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: Jason Baer Title: Assistant Director, Office of Environmental Affairs

Signature: *Jason Baer* Date: 10/24/2022



## 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](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](http://www.neiwpcc.org/neiwpcc_docs/iddmanual.pdf)


# APPENDIX A

## SITE VICINITY MAP

# University of Maryland

Site Vicinity Map

## Legend

 University of Maryland



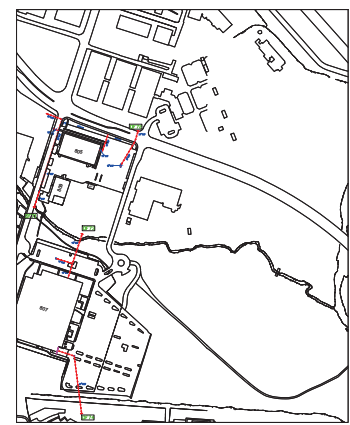
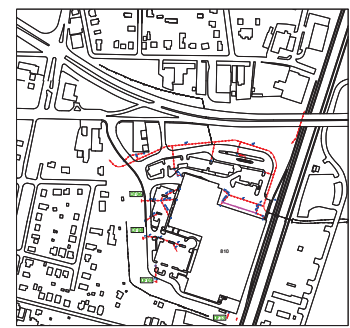
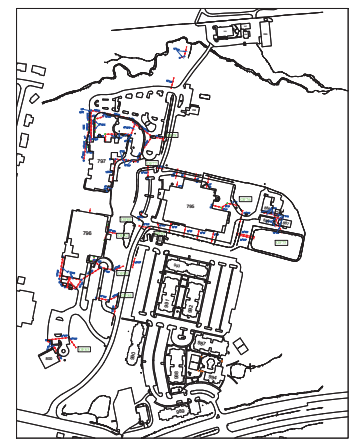
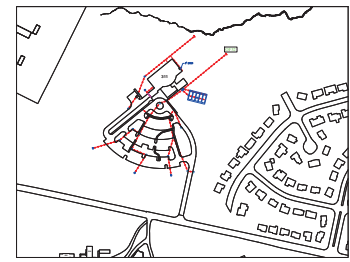
Google Earth

© 2016 Google

3000 ft

# APPENDIX B

## SITE MAP



**LEGEND STORM**

CATCH BASIN	○
CMS MANHOLE	○
CELANESE	○
CONDENSATE MANHOLE	○
DRAIN	○
DRY MANHOLE	○
GUTTER DRAIN	○
HEADWALL	○
INLET W/ MANHOLE COVER	○
LINE BRIM	○
PUMP STATION	○
STREAM MANHOLE	○
STORM DRAIN MANHOLE	○
TRENCH DRAIN	○
UNDERGROUND TANK	○
WATER DRAIN PIPE	○
STORM DRAIN	○
STORM DRAIN - ABBREVIATION	○

**ABBREVIATIONS**

CAST IRON PIPE	CP
CONCRETE PIPE	CP
DUCTILE IRON PIPE	DIP
HIGH DENSITY POLYETHYLENE PIPE	HDPE
POLYETHYLENE GLASS REINFORCED PIPE	PFRP
POLYETHYLENE GLASS REINFORCED PIPE	PFRP
VITRIFIED CLAY PIPE	VCP

SCALE: 1"=40'

**FACILITIES ASSET INVENTORY**  
 FACILITIES MANAGEMENT  
 800 SERVICE BUILDING  
 CHILLING PARK, SUITE 2000

# APPENDIX C

## UMD IDDE POLICIES

The University of Maryland Policies, Section VI: General Administration, Chapter 21.00(A): Policies and Procedures for Environmental, Safety and Health Management states:

A. *Department of Environmental Safety*

*The Department of Environmental Safety (DES) is responsible for the administration of the campus policies and is accountable for the University's compliance with all environmental, safety and health regulations. It carries out this mission by providing technical, regulatory and related management services to the colleges/schools and departments who have a shared responsibility for operational accountability for regulatory compliance. DES assists the colleges/schools and departments in the development and implementation of programs, including training, emergency response, and analysis of specific problems so that compliance is practical at the unit level. DES is the unit responsible for all official University contact with external governmental regulatory agencies concerned with workplace health, safety and environmental compliance. In consultation with University legal counsel and, as required, representation by the Office of the Attorney General, DES shall coordinate all University responses to regulatory agencies' inquiries, complaints, lawsuits and other formal proceedings. By working with a Policy Committee, DES is instrumental in the design and implementation of an effective environmental safety program. DES reports to the Vice President for Administrative Affairs.*

This policy grants the Department of Environmental Safety (DES) {recently changed to the Department of Environmental Safety, Sustainability, and Risk (ESSR)} the authority to maintain the University's compliance with environmental regulations. Therefore, ESSR will implement the IDDE requirements of the General Permit for Discharges from State and Federal Small Municipal Separate Storm Sewer Systems. With regards to illicit discharge detection and elimination, ESSR will implement the following requirements of their MS4 permit:

*C. Illicit Discharge Detection and Elimination. Permittees shall develop, implement, and maintain a program to identify and eliminate illicit storm drain system connections and non-stormwater discharges to the maximum extent practicable. The program developed to satisfy this minimum control measure shall contain elements to field screen storm drain system outfalls, inspect the storm drain system for the purpose of identifying the source of any illicit discharges, eliminate any illegal connection or illicit discharge to the storm drain system, and enforce penalties where appropriate. The illicit discharge program shall also contain components to address illegal dumping and spills. This minimum control measure may be implemented and maintained by the permittee or by another responsible entity. Additionally, a permittee may coordinate its efforts to identify and eliminate non-stormwater discharges with those of the surrounding County performing similar activities under an individual NPDES municipal separate storm sewer system permit. If the responsibilities for complying with this minimum control measure are to be shared between the permittee and another responsible entity, the relationship and specific duties of all participating entities shall be outlined in the NOI submitted to MDE according to PART II of this*

*general permit. At a minimum, a program developed to implement illicit discharge detection and elimination to satisfy this control measure shall contain the following:*

- 1. A map showing the extent of the storm drain system;*
- 2. The legal means to provide for entering onto private property to investigate and eliminate illicit storm drain system discharges;*
- 3. Procedures to field screen storm drain outfalls on a consistent basis;*
- 4. Inspection procedures for identifying the source of any suspected illicit discharges to the storm drain system;*
- 5. Enforcement and penalty procedures;*
- 6. Procedures to address spills and illegal dumping;*
- 7. Means to inform public employees, businesses, and the general public of illegal discharges and improper waste disposal; and*
- 8. Any other components deemed necessary to ensure that non-stormwater discharges to the municipal separate storm sewer system are either permitted by MDE under NPDES or eliminated.*

*Regardless of whether a permittee develops its own program or relies on another responsible entity to satisfy this minimum control measure, the permittee shall cooperate regarding discharges entering or leaving its jurisdictional boundaries or Waters of the State. The intent of this program is to control non-stormwater discharges to and from municipal separate storm sewer systems. Therefore, it is essential that a permittee covered by this general permit cooperate actively in instances where storm drain systems are interconnected with entities covered under this or any other NPDES stormwater permit.*

Additionally, in order to maintain compliance with the permit, ESSR has the authority to notify entities within the UMD MS4 of deficiencies and/or illicit discharges and to require corrective action to be performed. In the event that tenants or other non-UMD entities are involved in the deficiencies and/or illicit discharges, ESSR 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.

Deficiencies and/or illicit discharges at UMD construction sites will be handled differently; those will be reported to the Facilities Management Department by ESSR. 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 Maryland Department of the Environment for enforcement action.

# APPENDIX D

## ILLICIT DISCHARGE INCIDENT TRACKING SHEET

## Illicit Discharge Incident Tracking Sheet

<b>Incident ID:</b>				
<b>Responder Information</b>				
Call taken by:			Call date:	
Call time:			Precipitation (inches) in past 24-48 hrs:	
<b>Reporter Information</b>				
Incident time:			Incident date:	
Caller contact information ( <i>optional</i> ):				
<b>Incident Location</b> ( <i>complete one or more below</i> )				
Latitude and longitude:				
Stream address or outfall #:				
Closest street address:				
Nearby landmark:				
<b>Primary Location Description</b>		<b>Secondary Location Description:</b>		
<input type="checkbox"/> Stream corridor ( <i>In or adjacent to stream</i> )		<input type="checkbox"/> Outfall	<input type="checkbox"/> In-stream flow	<input type="checkbox"/> Along banks
<input type="checkbox"/> Upland area ( <i>Land not adjacent to stream</i> )		<input type="checkbox"/> Near storm drain	<input type="checkbox"/> Near other water source (storm water pond, wetland, etc.):	
Narrative description of location:				
<b>Upland Problem Indicator Description</b>				
<input type="checkbox"/> Dumping		<input type="checkbox"/> Oil/solvents/chemicals	<input type="checkbox"/> Sewage	
<input type="checkbox"/> Wash water, suds, etc.		<input type="checkbox"/> Other: _____		
<b>Stream Corridor Problem Indicator Description</b>				
Odor	<input type="checkbox"/> None	<input type="checkbox"/> Sewage	<input type="checkbox"/> Rancid/Sour	<input type="checkbox"/> Petroleum (gas)
	<input type="checkbox"/> Sulfide (rotten eggs); natural gas	<input type="checkbox"/> Other: Describe in "Narrative" section		
Appearance	<input type="checkbox"/> "Normal"	<input type="checkbox"/> Oil sheen	<input type="checkbox"/> Cloudy	<input type="checkbox"/> Suds
	<input type="checkbox"/> Other: Describe in "Narrative" section			
Floatables	<input type="checkbox"/> None:	<input type="checkbox"/> Sewage (toilet paper, etc)	<input type="checkbox"/> Algae	<input type="checkbox"/> Dead fish
	<input type="checkbox"/> Other: Describe in "Narrative" section			
Narrative description of problem indicators:				
Suspected Violator (name, personal or vehicle description, license plate #, etc.):				

### Investigation Notes

Initial investigation date:

Investigators:

No investigation made

Reason:

Referred to different department/agency:

Department/Agency:

Investigated: No action necessary

Investigated: Requires action

Description of actions:

Hours between call and investigation:

Hours to close incident:

Date case closed:

Notes:

# APPENDIX E

## OUTFALL INSPECTION FORM

## IDDE OUTFALL INSPECTION FORM

### Section 1: Background Data

Subwatershed:		Outfall ID:	
Today's date:		Time (Military):	
Investigators:		Form completed by:	
Temperature (°F):	Rainfall (in.):	Last 24 hours:	Last 48 hours:
Latitude:	Longitude:	GPS Unit:	GPS LMK #:
Camera:		Photo #s:	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial		<input type="checkbox"/> Open Space	
<input type="checkbox"/> Ultra-Urban Residential		<input type="checkbox"/> Institutional	
<input type="checkbox"/> Suburban Residential		Other: _____	
<input type="checkbox"/> Commercial		Known Industries: _____	
Notes (e.g., origin of outfall, if known):			

### Section 2: Outfall Description

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> RCP <input type="checkbox"/> CMP <input type="checkbox"/> PVC <input type="checkbox"/> HDPE <input type="checkbox"/> Steel <input type="checkbox"/> Other: _____	<input type="checkbox"/> Circular <input type="checkbox"/> Single <input type="checkbox"/> Elliptical <input type="checkbox"/> Double <input type="checkbox"/> Box <input type="checkbox"/> Triple <input type="checkbox"/> Other: _____ <input type="checkbox"/> Other: _____	Diameter/Dimensions: _____	In Water: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully  With Sediment: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earthen <input type="checkbox"/> rip-rap <input type="checkbox"/> Other: _____	<input type="checkbox"/> Trapezoid <input type="checkbox"/> Parabolic <input type="checkbox"/> Other: _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-Stream	<b>(applicable when collecting samples)</b>			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>If No, Skip to Section 5</i>			
Flow Description (If present)	<input type="checkbox"/> Trickle <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

### Section 3: Quantitative Characterization

FIELD DATA FOR FLOWING OUTFALLS				
PARAMETER	RESULT	UNIT	EQUIPMENT	
<input type="checkbox"/> Flow #1	Volume		Liter	Bottle
	Time to fill		Sec	
<input type="checkbox"/> Flow #2	Flow depth		In	Tape measure
	Flow width	_____ ' _____"	Ft, In	Tape measure
	Measured length	_____ ' _____"	Ft, In	Tape measure
	Time of travel		S	Stop watch
Temperature		°F	Thermometer	
pH		pH Units	Test strip/Probe	
Ammonia		mg/L	Test strip	
Chlorine		mg/L	Probe	

## IDDE OUTFALL INSPECTION FORM

### Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow?  Yes  No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Sewage <input type="checkbox"/> Rancid/sour <input type="checkbox"/> Petroleum/gas <input type="checkbox"/> Sulfide <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint	<input type="checkbox"/> 2 – Easily detected	<input type="checkbox"/> 3 – Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Faint colors in sample bottle	<input type="checkbox"/> 2 – Clearly visible in sample bottle	<input type="checkbox"/> 3 – Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 – Slight cloudiness	<input type="checkbox"/> 2 – Cloudy	<input type="checkbox"/> 3 – Opaque
Floatables -Does Not Include Trash!!	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Toilet Paper, etc.) <input type="checkbox"/> Suds <input type="checkbox"/> Petroleum (oil sheen) <input type="checkbox"/> Other:	<input type="checkbox"/> 1 – Few/slight; origin not obvious	<input type="checkbox"/> 2 – Some; indications of origin (e.g., possible suds or oil sheen)	<input type="checkbox"/> 3 – Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

### Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present?  Yes  No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Deposits/Stains	<input type="checkbox"/>	<input type="checkbox"/> Oily <input type="checkbox"/> Flow Line <input type="checkbox"/> Paint <input type="checkbox"/> Other:	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Poor pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Suds <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other:	
Pipe benthic growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other:	

### Section 6: Overall Outfall Characterization

<input type="checkbox"/> Unlikely <input type="checkbox"/> Potential (presence of two or more indicators) <input type="checkbox"/> Suspect (one or more indicators with a severity of 3) <input type="checkbox"/> Obvious
---

### Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow	<input type="checkbox"/> Pool
3. Intermittent flow trap set?	<input type="checkbox"/> Yes	<input type="checkbox"/> No    If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Caulk dam

### Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

# APPENDIX F

## IDDE TRAINING MATERIALS



# Environmental Safety, Sustainability & Risk

MS4 Permit Number 13-SF-5501 (MDR055501)



UNIVERSITY OF  
MARYLAND

# MS4 Permit

(Municipal Separate Storm Sewer System)

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- Phase I MS4 Permit: Population over 100,000
  - Montgomery County, Prince Georges County
- Phase II MS4 Permit
  - Small Municipalities
  - *State and Federal Agencies (e.g., USM Institutions)*

# Overview

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Became effective 10/31/2018

- Small MS4 located within a permit area (Phase II)
  - Owned/operated by the State of MD
  - Already covered under a NPDES Small MS4 permit (05-SF-5501)
  - Developed land >5 Acres and >10% impervious area property wide
    - ~40% is impervious of the 1,335 acres of land (Main Campus)
- 5 year term unless administratively extended

# Requirements of the MS4 Permit

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- Implementation of stormwater management programs and restoration actions to control discharge of pollutants from regulated MS4s.
- Identify BMPs in place to help mitigate stormwater discharge
- MS4 Six Minimum Control Measures (MCMs)
  - Personnel Education and Outreach
  - Public Involvement and Participation
  - Illicit Discharge Detection and Elimination Program
  - Construction Site Stormwater Runoff Control
  - Post Construction Stormwater Management
  - Pollution Prevention and Good Housekeeping

**In addition, there is a 20% impervious area restoration requirement known as the Chesapeake Bay Restoration (CBR)**

# Key components of an IDDE

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1. Stormwater Mapping
2. Ordinances
3. Detection Procedures
4. Corrective Action
5. Public Education
6. Recordkeeping
7. Staff Training

UNIVERSITY OF MARYLAND

*Department of Environmental Safety,  
Sustainability, and Risk*



# Stormwater mapping

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- Many communities lacked up-to-date mapping resources. It was found that mapping layers such as storm sewers, open drainage channels, waters of the U.S., outfalls, and land use were particularly useful to conduct and prioritize effective field investigations.
- UMD utilizes GIS and CAD programs to keep up-to-date maps of the campus, along with multiple layers.



# Ordinances

**Table 8: Codes and Ordinances with Potential Links to IDDE**

- Fire codes
- Hazardous wastes/spill controls
- Health codes
- Industrial storm water compliance
- Litter control regulations
- Nuisance ordinances
- Plumbing codes
- Pollution prevention permitting requirements
- Restaurant grease regulations
- Septic system regulations
- Sewer/drain ordinances
- Storm water ordinance
- Street/highway codes

To establish legal authority, communities will need to either develop a new IDDE ordinance or modify an existing ordinance that addresses illicit discharges. Language from existing ordinances that addresses illicit discharges should be incorporated or cross-referenced into any new IDDE ordinance to minimize conflicts and confusion. Furthermore, existing code ordinances may need to be amended or superseded to be consistent with the new IDDE ordinance.

# Detection Procedures

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- Notification of Spills
- Reporting during routine inspections
  - Outfall Reconnaissance Inventory (ORI) will be conducted, at a minimum, once per permit term
  - Monthly inspections for NPDES permit
  - Quarterly inspections for Stormwater permit
- Source Identification
  - Tracking, field investigation, smoke test, dye test, etc.

# Corrective Action

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- University Ordinance should provide for escalating enforcement measures to notify operators of violations and to require corrective action.
- Most illicit discharge corrective actions involve some form of infrastructure modification or repair.
  - Direct discharges are those such as cross-connections, and piping.
  - Indirect discharges are those such as pump station failure or sewer break.

# Corrective Actions Continued

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- Once the source of an illicit discharge has been identified, steps should be taken to fix or eliminate the discharge. The following four questions should be answered for each individual illicit discharge to determine how to proceed:
  - Who is responsible?
  - What methods will be used to fix it?
  - How long will it take?
  - How will removal be confirmed?

# Public Education

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- NPDES Phase II permits require public education and outreach and public involvement.
- Public education to advertise the hotline and training to educate employees across departments and agencies
- Dispersal of information brochures on UMD's IDDE
- Labeling storm drains and outfalls to make the public aware.

# Recordkeeping

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- The NPDES Phase II Permit requires UMD to keep records of all stormwater program activities and IDDE records for a minimum of five (5) years.
- UMD 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 UMD ESSR office. Electronic copies will be available on demand.

# Staff Training

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- The MS4 Permit requires UMD to provide annual training (once a year) to applicable field personnel in recognition and reporting of illicit discharges.
- Sign in sheet for records

# Reporting an Incident

Illicit Discharge Hotline Incident Tracking Sheet	
Incident ID:	
<b>Responder Information</b>	
Call taken by:	Call date:
Call time:	Precedence (check) in part 24-68 (a):
<b>Reporter Information</b>	
Incident name:	Incident date:
Caller contact information (optional):	
<b>Incident Location</b> (complete one or more below):	
Latitude and longitude:	
Township address or outfall #:	
Closest street address:	
Nearest landmark:	
<b>Primary Location Description</b>	<b>Secondary Location Description</b>
<input type="checkbox"/> Stream corridor (In or adjacent to stream):	<input type="checkbox"/> Outfall
<input type="checkbox"/> Upland area (Land not adjacent to stream):	<input type="checkbox"/> Near storm drain
<input type="checkbox"/> In-stream flow	<input type="checkbox"/> Along banks
<input type="checkbox"/> Near other water source (storm water pond, wetland, etc.):	
Narrative description of location:	
<b>Upland Problem Indicator Description</b>	
<input type="checkbox"/> Dumping	<input type="checkbox"/> Oil solvents/chemicals
<input type="checkbox"/> Wind-blown mud, etc.	<input type="checkbox"/> Sewage
<input type="checkbox"/> Other:	
<b>Stream Corridor Problem Indicator Description</b>	
<b>Odor</b>	<input type="checkbox"/> None
<input type="checkbox"/> Foul (rotten egg), animal, gas	<input type="checkbox"/> Sewage
<input type="checkbox"/> Other: Describe in "Narrative" section	<input type="checkbox"/> Faint/low
<b>Appearance</b>	<input type="checkbox"/> Pervasive (gas)
<input type="checkbox"/> Normal	<input type="checkbox"/> Oil slicks
<input type="checkbox"/> Other: Describe in "Narrative" section	<input type="checkbox"/> Cloudy
<b>Flotables</b>	<input type="checkbox"/> None
<input type="checkbox"/> None	<input type="checkbox"/> Sewage (toilet paper, etc.)
<input type="checkbox"/> Other: Describe in "Narrative" section	<input type="checkbox"/> Algae
<input type="checkbox"/> Dead fish	
Narrative description of problem indicators:	
Suspected Violator (name, personal or vehicle description, license plate #, etc.):	

- Immediately notify the discharge hotline
- Complete the Illicit Discharge Hotline Incident Tracking Sheet (left)
- Located in Appendix D of the UMD IDDE Plan

# IDDE Tracking form

**IDDE TRACKING FORM**

Date Illicit Discharge Observed/Reported: \_\_\_\_\_ Outfall # (if applicable): \_\_\_\_\_

Description of IDDE: \_\_\_\_\_  
\_\_\_\_\_

Date of Investigation: \_\_\_\_\_

Was the Source found?  Yes  No

If "Yes", please describe: \_\_\_\_\_  
\_\_\_\_\_

Was IDDE Resolved?  Yes  No

If "Yes", please explain how it was resolved (Please include any personnel or outside parties contacted or involved):  
\_\_\_\_\_  
\_\_\_\_\_

If "No", please explain why it was not resolved: \_\_\_\_\_  
\_\_\_\_\_

Is any follow-up action required?  Yes  No

If "Yes", please explain: \_\_\_\_\_  
\_\_\_\_\_

Date investigation closed: \_\_\_\_\_

Attach photos to this form and retain for records.

- After an illicit discharge is suspected, UMD ESSR staff will confirm the discharge.
- ESSR-EA Staff **must** fill out the IDDE tracking form located in Appendix G of the UMD IDDE plan.

# Outfall Inspections

**OUTFALL RECONNAISSANCE INVENTORY: SAMPLE COLLECTION FIELD SHEET**

**Section 1: Background Data**

Site/Location:		Map/Sheet No.:	
Date of Visit:		Time (Military):	
Investigator:		Date Completed by:	
Temperature (°F):	Barrel No.:	Lab. ID No.:	Lab. Kit No.:
Latitude:	Longitude:	GPS East:	GPS North:
Elevation:			
Land Use or Storage Area (Check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> Open Space	<input type="checkbox"/> Institutional	<input type="checkbox"/> Other _____
<input type="checkbox"/> Urban Urban Residential	<input type="checkbox"/> Suburban Residential	<input type="checkbox"/> Commercial	<input type="checkbox"/> Unknown/Undeveloped
Notes (e.g., nature of outfall, if known):			

**Section 2: Outfall Description**

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> Brick <input type="checkbox"/> PVC <input type="checkbox"/> Iron <input type="checkbox"/> Other _____	<input type="checkbox"/> Concrete <input type="checkbox"/> Triangular <input type="checkbox"/> Oval <input type="checkbox"/> Other _____	Depth: _____ Top Width: _____ Bottom Width: _____	In Water: <input type="checkbox"/> Top <input type="checkbox"/> Partially <input type="checkbox"/> Fully Water Substrate: <input type="checkbox"/> No <input type="checkbox"/> Partially <input type="checkbox"/> Fully
<input type="checkbox"/> Open Channel	<input type="checkbox"/> Concrete <input type="checkbox"/> Earth <input type="checkbox"/> Gravel <input type="checkbox"/> Other _____	<input type="checkbox"/> Triangular <input type="checkbox"/> Parabolic <input type="checkbox"/> Other _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In-stream (specify when collecting samples)				
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If No, Skip to Section 3)</i>			
Flow Description (if present)	<input type="checkbox"/> Turbulent <input type="checkbox"/> Moderate <input type="checkbox"/> Substantial			

**Section 3: Quantitative Characterization**

PARAMETER	FIELD DATA FOR FLOWING OUTFALLS			EQUIPMENT
	RESULT	UNIT		
<input type="checkbox"/> Flow #1	Velocity	ft/s		Velocimeter
	Time to fill	Sec		
	Flow depth	ft		Tape measure
	Flow width	ft, in		Tape measure
	Measured length	ft, in		Tape measure
	Time of travel	S		Stop watch
	Temperature	°F		Thermometer
	pH	pH		pH meter
	Ammonia	mg/L		Test strip

- Section 1: Background Data of the site/outfall location
- Section 2: Description of outfall
  - Material, size, shape, dimensions
- Section 3: Quantitative characterization
  - Only if there is flow
    - Temp, flow, pH, ammonia

# Outfall Inspections

**Outfall Reconnaissance Inventory Field Sheet**

**Section 4: Physical Indicators for Flowing Outfalls Only**  
 Are Any Physical Indicators Present in the Flow?  Yes  No (If No, Skip to Section 8)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Color	<input type="checkbox"/>	<input type="checkbox"/> Average <input type="checkbox"/> Brown/Green <input type="checkbox"/> Pink/Orange <input type="checkbox"/> Turbid <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily Noticed	<input type="checkbox"/> 3 - Noticeable from a distance
Odor	<input type="checkbox"/>	<input type="checkbox"/> Clean <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Other <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Faint odor in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See severity	<input type="checkbox"/> 1 - Single observation	<input type="checkbox"/> 2 - Usually	<input type="checkbox"/> 3 - Often
Flotation (Does Not include Trash)	<input type="checkbox"/>	<input type="checkbox"/> Sludge (Tissue Paper, etc.) <input type="checkbox"/> Sand <input type="checkbox"/> Petroleum (oil drips) <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Frequent, origin not obvious	<input type="checkbox"/> 2 - Some indication of origin or possible trash (if observed)	<input type="checkbox"/> 3 - Some origin close or is obvious oil (diesel, fuel, or floating sanitary material)

**Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls**  
 Are physical indicators that are not related to flow present?  Yes  No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Outfall Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Peeling Paint <input type="checkbox"/> Corrosion	
Debris/Trash	<input type="checkbox"/>	<input type="checkbox"/> Oil <input type="checkbox"/> Flow Line <input type="checkbox"/> Plastic <input type="checkbox"/> Other	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Excessive <input type="checkbox"/> Inhibited	
Fair good quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Sludge <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other	
Pipe bed/bio growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other	

**Section 6: Overall Outfall Characterization**

Unlikely  Potential (presence of two or more indicators)  Suspect (one or more indicators with a severity of 3)  Obvious

**Section 7: Data Collection**

1. Sample for the lab?  Yes  No

2. If yes, collected from:  Flow  Pool

3. Insufficient flow trap use?  Yes  No If Yes, type:  OBM  Creek dam

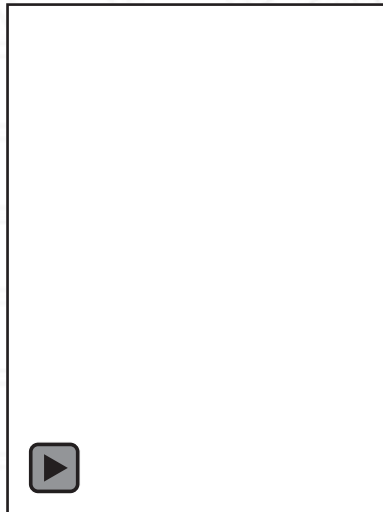
**Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?**

- Section 4: Physical indicators for flowing outfalls
  - i.e. Odor, color, turbidity, floatables
- Section 5: Physical indicators for BOTH flowing and non-flowing
  - anything unrelated to the outfall flow
- Section 6: Overall outfall characterization
  - pollution indicators present
- Section 7: Data Collection
  - describes sample collection
- Section 8: non- illicit discharge concerns
  - e.g. issues surrounding outfall not pertaining to the actual flow/water

# 2018 Outfall Screening Photos



Outfall 03



Outfall 30



No ID



No ID

# Future Implications

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## Chesapeake Bay Restoration

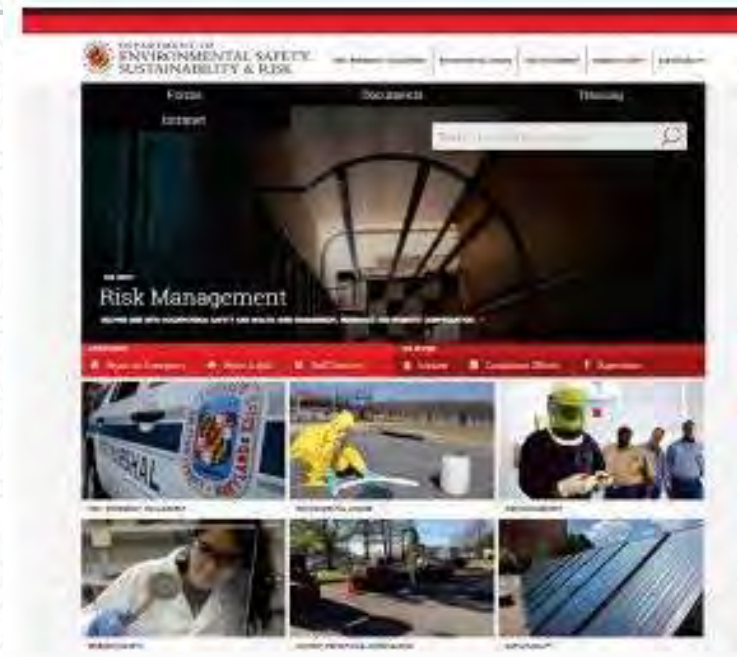
- 20% reduction OR treatment of stormwater
  - 35% of UMD is impervious
  - Do satellite properties count?
- How much impervious is treated? (i.e. stormwater ponds, infiltration, etc.)
  - Assuming 20% (More likely less)
  - Roughly 75 Acres (5x The size of McKeldin Mall)
- Who/What/Where?
- Must be completed by 2025
- What is treatment?
  - lbs of Nitrogen and phosphorus reduced
  - Removing impervious surfaces
  - Treating stormwater/improvements

## Permit Term ORI

- Need to update map of current and new outfalls
  - Verify the stormwater lines
  - Remove “Outfalls” that discharge into on property structures (i.e stormwater ponds and conveyances)
- Identify and eliminate illicit connections

# How to Reach Us

- [www.essr.umd.edu](http://www.essr.umd.edu)
- Call 301-405-3960 during business hours
- Call UMPD Communications at 301-405-3555 to reach on-call ESSR staff after business hours.
- Email [safety@umd.edu](mailto:safety@umd.edu)



# APPENDIX G

Institute for Bioscience and Biotechnology  
Research (IBBR) Addendum

## **Institute for Bioscience and Biotechnology Research (IBBR) Addendum**

IBBR was established by the University System of Maryland Board of Regents in 2010, building on the foundation of the Center for Advanced Research in Biotechnology (CARB) and the Center for Biosystems Research (CBR). IBBR Shady Grove is adjacent to The Universities at Shady Grove in the heart of the I-270 Bioscience Corridor. IBBR Shady Grove is easily accessible from Baltimore, College Park, and Gaithersburg. The campus is located in a suburban area, bounded by a mixture of commercial and institutional areas on all sides. IBBR is bordered by Darnestown Road to the north, Shady Grove Road to the east, and the Universities at Shady Grove (USG) to the west and south. The campus currently consists of two (2) large, connected buildings on 1,335 acres of land. A site vicinity map is included in this addendum.

The stormwater drainage system at IBBR consists of intermittent surface flow and catch basins located throughout the campus. Approximately 40% of the campus is considered impervious. The campus maintains an MS4 that consists of eleven (11) outfalls, four (4) of which are shared with USG. Outfalls 01G-P discharges to Gudelsky Pond. Outfall 01 discharges to an unnamed pond. Water from this discharge point ultimately flows to a tributary of the Watts Branch, which later empties into the Potomac River, a tributary of the Chesapeake Bay. IBBR 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.

District: **04** Account Number: **03219568**



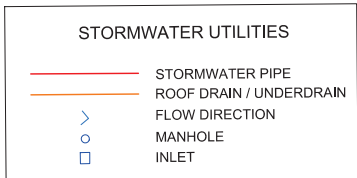
The information shown on this map has been compiled from deed descriptions and plats and is not a property survey. The map should not be used for legal descriptions. Users noting errors are urged to notify the Maryland Department of Planning Mapping, 301 W. Preston Street, Baltimore MD 21201.

If a plat for a property is needed, contact the local Land Records office where the property is located. Plats are also available online through the Maryland State Archives at [www.plats.net](http://www.plats.net) (<http://www.plats.net>).

Property maps provided courtesy of the Maryland Department of Planning.

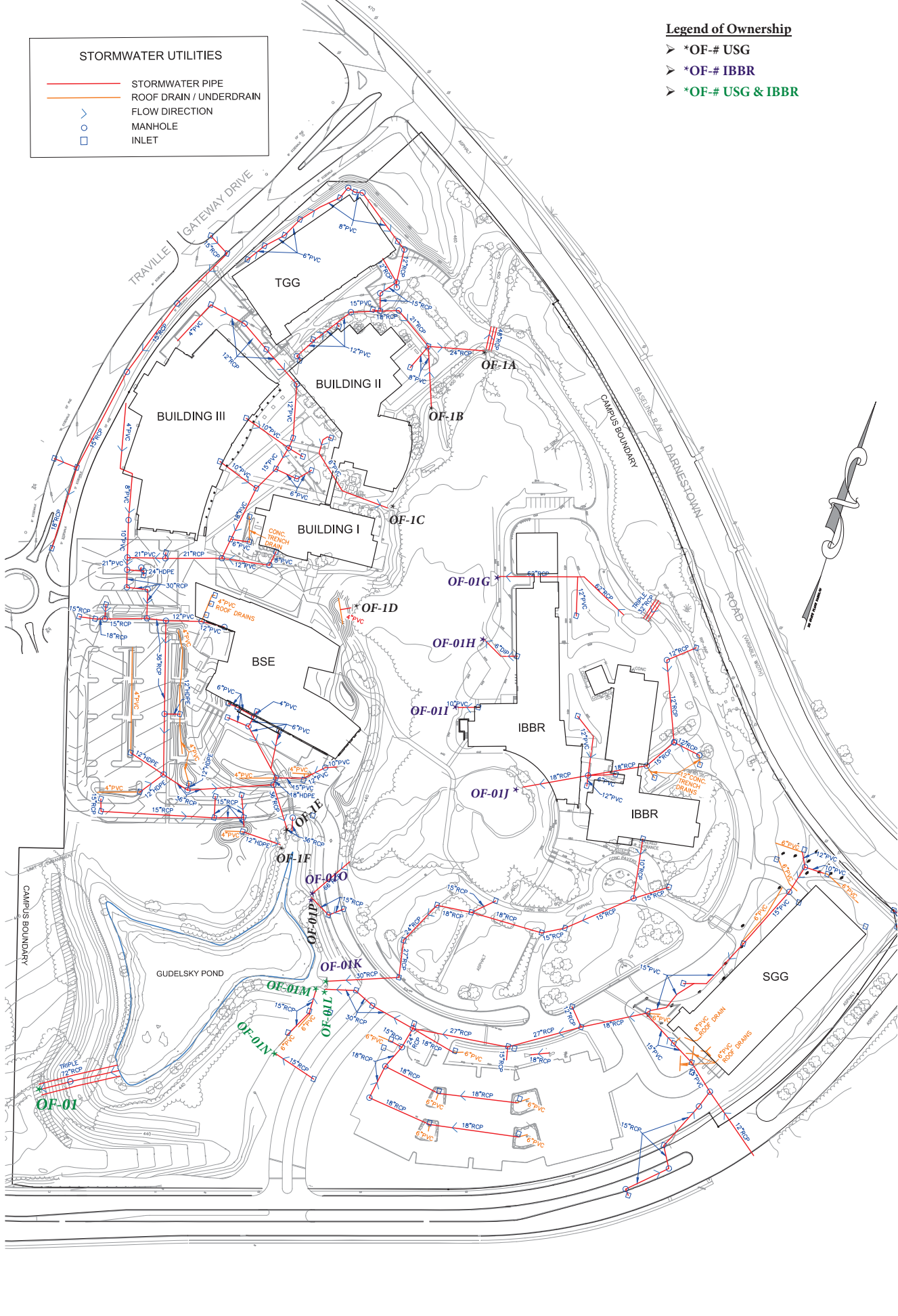
For more information on electronic mapping applications, visit the Maryland Department of Planning web site at [www.mdp.state.md.us/OurProducts/OurProducts.shtml](http://www.mdp.state.md.us/OurProducts/OurProducts.shtml) (<http://www.mdp.state.md.us/OurProducts/OurProducts.shtml>).

<a href="#">View Map</a>		<a href="#">View GroundRent Redemption</a>		<a href="#">View GroundRent Registration</a>	
<b>Account Identifier:</b>		<b>District - 04 Account Number - 03219568</b>			
<b>Owner Information</b>					
<b>Owner Name:</b>	STATE OF MARYLAND OFF OF ATTY GEN-EDU AFFRS DIV		<b>Use:</b>	EXEMPT COMMERCIAL	
<b>Mailing Address:</b>	200 SAINT PAUL PL BALTIMORE MD 21202-2004		<b>Principal Residence:</b>	NO	
			<b>Deed Reference:</b>	/15534/ 00302	
<b>Location &amp; Structure Information</b>					
<b>Premises Address:</b>		9636 GUDELSKY DR ROCKVILLE 20850-0000		<b>Legal Description:</b>	WICKHAMS PARK ETC
<b>Map:</b>	<b>Grid:</b>	<b>Parcel:</b>	<b>Sub District:</b>	<b>Subdivision:</b>	<b>Section:</b>
FR43	0000	P410		0001	
					<b>Block:</b>
					<b>Lot:</b>
					<b>Assessment Year:</b>
					2015
					<b>Plat No:</b>
					<b>Plat Ref:</b>
<b>Special Tax Areas:</b>			<b>Town:</b>	NONE	
			<b>Ad Valorem:</b>		
			<b>Tax Class:</b>	53	
<b>Primary Structure Built</b>	<b>Above Grade Enclosed Area</b>	<b>Finished Basement Area</b>	<b>Property Land Area</b>	<b>County Use</b>	
2016	233295		45.7100 AC	682	
<b>Stories</b>	<b>Basement</b>	<b>Type</b>	<b>Exterior</b>	<b>Full/Half Bath</b>	<b>Garage</b>
		PARKING STRUCTURE	CONCRETE		
					<b>Last Major Renovation</b>
<b>Value Information</b>					
	<b>Base Value</b>	<b>Value</b>	<b>Phase-in Assessments</b>		
		<b>As of</b>	<b>As of</b>	<b>As of</b>	
		01/01/2015	07/01/2016	07/01/2017	
<b>Land:</b>	3,982,200	4,579,500			
<b>Improvements</b>	73,330,400	74,768,900			
<b>Total:</b>	77,312,600	79,348,400	78,669,800	79,348,400	
<b>Preferential Land:</b>	0			0	
<b>Transfer Information</b>					
<b>Seller:</b> MONTGOMERY COUNTY		<b>Date:</b> 02/12/1998		<b>Price:</b> \$0	
<b>Type:</b> NON-ARMS LENGTH OTHER		<b>Deed1:</b> /15534/ 00302		<b>Deed2:</b>	
<b>Seller:</b>		<b>Date:</b>		<b>Price:</b>	
<b>Type:</b>		<b>Deed1:</b>		<b>Deed2:</b>	
<b>Seller:</b>		<b>Date:</b>		<b>Price:</b>	
<b>Type:</b>		<b>Deed1:</b>		<b>Deed2:</b>	
<b>Exemption Information</b>					
<b>Partial Exempt Assessments:</b>	<b>Class</b>	<b>07/01/2016</b>	<b>07/01/2017</b>		
<b>County:</b>	330	78,669,800.00	79,348,400.00		
<b>State:</b>	330	78,669,800.00	79,348,400.00		
<b>Municipal:</b>	330	0.00 0.00	0.00 0.00		
<b>Tax Exempt:</b>	<b>Special Tax Recapture:</b>				
<b>Exempt Class:</b>	NONE				
<b>Homestead Application Information</b>					
<b>Homestead Application Status:</b> No Application					



**Legend of Ownership**

- > \*OF-# USG
- > \*OF-# IBBR
- > \*OF-# USG & IBBR



SURVEYED BY \_\_\_\_\_  
 DRAWN BY JBB  
 CHECKED BY JW  
 DATE SEPTEMBER 23, 2020

**STORMWATER UTILITIES**  
**UNIVERSITY OF MARYLAND, SHADY GROVE**  
 BALTIMORE COUNTY, MARYLAND  
**GEOSPATIAL & ENGINEERING DIVISION**  
 259 Najoles Road - Millersville, Maryland 21108 - Office: 410-729-8200 - Fax: 410-729-8340

PROJECT NO. \_\_\_\_\_  
 SCALE: 1" = 150'  
 SHEET 1 OF 1  
 DRAWING NO. \_\_\_\_\_



MD IMAP, DoT



## USG / IBBR Stormwater Network



0 0.0225 0.045 0.09 Miles

- |                |                        |
|----------------|------------------------|
| ● Outfall      | ⊕ Control Structure    |
| ● Manhole      | ➤ Pipe                 |
| ■ Inlet        | — Hydraulic Connection |
| ● Head/Endwall | — Drain                |
| ● Culvert      | ➤ Ditch                |












MD IMP, DoT



## USG / IBBR BMP Locations

### BMP Type

- |   |   |
|---|---|
|  Infiltration Berms   |  Infiltration Trench |
|  Rainwater Harvesting |  Micro-Bioretention  |
|  Bioretention         |  Oil Grit Separator  |
|  Green Roof           |  Retention Pond      |
|   |  Sand Filter         |



0 0.0225 0.045 0.09 Miles

ATTACHMENT C  
EXAMPLE TRAINING MATERIALS



# Environmental Safety, Sustainability & Risk

General Stormwater Permit 20-SW for UMD 20-SW-3281 (MDR003281)



UNIVERSITY OF  
MARYLAND

# Overview-The Regulatory Background

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In 1972, Congress amended the Federal Water Pollution Control Act (i.e., the Clean Water Act) to prohibit the discharge of **any pollutant** to waters of the U.S from point sources.

- The exception to this discharge prohibition is if the pollutant is authorized by a NPDES (National Pollutant Discharge Elimination System) permit.

The intent of the NPDES program, prior to storm water requirements, was to target reductions in pollutants from industrial process waste water and municipal sewage.

- However, as control measures for these operations improved, the focus became disperse, non-point sources. ***Of prime importance with such widespread and scattered sources was stormwater runoff.***

# Overview-The Regulatory Background

---

- Stormwater Pollution Prevent Plans (SWPPPs)
  - Mandated by the Water Quality Act of 1987
  - Includes classes of industries and operations to be covered by general and/or individual NPDES permits to develop SWPPPs
- Phase I Coverage (11/16/1990)
  - Permits required for Municipal Separate Storm Sewer Systems (MS4s) located in areas with more than 100,000 people.
  - Also covers 11 categories of Industrial Activity- including recycling facilities, treatment works, electric plants, and manufacturing facilities.
  - Construction activities disturbing 5 or more acres are also subject.
- Phase II Coverage (12/08/1999)
  - Permits required for certain regulated Municipal Separate Storm Sewer Systems (MS4s) located in areas with less than 100,000 people.
  - Construction activities disturbing between 1 and 5 acres are also subject.
  - Also allows for a NO EXPOSURE EXCLUSION, when a lack of water quality impact can be demonstrated.

# 12-SW vs. 20-SW

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## 12-SW

- Includes the creation and implementation of a SWPPP
- Has benchmark and visual sampling
  - UMD only had visual
- Quarterly and Annual Inspections
- Corrective Actions
- Chesapeake Bay Restoration (UMD not required)

## 20-SW (February 2023)

- More sectors with benchmark monitoring requirements
  - UMD has 1 Sector with benchmark monitoring
- Impaired water monitoring
- AIMS & corrective actions
- Climate adaption
- Identify sources of PCBs and PFAS

# Enforcement of the 20-SW

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MDE is the enforcing agent of the 20-SW

- EPA allows MDE to enforce their more stringent permit regulations

MDE Audits SWPPP binder(s) for updates, inspections, visual monitoring, corrective actions, spill reports, etc.

- Failure to have items can result in monetary fines

# Chesapeake Bay Restoration

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- A 20% reduction of the untreated impervious surface area at your facility
  - Not a 20% reduction of surface, but of treatment!
  - Stormwater ponds, stream restoration, etc.
- Due to our MS4 permit, the CBR will be completed under that instead of the 20-SW



# What IS a SWPPP and What is in it?

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A SWPPP is a site-specific plan tailored to specific site conditions. It is also a self implementing plan.

- A SWPPP must contain:
  1. Pollution Prevention Team
  2. Accurate Site Description including a detailed map
  3. Description of “exposed” industrial activities and previous spills/leaks over last three years
  4. Identification of non-storm water discharges, illicit connections. Create procedures for eliminating non-authorized discharges.
  5. Description of Structural and Non-Structural stormwater management controls (BMPs)
  6. Record Keeping of all corrective actions, spills, and inspections

# 1. Pollution Prevention Team (P2 Team)

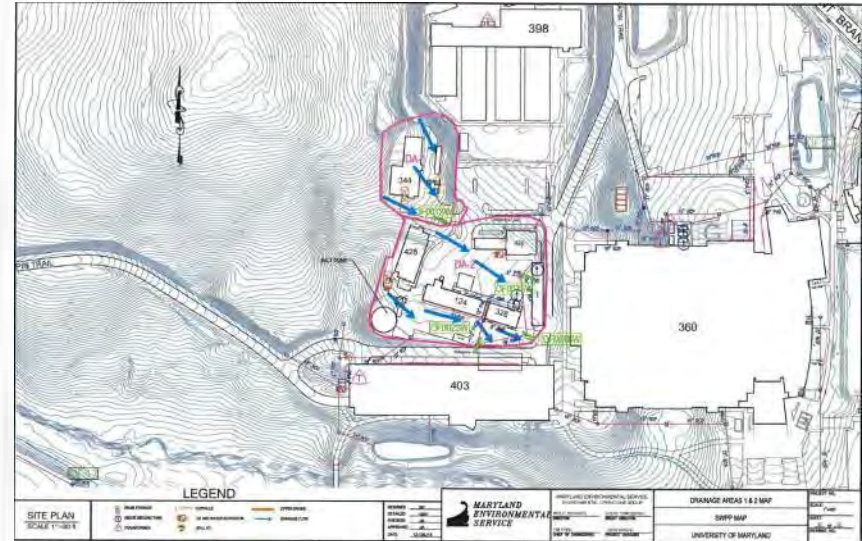
Staff Names	Individual Responsibilities	Contact Info
Jason Baer, Assistant Director of Environmental Affairs, UMD	Verify that the SWPPP is up to date; Signatory for NeDMR submissions	301-405-3163; jbaer123@umd.edu
Kaitlyn Peterson, Environmental Regulatory Compliance Manager, UMD	Verify that the SWPPP is up to date; modify the SWPPP to reflect any facility changes; Data management for benchmark sampling	301-405-8604; Kpeter13@umd.edu
Charles Curtis, Program Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the Environmental Services Building and all of DA-1.	301-405-3162; ccurtis@umd.edu
Karen Petroff, Assistant Director of B&LM, Arboretum, and Landscaping Services	Ensure that all permit requirements and BMPs are being correctly implemented within DA-2 and DA-7	301-405-8952 kpetroff@umd.edu
Michael Carmichael, Stormwater Management & Maintenance Inspector, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the UMD Landscaping Vehicle and Equipment Storage, Salt Dome, Vehicle and Equipment Maintenance in DA-2	301-314-1824; mmcarnic@umd.edu
Peter Agustin, Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the University Bus Facility Parking, Fueling, and Maintenance area in DA-3.	301-314-7267; pedawg@umd.edu
Jay Carter Smith, Solid Waste Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the source separated recycling area in DA-4.	301-405-5253; jsmith76@umd.edu
William Monan, Associate Director - Landscape Services, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the landscape material storage area in DA-4.	301-405-2290; wmonan@umd.edu
Larry Brookman, Facilities Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented at the Severn Building in DA-5 apart from vehicle fueling & maintenance.	301-226-8613; lbrookma@umd.edu
Leigh Remz, Manager, UMD	Ensure that all permit requirements and BMPs are being correctly implemented in regard to vehicle fueling & maintenance in DA-5.	301-405-5483; lremz@umd.edu
Mark Alexander, Operations Manager, College Park Energy LLC	Ensure that all permit requirements and BMPs are being correctly implemented at the Steam Electric Plant and Oil Storage in DA-6.	301-405-8025; mark.alexander@engie.com
Kristofer Bird, Environmental Specialist, UMD	Verify that the SWPPP is up to date; Quarterly visual and benchmark monitoring, Site inspections; SWPPP updates; and Annual pollution prevention (P2) team training.	301-405-7016; kbird@umd.edu

The staff is responsible for developing, implementing, maintaining, and revising the facility SWPPP.

UMD P2 team can be located within the SWPPP.

## 2. Accurate Site Description

- Description of the industrial activities performed
- Site map includes property size, potential pollutant sources, liquid storage tanks, impervious surfaces, historical spills and Stormwater outfalls
- Identify both activities and materials which may potentially be a “significant” pollution source into storm water discharges.



# 3. Description of “exposed” industrial activities and previous spills

---

- Standard Industrial Classification (SIC) is a system for classifying industries by a four-digit code and is used by government agencies to classify industry areas.
  - UMD’s SIC is School Bus Maintenance Facilities.
    - Sector AD.b in the 20-SW Permit
  - There are an additional 5 sectors covered around campus
    - Sector K: Hazardous Waste Treatment, Storage, or Disposal Facilities; Sector N: : Scrap Recycling and Waste Recycling Facilities; Sector O: Steam Electric Generating Facilities; Sector P: Land Transportation and Warehousing; and Sector AD.a: Department of Public Works and Highway Maintenance Facilities.

## 4. Identification of non-storm water discharges, illicit connections.

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The 20-SW only permits stormwater discharges.

- Any discharge that is not stormwater and is not permitted by an additional permit is unauthorized and must be documented and eliminated



# 5. Best Management Practices (BMPs)

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## Structural

- Protective covers over curb inlets, trench drains.
- Vegetative swales/Slope diversions.
- Secondary containment devices.
- Protective booms.

## Non- Structural

- Good Housekeeping
- Proper Material Storage
- Proper Spill Response—refer to SPCC plan
- Proper Equipment Fueling and Repair
- Proper Disposal of Waste
- Preventive Maintenance
- Regular Schedule of Inspections

# Examples of Structural vs. Non-Structural BMPs

## Structural



## Non-Structural



# 6. Record Keeping

The SWPPP is a “living document” which is constantly being updated and/or modified as changes occur on campus.

- Spill documents must be maintained for at least 3 years
- Annual training documentation
- All inspections and sampling forms
- Analytical lab results
- AIMS and Corrective actions



# Benchmark Sampling and Visual Monitoring

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## Benchmark Sampling


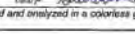
- Quarterly samples must be taken for four consecutive quarters by a member of the P2 team;
- Can stop monitoring if ALL four quarters are below benchmark;
- Each industry has different sector specific benchmarks;
- Samples are sent to the lab;
- Results are sent to MDE on a quarterly basis

## Visual Monitoring

- Done Quarterly by a member of the P2 team;
- Sample must be taken from each outfall;
- Forms are stored within the SWPPP binder;
- Should be completed within 30 minutes of a measurable storm event.

# Visual Monitoring Form

**Quarterly Visual Monitoring Form**  
Fill out a separate form for each outfall sampled.

Sample Location	D-4611 O&S SW	
Quarter / Year:	Q3 - 2017	Date / Time Collected: 8/15/2017 12:00 PM
Qualifying Storm Event?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
Collector's Name & Title	Alex Calabrese, Environmental Specialist	
Examiner's Name & Title		
Parameter	Parameter Description	Parameter Characteristics
1. Color	Does the stormwater appear to have any color? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (No (Clear))	If Yes, describe: Yellow Brown Red Gray Other:
2. Clarity	Is the stormwater clear? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	If not clear, which of the following best describes the clarity of the stormwater? Suspended Solids Milky/Cloudy Opaque Other:
3. Oil Sheen	Can you see a rainbow effect or sheen on the water surface? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Which best describes the sheen? Rainbow sheen Floating oil globules Other:
4. Odor	Does the sample have an odor? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If Yes, describe: Chemical Musty Rotten Eggs Sewage Sour Milk Oil/Petroleum Other:
5. Floating Solids	Is there anything on the surface of the sample? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	If Yes, describe: Suds Oil Film Garbage Sewage Water Fowl Excrement Other:
6. Suspended Solids	Is there anything suspended in the sample? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Describe:
<b>***Leave sample undisturbed for 30 minutes.***</b>		
7. Settled Solids	Is there anything settled on the bottom of the sample? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Describe: (note type, size and material after sample is not disturbed for 30 minutes)
8. Foam	Does foam or material form on the top of the sample surface if you shake it? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Describe:
9. If there are any visible indicators of pollution identify (1) where the pollution may come from and (2) any corrective actions taken. N/A		
Stormwater Collector's Signature and Date:  8/15/2017		
Stormwater Examiner's Signature and Date:  8/15/2017		
<small>Note - Sample should be collected and analyzed in a colorless glass or plastic bottle.</small>		

Visual Monitoring consists of 8 parameters:

1. Color
2. Clarity
3. Oil Sheen
4. Odor
5. Floating Solids
6. Suspended Solids
7. Settled Solids
8. Foam

Identification of where the possible contaminants should be noted within section

Corrective Actions may be triggered.

# Quarterly and Annual Inspections

Inspections are completed by the ESSR team at least 1x per quarter.

- Structural and non-structural BMPs
- Spills and spill reports
- Outfall conditions
- Any visual signs of contamination

Any non-compliance marks results in a Corrective Action

University of Maryland  
Quarterly Stormwater Compliance Inspection Report

The Quarterly Compliance Inspection shall be sufficiently detailed to verify that the Storm Water Pollution Prevention Plan (SWPPP) accurately reflects current site conditions, all potential pollution sources at the facility are identified, the facility site map and drainage map remain accurate, and Best Management Practices listed in the facility's SWPPP are properly operated and maintained. A visual inspection of the stormwater outfall(s) should be made to check for any odors, turbidity, or other visual signs of contamination.

SAMANTHA BRANSKY 9/18/18  
Name of Person(s) Conducting Inspection: Inspection Date:

ENVIRONMENTAL SERVICE FACILITY DA-1 (OTR-3)  
Facility Name: (BLDG. 344) Drainage Area:

Is a copy of the SWPPP maintained on campus? Yes  No

Does the SWPPP include a Site map indicating Drainage Areas and Outfalls? Yes  No

Does the SWPPP contain a topographic map? Yes  No

Are the site map, drainage conditions, and all other portion of the facility unchanged? Yes  No

If no, explain any construction or changes that have occurred and make revisions to the SWPPP:

Are the facility personnel, pollution prevention team members, and emergency contacts unchanged? Yes  No

If no, then update on an attached sheet and in SWPPP plan: Alex Galbreath no longer on P-7 team

Does the description of the drainage areas in the SWPPP accurately reflect Site Conditions? Yes  No

If no, please explain and make revisions:

Does the list of potential pollutant sources in the SWPPP reflect Site conditions and sources? Yes  No

If no, please explain and make revisions to the SWPPP:

# Corrective Action Report

---

A corrective action can be triggered by:

- An unauthorized release or discharge (e.g., spill, leak, or discharge of non-stormwater not authorized by this or another NPDES permit) occurs at your facility;
- A discharge violates a numeric effluent limit (Benchmark);
- You become aware, or MDE determines, that your control measures are not stringent enough for the discharge to meet applicable water quality standards;
- An inspection or evaluation of your facility by an MDE official, determines that modifications to the control measures are necessary to meet the non-numeric effluent limits in this permit; or
- You find in your routine facility inspection (Part V.A.1), quarterly visual assessment (Part V.A.3), or comprehensive site inspection (Part V.A.2) that your control measures are not being properly operated and maintained.

# Corrective Action Report

## Strict Timeline

### Within 24 hrs

- Identification of the condition triggering the need for a corrective action review on the form;
- Description of the problem identified; and
- Date the problem was identified

### Within 14 days

- Summary of the corrective action taken or to be taken
- Notice of whether SWPPP modifications are required as a result
- Date of corrective action initiated
- Date of corrective action completed

Section A – Initial Report (12-SW Part IV.D)					
(Complete this section within 24 hours of discovering the condition that triggered corrective action)					
Name of Site:	University of Maryland	12-SW Tracking No. (on NOI)	12SW3261	Today's Date	8/16/2017
Date Problem First Discovered	8/15/2017	Time Problem First Discovered	13:00		
Name and Contact Information of Individual Completing this Form	Alexander Galbreath, Environmental Specialist 301-405-7016; agalbrae@umd.edu				
<b>What site conditions triggered the requirement to conduct corrective action (check the box that applies):</b>					
<input type="checkbox"/> Unauthorized release or discharge (Part I.E)					
<input type="checkbox"/> A discharge violates a numeric effluent limit. (Part III.B)					
<input type="checkbox"/> Stormwater control measures not stringent enough for discharge to meet applicable water quality standards (Part III.B)					
<input type="checkbox"/> MDE requires corrective action as a result of permit violations found during an MDE inspection (Part IV.A)					
<input checked="" type="checkbox"/> During Routine Facility Inspection, Comprehensive Site Evaluation, or Quarterly Visual Assessment you find that your stormwater control measures are not being properly operated or maintained (Part V.A)					
<input type="checkbox"/> Construction or a change in design, operation or maintenance at your facility significantly changes the nature of pollutants discharged to stormwater from your facility, or significantly increases quantity of pollutants discharged.(Part IV.B)					
<input type="checkbox"/> The average of 4 quarterly sampling results exceeds an applicable benchmark. (Part V.B).					
<b>Provide a description of the problem (Elaborate on back in space provided if necessary):</b>					
During the quarterly visual monitoring, EA observed an oil sheen on the stormwater discharge from the Shuttle Bus Facility.					
Section B – Corrective Action Progress (12-SW Part IV.D)					
(Complete this section no later than 14 calendar days after discovering the condition that triggered corrective action)					
Section B.1 – Why the Problem Occurred					
Cause(s) of Problem (Elaborate on next page if necessary)		How This Was Determined and the Date You Determined the Cause			
1. Oil leaks/spills from vehicles that were not cleaned up properly; leaking nozzle at the 20,000-gal. diesel tank; oil-water separator not functioning.		1. Quarterly visual monitoring on 8/15 and routine site inspection on 8/21			
Section B.2 – Stormwater Control Modifications to be Implemented to Correct the Problem					
List of Stormwater Control Modification(s) Needed to Correct Problem (Elaborate on next page if needed)	Date of Completion	SWPPP Update Necessary?	Notes		
1. Notify employees to implement better leak/spill cleanup procedures 2. Install oil booms at Outfall 006SW to contain any oil runoff 3. Fix the leaking diesel fuel nozzle 4. Maintain oil-water separator	9/15/2017	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, provide date SWPPP modified: 8/24/2017			

# Corrective Action Report

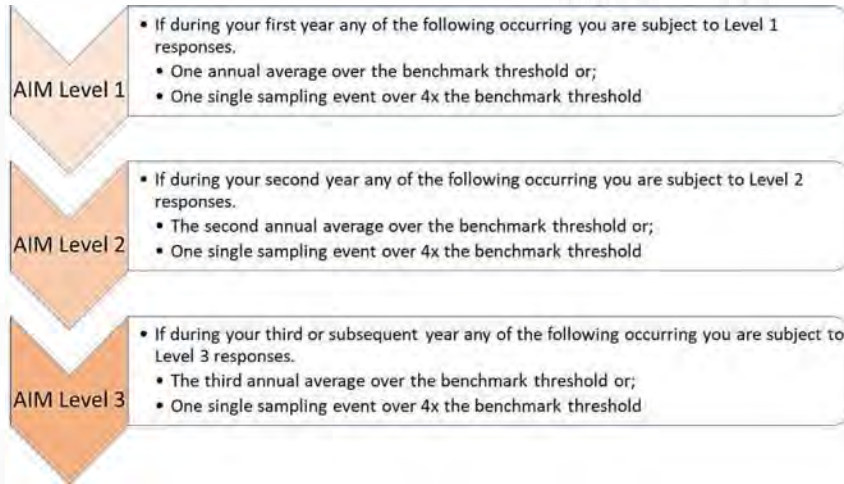
## Effect of Corrective Action

- Correcting a permit violating action does **NOT** remove the original violation
- Failing to report or take corrective action is an **ADDITIONAL** violation
- MDE will determine the enforcement response to a permit violation.



# Additional Implementation Measures (AIM)

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Implemented with the  
20-SW

AIM are mandatory  
increasingly robust  
responses to a  
benchmark  
exceedance

# Additional Implementation Measures (AIM)

As each AIM level is triggered, an increased response level is required

Response Level 1	Response Level 2	Response Level 3
<ul style="list-style-type: none"><li>i. Review stormwater control measures</li><li>ii. Implement additional measures.</li><li>iii. Continue Quarterly Benchmark Monitoring</li></ul>	<ul style="list-style-type: none"><li>i. Install Permanent Controls</li><li>ii. Or you may increase impervious surface restoration for your industrial stormwater above the baseline required by this permit.</li><li>iii. Continue Quarterly Benchmark Monitoring</li></ul>	<ul style="list-style-type: none"><li>i. Consult a professional engineer, stormwater professional or geologist to prepare an action plan.</li><li>ii. If the benchmark threshold for the same benchmark is repeatedly exceeded the Department will revoke the general permit and you must obtain an individual permit.</li><li>iii. Continue Quarterly Benchmark Monitoring</li></ul>

# Impaired Water Monitoring

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Additional pollutant monitoring required due to discharging into impaired waters

- Must monitor pollutants of concern once per year
- UMD's pollutant of concern is **chloride**
- Can discontinue monitoring if pollutant is within the acceptable range for **three** consecutive years



# Climate Adaption

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- Consider contours and elevations when siting new structures, placing them strategically based on anticipated climate change effects.
- Provide prompt written notice to the Department's Water Permits Program for planned physical alterations or additions to the permitted facility.
- Notification is required for alterations or additions that meet criteria for determining new sources, significantly change discharged pollutants, affect sludge practices, or may result in noncompliance with permit requirements.
- Advance notice must be given to the Department for planned facility or activity changes that may lead to noncompliance with permit requirements.

# 20-SW SWPPP Quiz

Knowledge check

Hi, . When you submit this form, the owner will see your name and email address.

\* Required

1. What is the primary goal of the 20-SW General Stormwater Permit? (1 Point) \*

- To regulate oil storage facilities
- To control hazardous waste disposal
- To manage stormwater runoff from construction sites



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**Website: [www.essr.umd.edu](http://www.essr.umd.edu)**

**Phone: 301-405-3960**

**After Hours: 301-405-3555**

**Email: [essr@umd.edu](mailto:essr@umd.edu)**



# Environmental Safety, Sustainability & Risk

Hazardous Waste Training



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# Hazardous Waste & Building Materials in Construction

- Chemical & Equipment Cleanouts
- Building Materials (PCBs, lead, asbestos, propane cylinders & mercury-containing devices)
- SARA Tier II Reporting Requirements
- CFATS (Chemical Security)



# Administrative Responsibilities

---

- Notification of requested work to OEA
- Completion of ESSR Service Request Form
  - <https://app.essr.umd.edu/chgbk/request>
  - Quick Codes are Unacceptable
- Labor, Materials & Waste Disposal Costs (outlined in ESSR Chargeback Policy)

# Chemical Waste & Building Materials

---

OEA responsibilities include:

- Identification of Chemical Waste (including “unknowns”)
- Packaging, labeling and transporting Chemical Waste to UMD Waste facility

# FM's Understanding of Project Chemical Waste Management

- Security of Project Site to prevent safety and/or environmental incidents
- Questions concerning environmental and safety should be addressed by ESSR (not contractor)



# Contractor's Understanding of Project Chemical Waste Management

---

## Contractor Managing Chemical Waste

- must agree to follow all applicable federal & State environmental & transportation regulations & laws, including ESSR applicable guidelines
- indemnify ESSR, UMD & USM of their activities associated with the project

# SARA Tier II Reporting Requirements

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- Purpose & UM locations
- Applicable Chemicals
  - Common Products
    - Propane
    - Diesel
    - Lead-acid batteries



# Chemical Facility Anti-Terrorism Standards (CFATS)

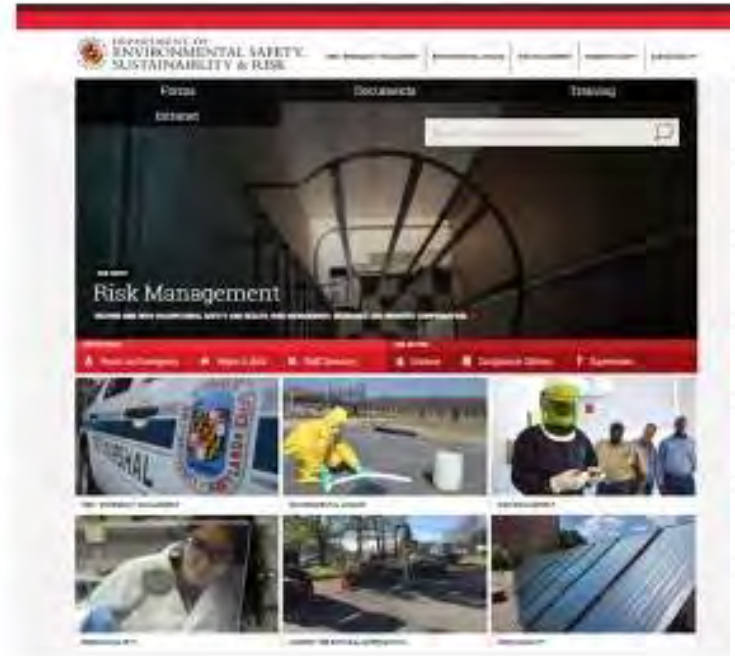
---

- Research Chemicals Normally Associated with this Homeland Security Program
- Chemicals & Equipment Installed with Project should be communicated to Assistant Director of OEA for Determination of CFATS



# How to Reach Us

- [www.essr.umd.edu](http://www.essr.umd.edu)
- Call 301-405-3960 during business hours
- Call UMPD Communications at 301-405-3555 to reach on-call ESSR staff after business hours.
- Email [safety@umd.edu](mailto:safety@umd.edu)





# Environmental Safety, Sustainability & Risk

MS4 Permit Number 13-SF-5501 (MDR055501)



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# MS4 Permit

(Municipal Separate Storm Sewer System)

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- Phase I MS4 Permit: Population over 100,000
  - Montgomery County, Prince Georges County
- Phase II MS4 Permit
  - Small Municipalities
  - *State and Federal Agencies (e.g., USM Institutions)*

# Overview

---

Became effective 10/31/2018

- Small MS4 located within a permit area (Phase II)
  - Owned/operated by the State of MD
  - Already covered under a NPDES Small MS4 permit (05-SF-5501)
  - Developed land >5 Acres and >10% impervious area property wide
    - ~40% is impervious of the 1,335 acres of land (Main Campus)
- 5 year term unless administratively extended

# Requirements of the MS4 Permit

---

- Implementation of stormwater management programs and restoration actions to control discharge of pollutants from regulated MS4s.
- Identify BMPs in place to help mitigate stormwater discharge
- MS4 Six Minimum Control Measures (MCMs)
  - Personnel Education and Outreach
  - Public Involvement and Participation
  - Illicit Discharge Detection and Elimination Program
  - Construction Site Stormwater Runoff Control
  - Post Construction Stormwater Management
  - Pollution Prevention and Good Housekeeping

**In addition, there is a 20% impervious area restoration requirement known as the Chesapeake Bay Restoration (CBR)**

# Key components of an IDDE

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1. Stormwater Mapping
2. Ordinances
3. Detection Procedures
4. Corrective Action
5. Public Education
6. Recordkeeping
7. Staff Training

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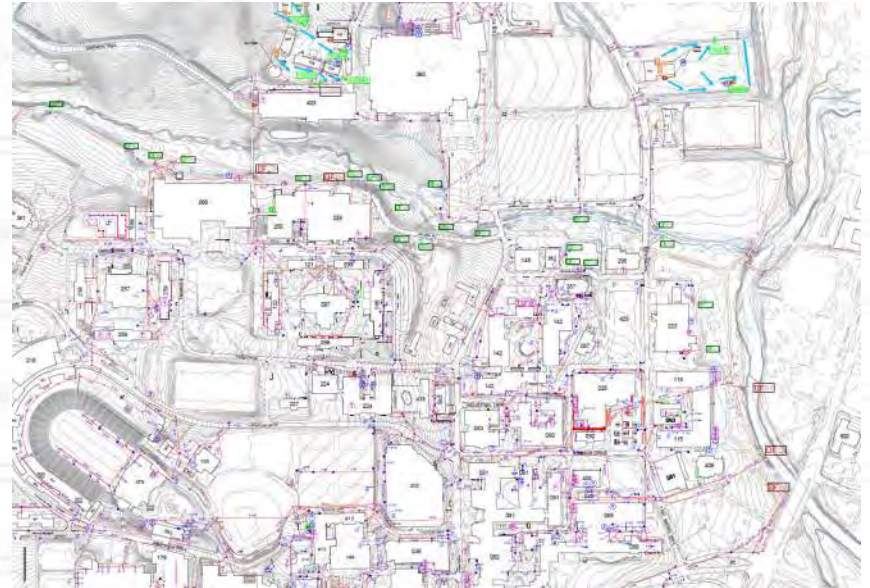
*Department of Environmental Safety,  
Sustainability, and Risk*

**ILLICIT DISCHARGE  
DETECTION AND ELIMINATION  
(IDDE) PLAN**

July 2017

# Stormwater mapping

- Many communities lacked up-to-date mapping resources. It was found that mapping layers such as storm sewers, open drainage channels, waters of the U.S., outfalls, and land use were particularly useful to conduct and prioritize effective field investigations.
- UMD utilizes GIS and CAD programs to keep up-to-date maps of the campus, along with multiple layers.



# Ordinances

**Table 8: Codes and Ordinances with Potential Links to IDDE**

- Fire codes
- Hazardous wastes/spill controls
- Health codes
- Industrial storm water compliance
- Litter control regulations
- Nuisance ordinances
- Plumbing codes
- Pollution prevention permitting requirements
- Restaurant grease regulations
- Septic system regulations
- Sewer/drain ordinances
- Storm water ordinance
- Street/highway codes

To establish legal authority, communities will need to either develop a new IDDE ordinance or modify an existing ordinance that addresses illicit discharges. Language from existing ordinances that addresses illicit discharges should be incorporated or cross-referenced into any new IDDE ordinance to minimize conflicts and confusion. Furthermore, existing code ordinances may need to be amended or superseded to be consistent with the new IDDE ordinance.

# Detection Procedures

---

- Notification of Spills
- Reporting during routine inspections
  - Outfall Reconnaissance Inventory (ORI) will be conducted, at a minimum, once per permit term
  - Monthly inspections for NPDES permit
  - Quarterly inspections for Stormwater permit
- Source Identification
  - Tracking, field investigation, smoke test, dye test, etc.

# Corrective Action

---

- University Ordinance should provide for escalating enforcement measures to notify operators of violations and to require corrective action.
- Most illicit discharge corrective actions involve some form of infrastructure modification or repair.
  - Direct discharges are those such as cross-connections, and piping.
  - Indirect discharges are those such as pump station failure or sewer break.

# Corrective Actions Continued

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- Once the source of an illicit discharge has been identified, steps should be taken to fix or eliminate the discharge. The following four questions should be answered for each individual illicit discharge to determine how to proceed:
  - Who is responsible?
  - What methods will be used to fix it?
  - How long will it take?
  - How will removal be confirmed?

# Public Education

---

- NPDES Phase II permits require public education and outreach and public involvement.
- Public education to advertise the hotline and training to educate employees across departments and agencies
- Dispersal of information brochures on UMD's IDDE
- Labeling storm drains and outfalls to make the public aware.

# Recordkeeping

---

- The NPDES Phase II Permit requires UMD to keep records of all stormwater program activities and IDDE records for a minimum of five (5) years.
- UMD 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 UMD ESSR office. Electronic copies will be available on demand.

# Staff Training

---

- The MS4 Permit requires UMD to provide annual training (once a year) to applicable field personnel in recognition and reporting of illicit discharges.
- Sign in sheet for records

# Reporting an Incident

Illicit Discharge Hotline Incident Tracking Sheet	
<b>Incident ID:</b>	
<b>Responder Information</b>	
Call taken by:	Call date:
Call time:	Precedence (check) in past 24-48 hrs:
<b>Reporter Information</b>	
Incident time:	Incident date:
Caller contact information (optional):	
<b>Incident Location</b> (complete one or more below):	
Latitude and longitude:	
Street address or creek #:	
Closest street address:	
Nearest landmark:	
<b>Primary Location Description</b>	<b>Secondary Location Description</b>
<input type="checkbox"/> Screen (outlet /in or adjacent to stream)	<input type="checkbox"/> Outfall
<input type="checkbox"/> Upland area (land not adjacent to stream)	<input type="checkbox"/> In-stream flow
<input type="checkbox"/> Storm drain	<input type="checkbox"/> Near other waste source (storm water pond, wetland, etc.)
Narrative description of location:	
<b>Upload Problem Indicator Description</b>	
<input type="checkbox"/> Dumping	<input type="checkbox"/> Oil solvent/chemicals
<input type="checkbox"/> Waste water, mud, etc.	<input type="checkbox"/> Sewage
<input type="checkbox"/> Other:	
<b>Stream Corridor Problem Indicator Description</b>	
<b>Odor</b>	<input type="checkbox"/> None
<input type="checkbox"/> H <sub>2</sub> S (rotten egg) sulfur gas	<input type="checkbox"/> Sewage
<input type="checkbox"/> "Normal"	<input type="checkbox"/> Blood/food
<input type="checkbox"/> Other: Describe in "Narrative" section	<input type="checkbox"/> Petroleum (gas)
<b>Appearance</b>	<input type="checkbox"/> Oil slicks
<input type="checkbox"/> Other: Describe in "Narrative" section	<input type="checkbox"/> Cloudy
<input type="checkbox"/> None	<input type="checkbox"/> Froth
<b>Floccibles</b>	<input type="checkbox"/> Sewage (toilet paper, etc.)
<input type="checkbox"/> Other: Describe in "Narrative" section	<input type="checkbox"/> Algae
<input type="checkbox"/> None	<input type="checkbox"/> Dead fish
Narrative description of problem indicators:	
Suspected violator (name, personal or vehicle description, license plate #, etc.):	

- Immediately notify the discharge hotline
- Complete the Illicit Discharge Hotline Incident Tracking Sheet (left)
- Located in Appendix D of the UMD IDDE Plan

# IDDE Tracking form

**IDDE TRACKING FORM**

Date Illicit Discharge Observed/Reported: \_\_\_\_\_ Outfall # (if applicable): \_\_\_\_\_

Description of IDDE: \_\_\_\_\_  
\_\_\_\_\_

Date of Investigation: \_\_\_\_\_

Was the Source found?  Yes  No

If "Yes", please describe: \_\_\_\_\_  
\_\_\_\_\_

Was IDDE Resolved?  Yes  No

If "Yes", please explain how it was resolved (Please include any personnel or outside parties contacted or involved):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If "No", please explain why it was not resolved: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is any follow-up action required?  Yes  No

If "Yes", please explain: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Date investigation closed: \_\_\_\_\_

Attach photos to this form and retain for records.

- After an illicit discharge is suspected, UMD ESSR staff will confirm the discharge.
- ESSR-EA Staff **must** fill out the IDDE tracking form located in Appendix G of the UMD IDDE plan.

# Outfall Inspections

**OUTFALL RECONNAISSANCE INVENTORY: SAMPLE COLLECTION FIELD SHEET**

**Section 1: Background Data**

Subwatershed		Outfall ID:	
Today's Date		Town (City/County)	
Nearest Major Road		Flow contained by:	
Temperature (°F)	Barrel (in.)	Last 24 hours	Last 48 hours
Latitude	Longitude	GPS Unit	GPS Model
County		State No.	
Land Use in Drainage Area (Check all that apply):			
<input type="checkbox"/> Industrial	<input type="checkbox"/> Open Space		
<input type="checkbox"/> Urban/Other Residential	<input type="checkbox"/> Suburban		
<input type="checkbox"/> Suburban Residential	Other		
<input type="checkbox"/> Commercial	Land Use Substrate		
Notes (e.g., signs of outfall, if known):			

**Section 2: Outfall Description**

LOCATION	MATERIAL	SHAPE	DIMENSIONS (IN.)	SUBMERGED
<input type="checkbox"/> Closed Pipe	<input type="checkbox"/> PVC <input type="checkbox"/> Steel <input type="checkbox"/> Other _____	<input type="checkbox"/> Circular <input type="checkbox"/> Elliptical <input type="checkbox"/> Round <input type="checkbox"/> Other _____	Diameter/Dimension: _____ Length: _____ Depth: _____ Top Width: _____ Bottom Width: _____	<input type="checkbox"/> No Water <input type="checkbox"/> Partially Full <input type="checkbox"/> Full <input type="checkbox"/> Not Partially Full <input type="checkbox"/> Not Full
<input type="checkbox"/> Open Drainage	<input type="checkbox"/> Concrete <input type="checkbox"/> Earth <input type="checkbox"/> Asphalt <input type="checkbox"/> Other _____	<input type="checkbox"/> Trapezoidal <input type="checkbox"/> Parabolic <input type="checkbox"/> Other _____	Depth: _____ Top Width: _____ Bottom Width: _____	
<input type="checkbox"/> In Stream	(Indicate when collection possible)			
Flow Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <i>(If No, Skip to Section 3)</i>			
Flow Description (if present)	<input type="checkbox"/> Turbid <input type="checkbox"/> Whiteout <input type="checkbox"/> Substantial			

**Section 3: Quantitative Characterization**

PARAMETER	FIELD DATA FOR FLOWING OUTFALLS		
	RESULT	UNIT	EQUIPMENT
<input type="checkbox"/> Flow #1	Volume	Liter	meter
	Flow to Eff.	Sec	
	Flow depth	in.	Stage measure
<input type="checkbox"/> Flow #2	Flow width	ft, in.	Stage measure
	Measured length	ft, in.	Stage measure
	Flow at Water	ft	Stage width
Temperature	°F	Thermometer	
pH		pH Tester	Use strip/Probe
Ammonia	mg/L		Test strip

- Section 1: Background Data of the site/outfall location
- Section 2: Description of outfall
  - Material, size, shape, dimensions
- Section 3: Quantitative characterization
  - Only if there is flow
    - Temp, flow, pH, ammonia

# Outfall Inspections

## Outfall Reconnaissance Inventory Field Sheet

### Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the Flow?  Yes  No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	<input type="checkbox"/>	<input type="checkbox"/> Strong <input type="checkbox"/> Faint/Weak <input type="checkbox"/> Punctuated/Sp. Occasional	<input type="checkbox"/> 1 - Faint	<input type="checkbox"/> 2 - Easily detected	<input type="checkbox"/> 3 - Noticeable from a distance
Color	<input type="checkbox"/>	<input type="checkbox"/> Clear <input type="checkbox"/> Brown <input type="checkbox"/> Gray <input type="checkbox"/> Yellow <input type="checkbox"/> Green <input type="checkbox"/> Orange <input type="checkbox"/> Red <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Fairly uniform in sample bottle	<input type="checkbox"/> 2 - Clearly visible in sample bottle	<input type="checkbox"/> 3 - Clearly visible in outfall flow
Turbidity	<input type="checkbox"/>	See above	<input type="checkbox"/> 1 - Single observation	<input type="checkbox"/> 2 - Chronic	<input type="checkbox"/> 3 - Chronic
Floatables (Does not include trash)	<input type="checkbox"/>	<input type="checkbox"/> Sewage (Cloth, Paper, etc.) <input type="checkbox"/> Sand <input type="checkbox"/> Petroleum (oil, sludge) <input type="checkbox"/> Other	<input type="checkbox"/> 1 - Frequent, origin not obvious	<input type="checkbox"/> 2 - Some indication of origin (e.g., possible made of oil drums)	<input type="checkbox"/> 3 - Some, origin close to flow, obvious in stream, mud, or floating (surface material)

### Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present?  Yes  No (If No, Skip to Section 6)

INDICATOR	CHECK IF Present	DESCRIPTION	COMMENTS
Channel Damage	<input type="checkbox"/>	<input type="checkbox"/> Spalling, Cracking or Chipping <input type="checkbox"/> Paving Patch <input type="checkbox"/> Corrosion	
Deposits/Silt	<input type="checkbox"/>	<input type="checkbox"/> Clay <input type="checkbox"/> Fine Sand <input type="checkbox"/> Peat <input type="checkbox"/> Other	
Abnormal Vegetation	<input type="checkbox"/>	<input type="checkbox"/> Eucalyptus <input type="checkbox"/> Inhibited	
Flow pool quality	<input type="checkbox"/>	<input type="checkbox"/> Odors <input type="checkbox"/> Colors <input type="checkbox"/> Floatables <input type="checkbox"/> Oil Sheen <input type="checkbox"/> Sludge <input type="checkbox"/> Excessive Algae <input type="checkbox"/> Other	
Pipe bundle growth	<input type="checkbox"/>	<input type="checkbox"/> Brown <input type="checkbox"/> Orange <input type="checkbox"/> Green <input type="checkbox"/> Other	

### Section 6: Overall Outfall Characterization

Unlikely  Potential (presence of two or more indicators)  Suspect (one or more indicators with a severity of 3)  Obvious

### Section 7: Data Collection

1. Sample for the lab?	<input type="checkbox"/> Yes <input type="checkbox"/> No
2. If yes, collected from:	<input type="checkbox"/> Flow <input type="checkbox"/> Pool
3. Instrument flow trap set?	<input type="checkbox"/> Yes <input type="checkbox"/> No If Yes, type: <input type="checkbox"/> OBM <input type="checkbox"/> Canli-dm

Section 8: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

- Section 4: Physical indicators for flowing outfalls
  - i.e. Odor, color, turbidity, floatables
- Section 5: Physical indicators for BOTH flowing and non-flowing
  - anything unrelated to the outfall flow
- Section 6: Overall outfall characterization
  - pollution indicators present
- Section 7: Data Collection
  - describes sample collection
- Section 8: non- illicit discharge concerns
  - e.g. issues surrounding outfall not pertaining to the actual flow/water

# 2018 Outfall Screening Photos



Outfall 03



Outfall 30



No ID



No ID

# Future Implications

## Chesapeake Bay Restoration

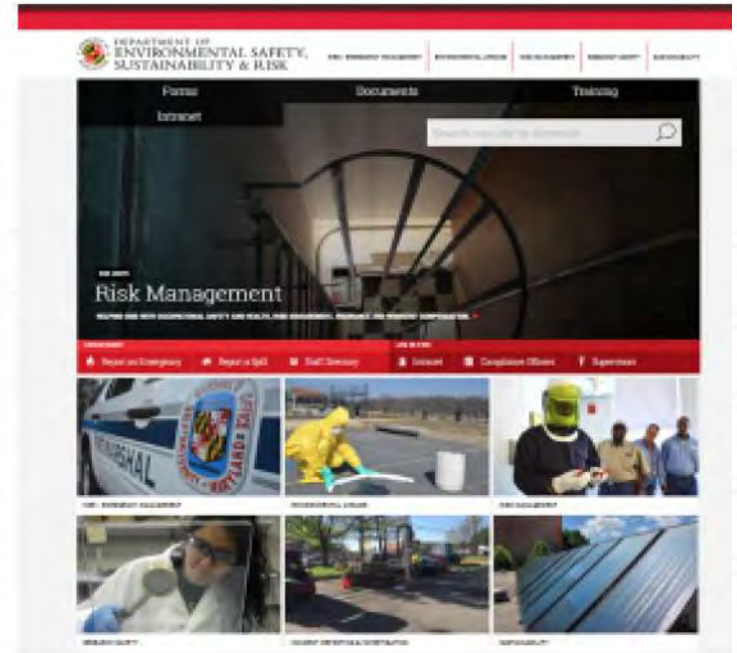
- 20% reduction OR treatment of stormwater
  - 35% of UMD is impervious
  - Do satellite properties count?
- How much impervious is treated? (i.e. stormwater ponds, infiltration, etc.)
  - Assuming 20% (More likely less)
  - Roughly 75 Acres (5x The size of McKeldin Mall)
- Who/What/Where?
- Must be completed by 2025
- What is treatment?
  - lbs of Nitrogen and phosphorus reduced
  - Removing impervious surfaces
  - Treating stormwater/improvements

## Permit Term ORI

- Need to update map of current and new outfalls
  - Verify the stormwater lines
  - Remove “Outfalls” that discharge into on property structures (i.e stormwater ponds and conveyances)
- Identify and eliminate illicit connections

# How to Reach Us

- [www.essr.umd.edu](http://www.essr.umd.edu)
- Call 301-405-3960 during business hours
- Call UMPD Communications at 301-405-3555 to reach on-call ESSR staff after business hours.
- Email [safety@umd.edu](mailto:safety@umd.edu)



# Environmental Safety, Sustainability & Risk

Spill Prevention, Control, and Countermeasures (SPCC)



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# Overview

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***The Purpose of an SPCC is to prevent the discharge of oil into navigable waters of the United States or adjoining shorelines as opposed to response and cleanup after a spill occurs.***

# ***The Federal Law***

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## ***Oil Pollution Prevention Rule***

- **Became effective January 1974 (revised 2017).**
- **Authority – Section 311 (j) (1) (c) of the Clean Water Act**
- **Promulgated under Title 40, CFR, Part 112**

# Oil Definitions

---

*Oil* means oil of any kind or in any form, including, but not limited to:

- fats, oils, or greases of animal, fish, or marine mammal origin
- vegetable oils, including oils from seeds, nuts, fruits, or kernels;
- other oils and greases, including petroleum, fuel oil, sludge, synthetic oils, mineral oils, oil refuse, or oil mixed with wastes other than dredged spoil.

# Applicability: How Much Oil?

- SPCC rule applies to facilities with:
  - >42,000 gallons buried
  - >1,320 gallons aboveground
  - This is based on storage containers  $\geq$  **55-gallons**
- Containers to include:
  - Bulk storage
  - Oil-filled equipment
  - Mobile/Portable Containers
- Containers not included in capacity:
  - Permanently Closed containers
  - UST Subject to 40 CFR 280 & 281



# Spill Reporting

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Facilities that discharge oil to navigable waters are subject to certain federal reporting requirements.

- 40 CFR 110, Discharge of Oil Regulation
- 40 CFR 112, Oil Pollution Prevention regulation
- State laws/regulations may differ or be more restrictive

# SPCC Reporting Requirements

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- Report to the EPA Regional Administrator (RA) when there is a discharge to navigable waters or adjoining shores of:
  - >1,000 Gal of oil in a single discharge
  - >42 Gal of oil in each of two discharges occurring within a 12 month period
- An owner / operator must report the discharge(s) to the EPA RA within 60 days
- All requirements found in CFR 40 112.4

# MDE Reporting Requirements

- Report to MDE Emergency Response Division (1-866-633-4686) if an oil spill or discharge of **ANY QUANTITY** a verbal report must be made within **TWO HOURS**

Verbal report must include:

- Time and location of discharge
- Type of facility involved
- Type and quantity of oil spilled
- Assistance required
- Name, address, telephone number of person making report
- Other pertinent info as requested by MDE

If spill is **5 Gallons or greater in quantity** or if **ANY QUANTITY reaches navigable** waters, a written report of the discharge must be submitted to MDE within 5 business days

The image shows a detailed reporting form for an oil spill. At the top, it identifies the Maryland Department of the Environment, Emergency Response Division, and provides contact information for the Division and the State of Maryland. The form is divided into several sections:
 

- Spill Information:** Includes fields for 'Date of spill', 'Time of spill', 'File Department Report No.', and 'Police Department Report No.'.
- Location and Product:** Fields for 'Location of spill - Street address', 'City / Town', 'MD County', 'Zip', 'Product Name', 'Capacity of Vessel, Vehicle or Tank', 'Container Type', and 'Estimated Amount Spilled'.
- Transportation Incident:** A section with checkboxes for 'Contained on Land', 'Entered Storm Drain or Ditch', 'Entered Sanitary Sewer', 'In Below Ground', and 'Entered Surface Waters'. It also includes fields for 'Vehicle Tag Number and Date' and 'DOT or ICC MC Number'.
- Personnel:** Two columns for 'Personnel Responsible for Spill' (Driver of Vehicle) and 'Company Responsible for Spill' (MA if private owner), with fields for Name, Address, City/State, Zip, Phone, and Driver's License No.
- Spill Details:** 'Cause of Spill' with checkboxes for Motor Vehicle Accident, Personnel Error/Amalgam, Tank/Container Pipe Leak, Mechanical Failure, and Transfer Accident. 'Identify All Groups that Participated in Spill Mitigation' with checkboxes for MDE, ERD, Fishery, State, and Local. 'Materials used for Spill Mitigation' with checkboxes for Motor Vehicle Accident, Personnel Error/Amalgam, Tank/Container Pipe Leak, Mechanical Failure, and Transfer Accident.
- Responsible Parties:** Fields for 'Responsible Party (Include Company, Name, and Clean-up Operations, Spilling Station, National Spill in tank)' and 'Responsible Party (Include Name, and Position/Jobtitle or Level responsible for the spill, Address, phone in tank)'.
- Signature and Contact:** A section for 'Print Name', 'Address', 'City / State / Zip', and 'Telephone'.

# National Response Center (NRC)



- The Discharge of Oil regulation provides the framework for determining whether an oil discharge to inland and coastal waters or adjoining shorelines should be reported to the National Response Center at 1-800-424-8802
- Any person in charge of a vessel, onshore or offshore facility must notify NRC once there is knowledge of a discharge
- NRC will relay discharge information to EPA or USCG

# ***SPCC Plan Requirements***

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## **Each Plan Must Include:**

- 1. Description of physical layout and a facility diagram.**
- 2. Key personnel contact list and phone numbers for the facility response coordinator, cleanup contractors, all appropriate federal, state, local agencies to contact.**
- 3. Prediction of direction, rate of flow, and total quantity of oil that **COULD** be discharged if the potential for equipment discharge exists.**
- 4. Description of containment and/or diversionary structures to prevent discharge from reaching navigable waters.**
- 5. Description of site-specific spill prevention and control measures in place.**

# ***Additional Requirements***

---

- Plan must have **MANAGEMENT APPROVAL** (signature)
- Plan must be prepared under the direct supervision of a P.E. (stamped)
- Plan must be maintained on-site **AVAILABLE AT ALL TIMES** for review by EPA/MDE.
- Key Facility Personnel must be **trained annually**. ***FOLLOW SOPs for any response actions!!!***
- Plan must include periodic **INSPECTIONS**.
- Plan must be **revised/updated** to reflect facility changes.
- Plan required to be reviewed/revised at least every **5 YEARS**.

# Select a section to review:

---

1. SPCC Rules Specific to Facilities Management and DOTS
2. SPCC Rules Specific to Dining Services
3. SPCC Rules Specific to Farms



**SPCC Rules Specific to  
Facilities Management and DOTS**



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# UMD SPCC Details

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- Over 85 tanks\*
  - Generators, ASTs, Day Tanks, Lube Reservoirs
- Over 30  $\geq$  55-gallon Drums\*
  - Cooking oil, food grease, used oil, hydraulic fluid
- Over 110 Hydraulic Elevators
- Over 155 Transformers

\*Current inventory fluctuates due to construction and need

# Secondary Containment

---

- All areas and equipment with the potential for a discharge are subject to general secondary containment provision, 112.7(c).
  - Oil-filled operational equipment
  - Loading/unloading areas
  - Piping
  - Mobile refuelers/ non-transportation related tank trucks
- Purpose is to contain or divert to prevent discharge: dikes, berms, retaining walls, curbing, drip pans, sumps, culverting, gutters, weirs, booms, spill diversion ponds, retention ponds, sorbent

# Secondary Containment

Active secondary containment is when an employee personally contains a spill,

- Deploying drain covers before a spill happens.
- Deploying drain covers after a spill has occurred, but before the spill reaches a drain
- Using a spill kit in the event of an oil discharge
- Closing a gate valve prior to a discharge

Passive secondary containment does not require deployment or the action of an employee or employees to contain a spill.

- Placing containment pallets or decks under drums and other containers
- Surrounding machines and containers with berms
- Erecting retaining walls around machines and containers
- Placing drip trays under leaky machines and containers



# Specific (Sized) Provision

---

- To address the potential of oil discharges from areas of a facility where oil is stored or handled, containment specified by SPCC rule CFR 40 112.8, requirements are intended to address a major container failure
  - Bulk storage containers, loading/unloading rack, mobile/portable containers, production tank batteries, treatment, separation installations
- Minimum containment capacity
  - Largest single compartment
  - Sufficient freeboard

# Portable Containers



- Drums placed on spill pallets
- Emergency generators; utilize drip pans
- Fuel trucks parked within bermed area

# Oil – Filled Operational Equipment

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- Equipment that includes an oil storage container (or multiple containers) in which the oil is present solely to support the function of the apparatus or the device.
  - Does not include oil-filled manufacturing equipment (flow-through process)
- Piping is considered a component if it is solely used to facilitate operation of the equipment device.

# Loading/Unloading Area Containment



- Dikes, berms, or retaining walls sufficiently impervious to contain oil;
- Curbing or drip pans;
- Sumps and collection systems;
- Culverting, gutters, or other drainage systems;
- Weirs, booms, or other barriers;
- Spill diversion ponds;
- Retention ponds; or
- Sorbent materials.

# Inspection & Testing 112.8(c)(6)

---

- Prevent discharge of oil caused by leaks, corrosion, brittle fracture, overfill, other forms of container/equipment failure
- AST are tested or inspected in accordance with industry standards
  - Integrity tests include: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing.

# Common visual inspection problems:



Spillage



Severely rusted and pitting occurring



Poor housekeeping, not in containment, exposed, rusting.

# Visual Inspection:



# Remember!

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- **All actions (visual inspection or testing) must be documented & maintained**
  - Some standards require records to be maintained for over 3 years for comparison reasons
- **Know objective: the tank IS or IS NOT suitable for continued use**

# Oil-Water Separators

---

Oil/water separators (OWS) are structural devices intended to allow oils (and substances lighter than water) to be intercepted and be removed for disposal.

Substances heavier than water settle into sludge at the bottom of the unit. The remaining water passes through the unit into the sanitary sewer system.

# OWS Maintenance Requirements

---

- Two are located at the Shuttle Bus Facility
  - Adjacent to the 20,000-gallon fueling area
  - Outside the maintenance shop
- Do not drain petroleum, oil, or lubricants directly to an OWS. The structures are designed to manage these materials at low and medium concentrations in sanitary sewage, not as slug loads.
- Do not drain antifreeze, degreasers, detergents, fuels, alcohols, solvents, coolant, or paint to the OWS.
- Separator compartment covers should be tightly sealed to ensure drainage only enters the first compartment of the OWS.
- Drains should be kept free of debris and sediment to the maximum extent practicable.
- Spill cleanup materials should be maintained in the area served by the OWS.

# Example of OWS Inspection Sheet

## Inspection of Fuel Oil Dike Oil/ Water Separator Building 001

Instructions: This record will be completed every **Monday** after checking leak detector/ pumps and tanks. Place an X in the appropriate box for each item. If any response is required do so in the description and comment space provided.

<u>Item</u>	<u>Yes</u>	<u>No</u>	<u>Description/Comments</u>
Separation Plates installed correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
All piping leading to the Separator is in good condition and no leaks are present.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Oil is less than 12" from top	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Oily sheen is present on the outlet of the separator?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Remarks: \_\_\_\_\_

- Inspection done regularly
- Measured oil level
- Inspects outlet to see if there is an oil sheen

Signature: \_\_\_\_\_

Date: 11/11/18

# Oil Containment: Examples

- A lightweight non-biodegradable absorbent made from 100% Canadian Sphagnum Peat Moss
- Absorbed oil passes the Toxicity Characteristic Leaching Procedure (TCLP)
- Affinity for hydrocarbons of all types
- Suppresses 90% of gasoline vapors which eliminates the danger of explosion





# DEPARTMENT OF ENVIRONMENTAL SAFETY, SUSTAINABILITY & RISK

**Thank you**

Thank you for completing the SPCC Training for Facilities Management and DOTS. Please [click here](#) to visit the final page and conclude the training.

# SPCC Rules Specific to Dining Services



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# *The Law-Vegetable Oils and Animal Fats*

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Animal fats and vegetable oils are regulated under 40 CFR 112, which has identical requirements for petroleum and non-petroleum oils. Petroleum oils, vegetable oils, and animal fats share common physical properties and produce similar environmental effects.

Like petroleum oils, vegetable oils and animal fats and their constituents can:

- Cause devastating physical effects, such as coating animals and plants with oil and suffocating them by oxygen depletion;
- Be toxic and form toxic products;
- Destroy future and existing food supplies, breeding animals, and habitats;
- Produce rancid odors;
- Foul shorelines, clog water treatment plants, and catch fire when ignition sources are present; and
- Form products that linger in the environment for many years.

# Proper Disposal of Fats, Oils, and Grease (FOG)

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- **Never** put any amount of grease or oil down the drain or into unlined trash containers.
  - When grease in liquid or solid form goes down the drain, it accumulates and sticks to pipes and causes blockages that result in raw sewage back-ups.
  - FOGs leaking from an unlined trash container can leak into stormwater drains and cause an SPCC and SWPPP violations.
- Always dispose of in the correct manner.
  - 55-gallon drums
  - Grease interceptor
- Failure to do so can result in hefty fines and regulatory repercussions.

# Inspections

Drum Contents: Used Cooking Oil	No. of 55+gal drums: _____	Date/Time:	
Location/Bldg. No.:	Containment: Sec. Cont	Inspector:	
Ellicott Dining Hall / 257	Map No.: 14		
	Yes	No	N/A
Drum surfaces show signs or leakage or spillage			
Drum is damaged, rusted or deteriorated			
Drum is not located on spill pallet or in containment			
Pumps, hoses, or valves are leaking			
Drum signage is missing, illegible or inaccurate			
Spill response kit inventory is incomplete			
Containment signage missing/damage			
Describe noted problems:			

## Why?

- Prevent discharge of oil caused by leaks, corrosion, brittle fracture, overflow, other forms of container/equipment failure

## How?

- Visual inspection completed monthly.

## What are you looking for?

- Good housekeeping
- Proper storage
- Proper clean up efforts when spills occur

# Examples of Failing Inspections



Spillage and absorbent around tank, no signage.



Containment not closed, spillage, no spill kit, no signage.



Containments are stained and have grease on the exterior, they are located in close proximity to the grassy areas, no spill kits.

# FOG and Stormwater

---

WSSC... “Sanitary sewers are designed and installed with sufficient diameter to carry the normal waste discharges from a residence or business. When cooking by-products -- fats, oils, and/or grease -- are discharged to the sewer, the FOG can cool and accumulate on the interior of the sewer pipes. Over time, this accumulation of FOGs restricts the flow and causes blockages in the sewer which can result in overflowing manholes or basement backups. Sanitary Sewer Overflows (SSOs) can discharge to storm drains and creeks, which will ultimately flow to the Chesapeake Bay.”

# WSSC Inspections and Enforcement

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- Inspections

- All Food Service Establishments (FSE) are subject to annual routine inspections. In addition, FSE's may be inspected at any time in response to complaints or reports of sewer blockages. During an inspection, WSSC FOG Investigators will verify that all required fixtures are connected to a grease treatment device and that the grease treatment device is adequately sized and installed according to the WSSC Code. Investigators may also review maintenance records or other documents related to the operation of the grease treatment device.

- Enforcement

- Failure to comply with any condition of an FSE permit will subject the permittee to penalties and other enforcement action as provided for in WSSC's Food Service Establishment Enforcement Response Plan (ERP). These enforcement actions may include Notices of Violation, Compliance Directives, Civil Citations (fines up to \$1,000), or termination of water and sewer service.

# BMPs for FOG

## Best Management Practices (BMP's)

- (1) Do not pour, scrape, or otherwise dispose of fats, oils, and grease into sinks or drains.
- (2) Scrape pots and pans prior to washing them.
- (3) Collect fryer oil and store in barrels for recycling.
- (4) Dump mop water only to drains connected to your grease abatement system.
- (5) Use absorbents to soak up spills containing fats, oils, and grease.
- (6) Do not put food (including liquid food) including milk shake syrups, batters, and gravy down the drain.
- (7) Use strainers on sinks and floor drains to prevent solid material from entering the sewer.
- (8) Post **"NO GREASE"** signs near sinks and drains.
- (9) Empty the collection pan on automatic grease recovery devices before it becomes full.
- (10) Provide employees with the proper equipment for cleaning your grease trap or grease recovery device.
- (11) Direct wastewater generated from duct/range filter cleaning through the grease abatement system.
- (12) Train all kitchen staff in best management practices for grease disposal and the impacts of grease accumulation in the sewer.
- (13) Provide regular refresher training/discussion for proper disposal of fats, oils, and grease for all employees.
- (14) Inspect grease abatement devices/interceptors after pumping to ensure adequate cleaning.



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---

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Oil is less than 12" from top	<input checked="" type="checkbox"/>	<input type="checkbox"/>	_____
Oily sheen is present on the outlet of the separator?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	_____

Remarks: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: 11/11/18

- Inspection done regularly
- Measured oil level
- Inspects outlet to see if there is an oil sheen



# DEPARTMENT OF ENVIRONMENTAL SAFETY, SUSTAINABILITY & RISK

**Thank you**

Thank you for completing the SPCC Training for Dining Services.  
Please [click here](#) to visit the final page and conclude the training.

# **SPCC Rules Specific to UMD Research Farms**



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# Water Resources Reform and Development Act (WRRDA)

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**Became effective June 10, 2014.**

**Section 1049** of the Act changes certain applicability provisions of the SPCC rule for **farms**, and modifies the criteria under which a farmer may self-certify an SPCC Plan.

Under WRRDA:

- A farm is not required to have an SPCC Plan if it has:
  - An aggregate aboveground storage capacity less than 2,500 gallons OR
  - An aggregate aboveground storage capacity greater than 2,500 gallons and less than 6,000\* gallons; and
  - No reportable discharge history.
- A farmer can self-certify the SPCC Plan if the farm has:
  - An aggregate aboveground storage capacity greater than 6,000\* gallons but less than 20,000 gallons;
  - No individual tank with a capacity greater than 10,000 gallons; and
  - No reportable discharge history.

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\*This 6,000-gallon threshold may be adjusted by EPA, following a study to determine the appropriate exemption.

# Definition of a Farm



*The definition of a farm was promulgated in the December 2006 rule amendments because, at the time, EPA delayed the compliance date for farms until additional amendments to the rule were promulgated.*

*Additional amendments were promulgated in 2008 and farms now have the same compliance dates as other facilities.*

**Farm** - A facility on a tract of land devoted to the production of crops or raising of animals, including fish, which produced and sold, or normally would have produced and sold, \$1,000 or more of agricultural products during a year.

# Examples of Oil on a Farm

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- Gasoline
- Off-road and on-road diesel fuel
- Hydraulic oil
- Lubrication oil
- Crop oil
- Vegetable oils from crops
- Adjuvant oil
- Milk\*



\* Milk and Milk product containers are now exempt from the SPCC capacity calculations and rule requirements

# Pesticide Application Equipment

- Exempt equipment includes:
  - Ground boom applicators
  - Airblast sprayers
  - Specialty aircraft that apply measured amounts of pesticides to crops and/or soil
  - Related mix containers
- Exemption applies to all pesticide application equipment and related mix containers, regardless of ownership or where used



# Motive Power Containers Exemption

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- Defined as any onboard storage containers used primarily to power the movement of a motor vehicle
- Includes self-propelled agricultural, construction, and excavation vehicles; and self-propelled cranes
- Oil transfer activities occurring within an SPCC-regulated facility continue to be regulated



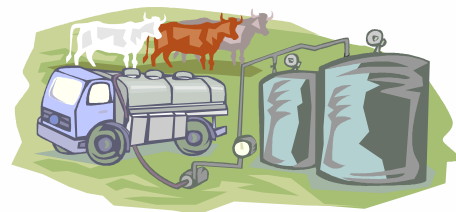
# Milk and Milk Product Container Exemption

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All milk and milk product containers, associated piping and appurtenances are exempt from the SPCC rule

- Excluded from facility oil storage capacity calculation when determining SPCC applicability
- Exemption also includes all milk handling and transfer activities
- Milk product examples include cheese, yogurt and ice cream

Does not impact the potential liability of milk spills



Immediately report milk and other oil spills to navigable waters or adjoining shorelines to the National Response Center (NRC) at **800-424-8802** or **202-426-2675**



## DEPARTMENT OF ENVIRONMENTAL SAFETY, SUSTAINABILITY & RISK

**Thank you**

Thank you for completing the SPCC Training for UMD Research Farms.  
Please [click here](#) to visit the final page and conclude the training.

# Certificate of Completion

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THIS IS TO CERTIFY THE SUCCESSFUL  
COMPLETION OF THE  
**SPILL PREVENTION, CONTROL, AND  
COUNTERMEASURE (SPCC) ANNUAL TRAINING**



DEPARTMENT OF  
ENVIRONMENTAL SAFETY,  
SUSTAINABILITY & RISK

Date:





UNIVERSITY OF  
MARYLAND

**Website: [www.essr.umd.edu](http://www.essr.umd.edu)**

**Phone: 301-405-3960**

**After Hours: 301-405-3555**

**Email: [essr@umd.edu](mailto:essr@umd.edu)**

ATTACHMENT D  
BASELINE ASSESSMENT REPORT

## Summary

In the 2024 impervious change report, MES reported UMCP is responsible for 469.37 acres of impervious under their MS4 permit, with 464.85 acres located at their main campus and 4.52 acres for the Institute for Bioscience and Biotechnology Research (IBBR) located at the Universities at Shady Grove (USG). However, following recent property changes and review of stormwater treatment provided by Prince George's County, UMCP's baseline has been reduced to 456.04 acres which is described in more detail in the following section of this report.

Utilizing the findings provided by Whitney, Bailey, Cox & Magnani, LLP (WBCM) in Year 1, MES's findings over the course of the permit term thus far, and data provided by USG, MES has determined that UMCP has 66 facilities providing 59.79 acres of treatment toward their baseline. This brings UMCP's baseline to 396.25 acres and the 20% restoration goal to 79.25 acres. Additionally, MES determined UMCP has 46 facilities classified as post 2006 restoration or redevelopment providing 12.79 acres of restoration credit. UMCP also has twelve alternative practices, including a large stream restoration project, providing another 108.97 acres of restoration credit. UMCP's restoration credit totals to 121.76 acres, surpassing their 20% restoration requirement. MDE also recommends that UMCP plan to restore 10% of the current baseline area by 2030, which UMCP has met through current projects.

## Baseline Adjustment

In 2023, UMCP purchased the Riverside property located at Physics Ellipse Drive. The total acreage of the property is 21.72 acres, including 4.87 acres of impervious area. In addition to other construction projects occurring on UMCP's campus during the reporting period, this brought UMCP's baseline impervious total to 469.37 acres. Following review of the stormwater management for the Riverside property, it was determined the impervious runoff from the property drains into two offsite ponds, Riverside Pond A and Pond B. Both ponds are retrofit projects completed by Prince George's County Clean Water Partnership (CWP) for restoration credit toward the County's MS4 Phase I permit.

Further investigation determined additional UMCP property is nested within the two ponds' drainage areas. However, the County is only reporting management for part of UMCP's impervious within the nested drainage areas. In addition to the newly purchased Riverside Property, the County is also reporting quality management for 8.46 acres of UMCP impervious area off University Research Court. Since Prince George's County is responsible for the construction and maintenance of these ponds and is reporting the 13.33 acres of impervious under their MS4 Phase I permit and water quality credits, this impervious should not be included within UMCP's baseline total. Therefore, this reduces UMCP's baseline to 456.04 acres.

## Methodology

BMP status, type, construction purpose, built date, and inches of runoff treated (Pe) were concurrently used to determine if a BMP is providing treatment and if that treatment should be applied to the baseline or restoration goal. Only facilities in passing condition received treatment credit. Dry facilities do not provide water quality treatment, only quantity control. Therefore, these facilities do not qualify for credit under MDE guidelines and the impervious area draining to these facilities is included in the untreated

impervious area total. Additionally, UMCP only considered MDE permitted BMPs on their campus as being eligible for treatment credit. To qualify for treatment credit non-permitted facilities would require additional review, documentation and official approval from MDE’s Plan Review Division.

When determining the credit for each eligible facility, 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 after the beginning of 2006 were included in UMCP’s restoration credit if additional treatment was provided beyond any new development requirements, which is discussed later in this report. Additionally, restoration projects completed after the beginning of 2006 were included in UMCP’s restoration goal.

## Baseline Assessment

Utilizing the findings and methods described above, MES determined UMCP has 62 functioning facilities which should be counted in UMCP’s baseline as treating 57.45 acres out of 451.52 acres of impervious on their College Park campuses. A summary of these 62 functioning BMPs is provided in Table 1.

*Table 1. Summary of UMCP BMPs for Baseline Treatment*

BMP ID	BMP Name	Purpose	Status	Impervious Area (ac.)	Pe	Baseline Credit (ac.)
UMCP19BMP0002	Lot 2 retention pond	New Development	Pass	3.52	0.28	1.00
UMCP19BMP0005	Peace & Friendship Garden	Redevelopment	Pass	10.33	1	8.33
UMCP19BMP0011	CSPAC retention pond	New Development	Pass	9.94	0.8	7.95
UMCP19BMP0012	Softball complex retention pond	Redevelopment	Pass	8.26	1	8.26
UMCP19BMP0018	BLS Heavy Equipment	New Development	Pass	0.05	1	0.05
UMCP19BMP0019	University House Parking Lot	New Development	Pass	0.29	1	0.29
UMCP19BMP0020	VetMed research pond	New Development	Pass	7.14	1	7.14
UMCP19BMP0024	Terrapin Trail Garage retention pond	New Development	Pass	3.85	1	3.85
UMCP19BMP0033	University House	New Development	Pass	0.14	1	0.14
UMCP19BMP0035	University House	New Development	Pass	0.2	1	0.20
UMCP19BMP0041	University House	New Development	Pass	0.09	1	0.09

UMCP19BMP0042	Wye Oak Building	New Development	Pass	0.27	1	0.27
UMCP19BMP0056	Comcast north retention pond	Redevelopment	Pass	5.96	1	5.96
UMCP19BMP0065	Greenmeade North Grass Channel B	New Development	Pass	0.22	1	0.22
UMCP19BMP0066	Greenmeade North Grass Channel A	New Development	Pass	2.43	1	2.43
UMCP19BMP0108	Chesapeake Parking Lot East	New Development	Pass	0.56	0.47	0.26
UMCP19BMP0142	Kim Plaza	Redevelopment	Pass	0.1	1	0.10
UMCP19BMP0152	AV Williams (Lot GG)	Redevelopment	Pass	0.37	1.3	0.07
UMCP19BMP0153	AV Williams (Lot GG)	Redevelopment	Pass	0.22	0.8	0.04
UMCP19BMP0154	AV Williams (Lot GG)	Redevelopment	Pass	0.39	1	0.08
UMCP19BMP0155	West of Edward St. John	New Development	Pass	0.05	1	0.05
UMCP19BMP0159	East Side of Edwards St. John	New Development	Pass	0.03	1	0.03
UMCP19BMP0161	Oakland Hall Sand filter	New Development	Pass	0.21	1	0.21
UMCP19BMP0240	Presidents House Disconnect 2-1	New Development	Pass	0.02	1	0.02
UMCP20BMP0256	UMCP Student Housing Building A	Redevelopment	Pass	0.59	0.63	0.37
UMCP20BMP0257	UMCP Student Housing Building B	Redevelopment	Pass	0.72	0.51	0.37
UMCP20BMP0266	University of Maryland Health Center	Redevelopment	Pass	0.12	0.75	0.09
UMCP20BMP0267	College Park Academy Micro-Bioretenion 1	New Development	Pass	0.14	1	0.14
UMCP20BMP0268	College Park Academy Micro-Bioretenion 2	New Development	Pass	0.27	1	0.27
UMCP20BMP0269	College Park Academy Micro-Bioretenion 3	New Development	Pass	0.35	1	0.35
UMCP20BMP0270	College Park Academy Micro-Bioretenion 4	New Development	Pass	0.32	1	0.32
UMCP20BMP0271	College Park Academy Micro-Bioretenion 5	New Development	Pass	0.42	1	0.42
UMCP20BMP0272	College Park Academy Submerged Gravel Wetland 1	New Development	Pass	1.97	1	1.97
UMCP20BMP0273	NOAA Green Roof 1	New Development	Pass	0.63	1	0.63
UMCP20BMP0274	NOAA Bioretenion	New Development	Pass	1.35	0.92	1.24
UMCP20BMP0275	NOAA Green Roof 2	New Development	Pass	0.33	1	0.33

UMCP20BMP0282	Presidents House Disconnect 2-2	New Development	Pass	0.02	1	0.02
UMCP20BMP0285	Presidents House Disconnect 2-5	New Development	Pass	0.02	1	0.02
UMCP20BMP0286	Presidents House Disconnect 2-3	New Development	Pass	0.02	1	0.02
UMCP20BMP0287	Presidents House Disconnect 2-4	New Development	Pass	0.02	1	0.02
UMCP22BMP0301	Idea Factory Micro-Bioretenction 4	Redevelopment	Pass	0.12	2.47	0.08
UMCP22BMP0302	Idea Factory Micro-Bioretenction 2	Redevelopment	Pass	0.16	1.34	0.11
UMCP22BMP0303	Idea Factory Micro-Bioretenction 1	Redevelopment	Pass	0.13	1.83	0.09
UMCP22BMP0304	Idea Factory Micro-Bioretenction 3	Redevelopment	Pass	0.06	2.31	0.04
UMCP22BMP0306	Johnson-Whittle Hall Micro-Bioretenction 7A	New Development	Pass	0.25	1	0.25
UMCP22BMP0307	Johnson-Whittle Hall Micro-Bioretenction 6A	New Development	Pass	0.37	1	0.37
UMCP22BMP0308	Johnson-Whittle Hall Micro-Bioretenction 5A	New Development	Pass	0.4	1	0.40
UMCP22BMP0309	Johnson-Whittle Hall Micro-Bioretenction 5	New Development	Pass	0.19	1	0.19
UMCP22BMP0310	Johnson-Whittle Hall Micro-Bioretenction 6	New Development	Pass	0.43	1	0.43
UMCP22BMP0311	Johnson-Whittle Hall Micro-Bioretenction 8	New Development	Pass	0.19	1	0.19
UMCP22BMP0312	Johnson-Whittle Hall Micro-Bioretenction 8A	New Development	Pass	0.16	1	0.16
UMCP22BMP0313	Pyon-Chen Hall Micro-Bioretenction 9	New Development	Pass	0.12	1	0.12
UMCP22BMP0314	Pyon-Chen Hall Micro-Bioretenction 3A	New Development	Pass	0.28	1	0.28
UMCP22BMP0315	Pyon-Chen Hall Micro-Bioretenction 3	New Development	Pass	0.11	1	0.11
UMCP22BMP0316	Pyon-Chen Hall Micro-Bioretenction 4	New Development	Pass	0.25	1	0.25
UMCP22BMP0317	Pyon-Chen Hall Micro-Bioretenction 2	New Development	Pass	0.14	1	0.14
UMCP22BMP0318	Pyon-Chen Hall Micro-Bioretenction 1	New Development	Pass	0.2	1	0.20
UMCP22BMP0319	Pyon-Chen Hall Non-Rooftop Disconnect 1	New Development	Pass	0.02	1	0.02
UMCP22BMP0320	Johnson-Whittle Hall Micro-Bioretenction 7	New Development	Pass	0.26	1	0.26
UMCP22BMP0326	Throwing Event Relocation Bioretenction	New Development	Pass	0.07	1	0.07
UMCP22BMP0327	Throwing Event Relocation Non-Rooftop Disconnect	New Development	Pass	0.03	1	0.03

UMCP22BMP0328	UMCP Field Hockey & Lacrosse Complex	Redevelopment	Pass	0.29	1.5	0.04
<b>Total =</b>						<b>57.45</b>

Additionally, UMCP is responsible for treatment of the Institute for Bioscience and Biotechnology Research (IBBR) campus located at the Universities at Shady Grove (USG) campus. IBBR accounts for 4.52 acres of UMCP's total impervious covered under their MS4 permit. Table 2 provides a summary of the status, impervious area and treatment credit for each BMP located at IBBR determined by MES under a separate scope of work and included in UMCP's baseline assessment. A breakdown of the combined baseline calculations is provided in Table 3. USG and UMCP share credits for Gudelsky Pond, with 2.18 acres of credit being applied to UMCP's baseline assessment. However, since USG is the owner of the pond, USG19BMP00026 is not included in UMCP's BMP database.

*Table 2. Summary of IBBR BMPs for Baseline Treatment*

BMP ID	BMP Name	Purpose	Status	Impervious Area (ac.)	Pe	Baseline Credit (ac.)
USG19BMP00003	Infiltration Trench 1 at IBBR	New Development	Pass	0.14	0.5	0.07
USG19BMP00005	Infiltration Trench 2 at IBBR	New Development	Pass	0.06	1	0.06
USG19BMP00026	Gudelsky Pond	New Development	Pass	4.52	0.5	2.18
USG19BMP00042	IBBR Non-Rooftop Disconnect	New Development	Pass	0.03	1	0.03
<b>Total =</b>						<b>2.34</b>

With a baseline treatment credit of 57.45 acres for UMCP's main campus, and 2.34 acres of treatment credit for the IBBR campus, UMCP's total untreated impervious results to 396.25 acres. This brings UMCP's 20% restoration goal to 79.25 acres. A breakdown of the baseline calculations is provided in Table 3 below.

*Table 3. UMCP Baseline Assessment*

Area (ac)		Impervious (ac)		Treated Impervious (ac)		Untreated Impervious (ac)	20% Restoration Goal (ac)
UMCP	IBBR	UMCP	IBBR	UMCP	IBBR	Total	Total
1314.86	12.18	451.52	4.52	57.45	2.34	396.25	79.25

## 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.

For the redevelopment projects included within this report, AV Williams and the Field Hockey & Lacrosse Complex were determined to have a net increase in impervious area. As-built plans indicated AV Williams

had a net increase of 0.19 acres. Utilizing the ESD requirements and the ESD provided indicated in the as-built plans, MES determined this project provides 0.72 acres of restoration credit. This credit was split among the 3 facilities built for AV Williams, resulting in 0.19 acres of credit toward the baseline and 0.72 acres toward UMCP’s restoration goal. The same methodology was used for Field Hockey & Lacrosse Complex. The net increase in impervious was 0.4 acres. Therefore, 0.4 acres were credited toward UMCP’s baseline and the remaining 0.25 acres was credited toward restoration.

Impervious Treatment credit was also split between the baseline and restoration for the Idea Factory redevelopment project. This project area had 9 existing micro-biorententions treating 0.32 acres of impervious area that were removed as part of construction. Four new bioretentions were constructed treating 0.47 acres of impervious. Several of these facilities provided over management, resulting in a total treatment credit of 0.57 acres. Since the project did not have a net increase in impervious area, there were no new development requirements. However, since there was existing treatment prior to the redevelopment project, only 0.25 acres were eligible for restoration credit. The remaining 0.32 acres were included in the baseline treatment.

A total of 46 BMPS were identified as qualifying for restoration credit, which are summarized below in Table 4.

*Table 4. Summary UMCP Redevelopment & Restoration BMPs*

BMP ID	BMP Name	Purpose	Status	Impervious Area (ac.)	Pe	Restoration Credit (ac.)
UMCP19BMP0016	Shuttle Facility	Redevelopment	Pass	0.11	1	0.11
UMCP19BMP0017	Shuttle Facility	Redevelopment	Pass	0.11	1	0.11
UMCP19BMP0026	Shuttle Facility dry swale	Redevelopment	Pass	2.23	0.82	1.71
UMCP19BMP0040	University House	Restoration	Pass	0.03	1	0.03
UMCP19BMP0049	Computer and Space Sciences	Redevelopment	Pass	0.08	1.2	0.08
UMCP19BMP0055	Heavy Equipment Building bioretention	Redevelopment	Pass	0.09	1.15	0.1
UMCP19BMP0059	Denton dining bioretention	Redevelopment	Pass	0.18	2.28	0.24
UMCP19BMP0070	Denton bioretention	Redevelopment	Pass	0.09	0.76	0.07
UMCP19BMP0078	Physical Sciences	Redevelopment	Pass	0.2	1.2	0.21
UMCP19BMP0082	Knight Hall	Redevelopment	Pass	0.43	0.91	0.39
UMCP19BMP0106	Shuttle Bus Pond	Redevelopment	Pass	1.17	0.12	0.14
UMCP19BMP0122	Denton Courtyard bioretention	Redevelopment	Pass	0.1	1.03	0.1

UMCP19BMP0124	Prince Frederick Hall Bioretention Cell 1	Redevelopment	Pass	0.17	0.8	0.14
UMCP19BMP0125	Prince Frederick Hall Bioretention Cell 2	New Development	Pass	0.3	1.36	0.33
UMCP19BMP0152	AV Williams (Lot GG)	Redevelopment	Pass	0.37	1.3	0.27
UMCP19BMP0153	AV Williams (Lot GG)	Redevelopment	Pass	0.22	0.8	0.14
UMCP19BMP0154	AV Williams (Lot GG)	Redevelopment	Pass	0.39	1	0.31
UMCP19BMP0157	West Side of Edward St. John	Redevelopment	Pass	0.06	1	0.06
UMCP19BMP0158	West Side of Edward St. John	Redevelopment	Pass	0.06	1	0.06
UMCP19BMP0231	Clark Hall Bioretention 1	Redevelopment	Pass	0.27	1.96	0.33
UMCP19BMP0232	Clark Hall Bioretention 2	Redevelopment	Pass	0.21	2.6	0.29
UMCP19BMP0239	Presidents house Disconnect 1	Redevelopment	Pass	0.01	1	0.01
UMCP19BMP0241	Brendan Iribe 1	Redevelopment	Pass	0.19	2.6	0.27
UMCP19BMP0242	Brendan Iribe 2	Redevelopment	Pass	0.23	2.5	0.32
UMCP19BMP0243	Brendan Iribe 3	Redevelopment	Pass	0.19	1	0.19
UMCP19BMP0244	Brendan Iribe 4	Redevelopment	Pass	0.12	2	0.15
UMCP19BMP0245	Brendan Iribe 5	Redevelopment	Pass	0.12	1.7	0.14
UMCP20BMP0258	M Square SGW 1	Redevelopment	Pass	2.33	0.8	1.86
UMCP20BMP0259	M Square SGW 2	Redevelopment	Pass	0.88	0.82	0.72
UMCP20BMP0260	M Square MBR1	Redevelopment	Pass	0.48	0.73	0.35
UMCP21BMP0292	Cole Field House Green Roof 1	Redevelopment	Pass	0.32	1	0.32
UMCP21BMP0293	Cole Field House Green Roof 2	Redevelopment	Pass	0.07	1	0.07
UMCP21BMP0294	Cole Field House Green Roof 3	Redevelopment	Pass	0.37	1	0.37
UMCP21BMP0295	Cole Field House Green Roof 4	Redevelopment	Pass	0.86	1	0.86
UMCP22BMP0301	Idea Factory Micro-Bioretention 4	Redevelopment	Pass	0.12	2.47	0.08
UMCP22BMP0302	Idea Factory Micro-Bioretention 2	Redevelopment	Pass	0.16	1.34	0.06

UMCP22BMP0303	Idea Factory Micro-Bioretenion 1	Redevelopment	Pass	0.13	1.83	0.07
UMCP22BMP0304	Idea Factory Micro-Bioretenion 3	Redevelopment	Pass	0.06	2.31	0.04
UMCP22BMP0321	School of Public Policy Bioretention 1	Redevelopment	Pass	0.12	2.25	0.16
UMCP22BMP0322	School of Public Policy Bioretention 3	Redevelopment	Pass	0.21	2.55	0.3
UMCP22BMP0323	School of Public Policy Pocket Wetland 1	Redevelopment	Pass	0.39	2.6	0.55
UMCP22BMP0324	School of Public Policy Non-Rooftop Disconnect 1	Redevelopment	Pass	0.04	1	0.04
UMCP22BMP0328	UMCP Field Hockey & Lacrosse Complex	Redevelopment	Pass	0.29	1.5	0.25
UMCP22BMP0329	Chemistry Wing 1 Micro-bioretenion	Redevelopment	Pass	0.34	1.25	0.36
UMCP22BMP0330	Chemistry Wing 1 Non-rooftop Disconnection 1A	Redevelopment	Pass	0.02	0.8	0.01
UMCP22BMP0331	Chemistry Wing 1 Non-rooftop Disconnection 1B	Redevelopment	Pass	0.02	1	0.02
					<b>Total =</b>	<b>12.79</b>

In addition to the projects listed in Table 4, alternative practices also qualify for restoration credit. UMCP completed Phase 1 of the Campus Creek restoration in November 2019, which restored 3,039 linear feet of the stream. The project was determined by WBCM to provide 105.8 acres of restoration credit. However, as part of an agreement to allow UMCP to complete restoration in the right of way along MD Route 193, 1 acre of the restoration credit was given to SHA to apply toward their MS4 requirement. Additionally, as part of the Campus Creek restoration two regenerative step pool conveyances were installed along with a stormwater bar (outfall stabilization). These three practices were evaluated to provide an additional 1.02 acres of restoration credit. Furthermore, UMCP has completed a total of 7 impervious surface removal projects. For every acre of impervious surface converted to grass cover, UMCP received a 0.75-acre equivalent treatment credit. To ensure double credit is not claimed, the total impervious for these projects has been included in UMCP's baseline total. The total impervious area removed is 3.53 acres, resulting in a restoration credit of 2.65 acres. Lastly, on the IBBR campus an outfall stabilization was completed in 2006. The project was 50 feet long, and with an equivalent credit of 0.01 acres per linear foot, the project earned a credit of 0.5 acres. Table 5 below presents each alternative practice and their equivalent restoration credit.

*Table 5. Summary UMCP Alternative Practices*

Year	BMP ID	BMP Name	BMP Type	Impervious Credit (ac.)
2019	UMCP19BMP0249	Campus Creek Restoration	Stream Restoration	104.8
2006	USG19BMP00004	IBBR Outfall Stabilization	Outfall Stabilization	0.5
2016	UMCP20BMP0288	Impervious Surface Removal to Pervious 4100 Metzert Rd	Impervious Surface Removal to Pervious	0.17

2017	UMCP20BMP0289	Impervious Surface Removal to Pervious 4109 Metzertott Rd	Impervious Surface Removal to Pervious	0.03
2019	UMCP19BMP0250	Campus Creek RSPSC 1	Regenerative Step Pool Conveyance	0.58
2019	UMCP20BMP0290	Campus Creek RSPSC 2	Regenerative Step Pool Conveyance	0.31
2019	UMCP20BMP0291	Campus Creek Stormwater Bar	Outfall Stabilization	0.13
2020	UMCP21BMP0296	Wooded Hillock Impervious Removal 3	Impervious Surface Removal to Pervious	0.02
2020	UMCP21BMP0297	Wooded Hillock Impervious Removal 2	Impervious Surface Removal to Pervious	0.017
2020	UMCP21BMP0298	Wooded Hillock Impervious Removal 1	Impervious Surface Removal to Pervious	0.05
2021	UMCP21BMP0299	4103 Metzertott Rd Impervious Removal	Impervious Surface Removal to Pervious	0.067
2021	UMCP21BMP0300	Cole Field House Impervious Surface Removal	Impervious Surface Removal to Pervious	2.30
<b>Total =</b>				<b>108.97</b>

The restoration credit earned from the projects described within this report totals to 121.76 acres. This surpasses UMCP’s restoration requirement of 79.25 acres as demonstrated in Table 6.

*Table 6. UMCP Restoration Credit Computation*

20% Restoration Goal (ac)	Restoration Credit (ac)	Remaining 20% Goal (ac)
79.25	121.76	-42.51

In preparation of the next MS4 Phase II Permit, MDE provided guidance to all permit holders to extend their Restoration Activity Schedule through 2030 with an additional 10% restoration goal. For UMCP, this goal is equivalent to an additional 39.63 acres of restoration. UMCP would meet this goal with current implemented projects. However, UMCP continues to plan future projects for continued restoration.

### Future Projects

Even though UMCP has surpassed their 20% restoration requirement, the University continues to plan future restoration projects in preparation of future permit requirements. In 2020, UMCP applied for the Chesapeake Bay Trust (CBT) Watershed Assistance Grant Program and was awarded funding for the design to retrofit the Animal Science Pond and restore the remaining section of Campus Creek. The design phase for both projects began in 2021. Animal Science is a dry pond that is no longer functioning and will be converted into a water quality facility. The stream restoration project will restore 2,318 linear feet of Campus Creek. These projects are estimated to provide restoration credits of 8.95 acres and 45.2 acres, respectively, bringing UMCP’s total restoration credit to 174.57 acres. UMCP received grant funding for the construction of these projects, which is anticipated to begin in 2024. Upon project completion, the awarded credit may increase or decrease.

Additionally, UMCP continues completing maintenance to restore failing BMPs across the campus. As these facilities are repaired, baseline or restoration credit will be awarded as appropriate, further contributing to UMCP's stormwater treatment requirements.

## **Conclusion**

UMCP is responsible for a total of 456.04 acres of impervious under their MS4 permit. MES determined UMCP is treating 57.45 acres of their main campus's impervious area, and 2.34 acres of the IBBR campus's impervious area in baseline treatment. This treatment resulted in a 20% restoration goal of 79.25 acres. Through a combination of redevelopment projects and alternative practices, UMCP has earned 121.76 acres of restoration credit, surpassing their 20% restoration requirement. Although UMCP has exceeded their restoration goal, UMCP continues to plan future restoration projects to ensure they continue to meet future requirements such as the 2030 10% restoration goal under the NPDES MS4 permit.

ATTACHMENT E  
BMP INSPECTION REPORTS



# FACILITIES MANAGEMENT

UMCP19BMP0005 / Peace and Friendship Garden

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 26, 2023 10:02 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0005	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Sand Filter	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Rutting at spillway is a result of a vehicle moving through the area
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Fair
- **Vegetation** - Fair
- **BMP Contamination** - Fair
- **General Site Conditions Comments:** Good vegetation, along with weed growth in pretreatment and sand filter

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - Fair

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding** - Good/**Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - Fair

## **Outfall and Downstream Condition**

- **Spillway Outfall** - Good
- **Downstream Condition** - Poor

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

UMCP19BMP0005 / Peace and Friendship Garden

Date of Inspection: September 26, 2023 10:02 AM



# FACILITIES MANAGEMENT

UMCP19BMP0011 / CSPAC Shallow Marsh Wetland

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	September 27, 2023 12:11 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0011	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Shallow Marsh	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Fair
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Southern inlets and channel are overgrown. Access around facility is overgrown. Riser not immediately Visakhapatnam

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - Good

## Treatment Area

- **Conveyance Stability** - Good
- **Ponding** - Good/**Water Depth** -

## Embankment

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

## Outlet/Control Structure

- **Low Flow Orifice** - Good
- **Outlet / Control Structure** - Good
- **Principal Spillway** - N/A

## Outfall and Downstream Condition

- **Spillway Outfall** - N/A
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

UMCP19BMP0011 / CSPAC Shallow Marsh Wetland

Date of Inspection: September 27, 2023 12:11 PM



# FACILITIES MANAGEMENT

## Maintenance & Remediation Recommendations

### Additional Photos





# FACILITIES MANAGEMENT

UMCP19BMP0012 / Softball Complex retention pond  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 11, 2024 1:29 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0012	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Retention Pond (Wet Pond)	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Good vegetation, low debris/trash, inlet and outfall clear.
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - Good

## Treatment Area

- **Conveyance Stability** -
- **Ponding** - Good/**Water Depth** - 0

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** - Good
- **Outlet / Control Structure** - Good
- **Principal Spillway** - Good

## Outfall and Downstream Condition

- **Spillway Outfall** - Good
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations

UMCP19BMP0012 / Softball Complex retention pond  
Date of Inspection: June 11, 2024 1:29 PM



# FACILITIES MANAGEMENT

Routine vegetation control later in the season

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0014 / Woods Hall

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 21, 2023 2:53 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0014	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Good plant coverage on slope. No weed pressure
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Good access to facility. Appropriate vegetation, no weed pressure. Overflow is clear

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed



# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

None

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0014 / Woods Hall

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 15, 2023 1:21 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0014	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Good vegetative coverage
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** - 0

## **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - N/A

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP19BMP0014 / Woods Hall  
PM

Date of Inspection: September 15, 2023 1:21



# FACILITIES MANAGEMENT

None

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0016 / Shuttle Facility Lower Roof  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 16, 2024 10:06 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0016	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0017 / Shuttle Facility Upper Roof  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 16, 2024 10:09 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0017	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0018 / BLS Heavy Equipment  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 16, 2024 8:26 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0018	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

## BMP Status -

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0022 / Lot 11b

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 21, 2023 12:22 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0022	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Fail	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Rebuild / Redesign (Use of engineering design to redesign or completely rebuild the facility)		

## **Site Conditions**

- **BMP Access** - Fair
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Access is a bit overgrown. BMP is completely overgrown and taken over by invasive, with some native volunteer plants present

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Poor

**BMP Status** - Fail



# FACILITIES MANAGEMENT

**Maintenance Level** - Rebuild / Redesign (Use of engineering design to redesign or completely rebuild the facility)

## **Maintenance & Remediation Recommendations**

### **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0026 / Shuttle Facility

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 24, 2024 1:09 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0026	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Dry Swale	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Conditions good, but in need of routine maintenance

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - Good

## Treatment Area

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0027 / Lot PP2 Bioretention

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	September 21, 2023 12:09 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0027	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Fair
- **Vegetation** - Fair
- **BMP Contamination** - Fair
- **General Site Conditions Comments:** Some debris at inlet. Full vegetation, but naturalized with native and non native volunteer plants

## Inflow and Forebay

- **Inflow Condition** - Fair
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)



# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

### **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0039 / Chem-Nuc BLDG

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 21, 2023 11:32 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0039	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Fair
- **General Site Conditions Comments:** There is vegetative coverage, but mostly invasive and undesirable weeds. Some curb cuts are partly blocked by weeds and debris. One Boulder has moved and needs to be repositioned.

## **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

UMCP19BMP0039 / Chem-Nuc BLDG  
AM

Date of Inspection: September 21, 2023 11:32



# FACILITIES MANAGEMENT

## Maintenance & Remediation Recommendations

### Additional Photos





# FACILITIES MANAGEMENT

UMCP19BMP0042 / Wye Oak Building

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 11, 2024 1:05 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0042	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Shrub layer is good, understory and ground cover needs attention.

## **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** - 0

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Fair

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

## **Maintenance & Remediation Recommendations**



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0049 / Computer and Space Sciences Green Roof

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 10, 2024 8:00 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0049	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations

UMCP19BMP0049 / Computer and Space Sciences Green Roof

Date of Inspection: April 10, 2024 8:00 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0050 / Cumberland Green Roof

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 10, 2024 9:50 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0050	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0055 / Heavy Equipment Building  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 11, 2024 1:41 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0055	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Condition of facility is as designed, however, recommend planting plan for facility
<b>Maintenance Level</b>	No Maintenance Needed		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** - 0

## Embankment

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0056 / Comcast north retention pond  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 17, 2024 9:44 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0056	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Retention Pond (Wet Pond)	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Dredging completed in March. Pond, vegetation, inlet and outfall conditions good
<b>Maintenance Level</b>	No Maintenance Needed		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Site condition is good. Routine maintenance of vegetation will be needed later in the season.

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - Good
- **Ponding** - Good/**Water Depth** - 0

## Embankment

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

## Outlet/Control Structure

- **Low Flow Orifice** - Good
- **Outlet / Control Structure** -
- **Principal Spillway** - N/A

## Outfall and Downstream Condition

- **Spillway Outfall** - Good
- **Downstream Condition** - Good

**BMP Status** - Pass



# FACILITIES MANAGEMENT

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

### **Additional Photos**



UMCP19BMP0056 / Comcast north retention pond

Date of Inspection: April 17, 2024 9:44 AM



# FACILITIES MANAGEMENT

UMCP19BMP0059 / Denton Dining

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 27, 2023 12:00 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0059	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Needs additional plant material for full vegetative coverage
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Replanting required in each of the three cells. Many bare spots.

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)



# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

Replant per plan

### **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0073 / Stamp Green Roof West  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 16, 2024 10:17 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0073	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0074 / Stamp Green Roof East  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 16, 2024 10:18 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0074	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0078 / Physical Science Complex Green Roof

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	April 10, 2024 9:25 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0078	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations

UMCP19BMP0078 / Physical Science Complex Green Roof

Date of Inspection: April 10, 2024 9:25 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0088 / Chem-Nuc BLDG

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	September 21, 2023 11:40 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0088	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Sparse desirable plant material. Replanting opportunity
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Better condition than adjacent BMP, but there's a need for new planting in big facilities

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)



# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

### **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0107 / Taylor Stadium

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 24, 2024 12:56 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0107	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Fail	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Poor
- **Debris & Sediment** - Poor
- **Vegetation** - Poor
- **BMP Contamination** - Poor
- **General Site Conditions Comments:** Athletic equipment left in access area, overgrown, debris left in area

## Inflow and Forebay

- **Inflow Condition** - Not Rated
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - Not Rated
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - Not Rated

**BMP Status** - Fail

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

Major routine maintenance required. Clear equipment and debris

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0108 / Chesapeake Parking Lot East  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 11, 2024 1:24 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0108	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Underground Filter	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Facility all clear, good condition.
<b>Maintenance Level</b>	No Maintenance Needed		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** - 0

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## Additional Photos





# FACILITIES MANAGEMENT

UMCP19BMP0122 / Denton Courtyard Bioretention

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	September 27, 2023 12:05 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0122	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	One missing 6" cleanout cap, and a sinkhole about 2' in diameter has formed
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Plants that are present are healthy and vigorous, but bare spots require replanting in shine areas

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

UMCP19BMP0122 / Denton Courtyard Bioretention

Date of Inspection: September 27, 2023 12:05 PM



# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

Replace cleanout cap, and fill in sinkhole. Replant bare areas

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0142 / Kim Plaza

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 12:33 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0142	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	In good condition
<b>Maintenance Level</b>	No Maintenance Needed	<b>Comment:</b>	

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** - 0

## **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0155 / West of Edward St. John  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 24, 2024 1:21 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0155	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Indicators of heat stress
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Presence of weeds and signs of heart stress

## Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

Increase watering during high temperatures

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0157 / West Side of Edward St. John

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 4, 2024 10:27 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0157	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations

UMCP19BMP0157 / West Side of Edward St. John

Date of Inspection: June 4, 2024 10:27 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0158 / West Side of Edward St. John  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	June 4, 2024 10:30 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0158	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0159 / East Side of Edward St. John

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 4, 2024 11:38 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP19BMP0159	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - N/A
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## **Maintenance & Remediation Recommendations**

UMCP19BMP0159 / East Side of Edward St. John

Date of Inspection: June 4, 2024 11:38 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0161 / Oakland Hall Sandfilter

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 2:00 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0161	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Underground Filter	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Facility in good condition. Last maintenance 9/27/23
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - Good

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**



# FACILITIES MANAGEMENT

## **Additional Photos**



# FACILITIES MANAGEMENT

UMCP19BMP0162 / Terrapin Trail Garage Baysaver unit

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 2:10 PM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0162	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Oil Grit Separator	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	In good condition. Maintenance last performed on 9/27/23
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - Good

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP19BMP0162 / Terrapin Trail Garage Baysaver unit

Date of Inspection: June 24, 2024 2:10 PM



# FACILITIES MANAGEMENT

## **Additional Photos**



# FACILITIES MANAGEMENT

UMCP19BMP0231 / Clark Hall Bioretention 1

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 21, 2023 11:48 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0231	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Vegetation present, but lower growing plant layer is missing and being replaced by grass and weeds

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Fair

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

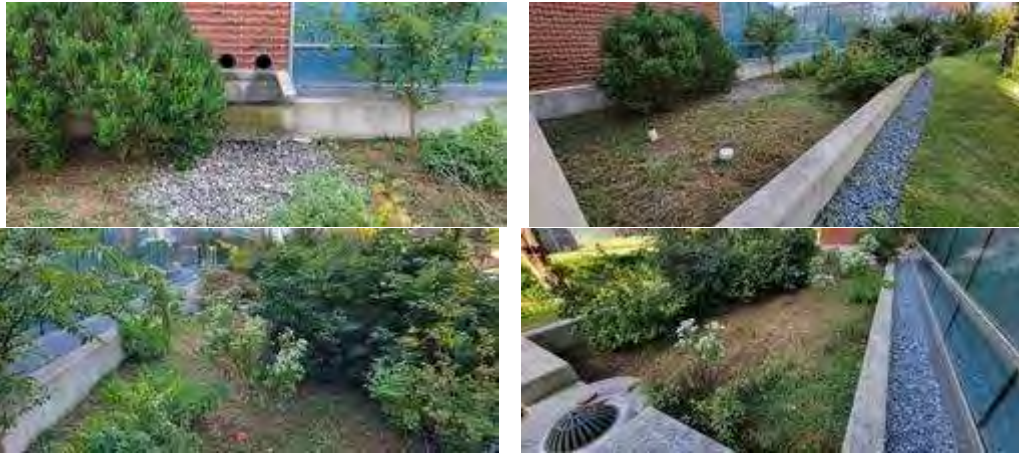


# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

Replant following the plant schedule as needed

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0232 / Clark Hall Bioretention 2

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 21, 2023 11:57 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0232	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Perennial shrubs present, but lower growing plants are absent and being replaced with weed. Holes present which appear to be from burrowing animals

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Fair

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

UMCP19BMP0232 / Clark Hall Bioretention 2      Date of Inspection: September 21, 2023 11:57 AM



# FACILITIES MANAGEMENT

## **Maintenance & Remediation Recommendations**

### **Additional Photos**





# FACILITIES MANAGEMENT

UMCP19BMP0240 / Presidents House Disconnect 2-1

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 11:54 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP19BMP0240	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Non-Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	In good condition
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

## **BMP Status** -

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP19BMP0240 / Presidents House Disconnect 2-1

Date of Inspection: June 24, 2024 11:54 AM



# FACILITIES MANAGEMENT

## **Additional Photos**



## UMCP20BMP0258 / M Square SGW 1

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 1:11 PM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0258	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Submerged Gravel Wetland	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

#### Overall Photo





### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

### **Maintenance & Remediation Recommendations**

continue with routine maintenance

**Additional Photos**



Inflow



Inflow



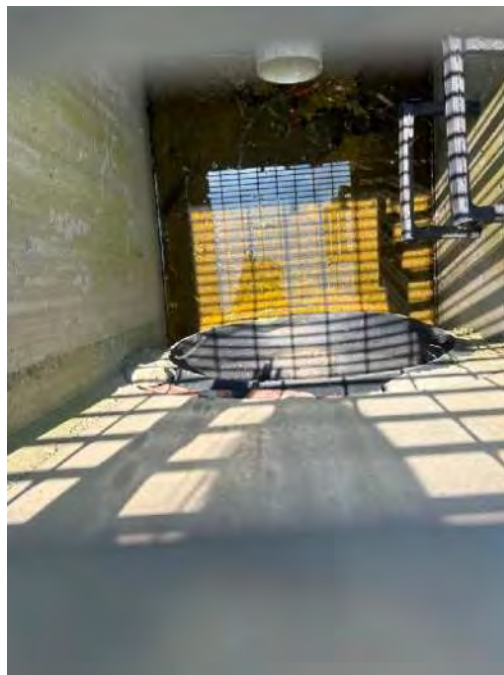
Exposed Pipe at Inflow



Inflow



Control Structure



Spillway



Treatment Area

## UMCP20BMP0259 / M Square SGW 2

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 1:18 PM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0259	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Submerged Gravel Wetland	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition. Stabilize erosion on embankment
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

#### Overall Photo





### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Fair
- **Upstream Embankment** - Good
- **Downstream Embankment** - Fair

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor maintenance. Reseed bare spots on embankment.

**Additional Photos**



Inflow



Inflow



Treatment Area



Treatment Area



Control Structure



Spillway



Erosion Occurring to Embankment

## UMCP20BMP0260 / M Square MBR1

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 1:24 PM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0260	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	BMP in good condition. Erosion around inflow needs repairing
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)	<b>Comment:</b>	

#### Overall Photo





### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:** vegetation needs trimming around control structure

### **Inflow and Forebay**

- **Inflow Condition** - Poor
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor maintenance. Repair erosion around inflow

**Additional Photos**



Treatment Area



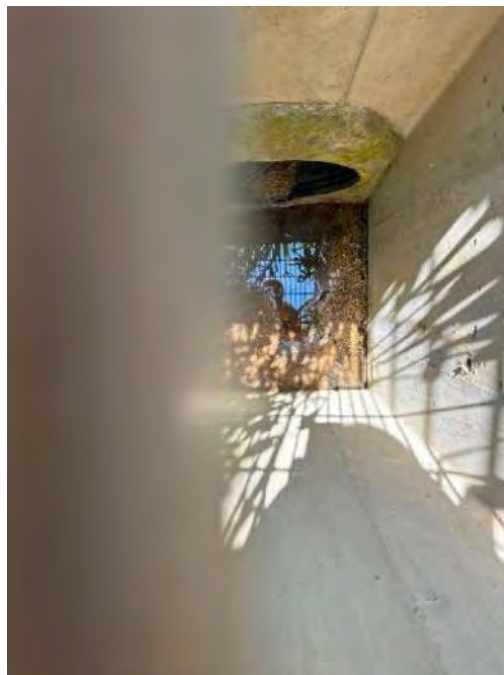
Erosion Occurring to Inflow



Erosion Occurring to Inflow



Control Structure



Spillway



# FACILITIES MANAGEMENT

UMCP20BMP0264 / New Training Facility for MFRI

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	September 22, 2023 11:03 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP20BMP0264	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Fail	<b>Overall Inspection</b>	
<b>Maintenance Level</b>	No Maintenance Needed	<b>Comment:</b>	

## **Site Conditions**

- **BMP Access** - Fair
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Wetland restrictions don't allow for complete clearing, but flow path of water is unobstructed

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - Good

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP20BMP0264 / New Training Facility for MFRI

Date of Inspection: September 22, 2023 11:03 AM



# FACILITIES MANAGEMENT

## **Additional Photos**



## UMCP20BMP0267 / College Park Academy Micro-Bioretenion 1 Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 11:09 AM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0267	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	BMP in good condition
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)	<b>Comment:</b>	

### Overall Photo



### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

### **BMP Status** - Pass

**Maintenance Level** – Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor maintenance. Reseed bare spots on embankment

**Additional Photos**



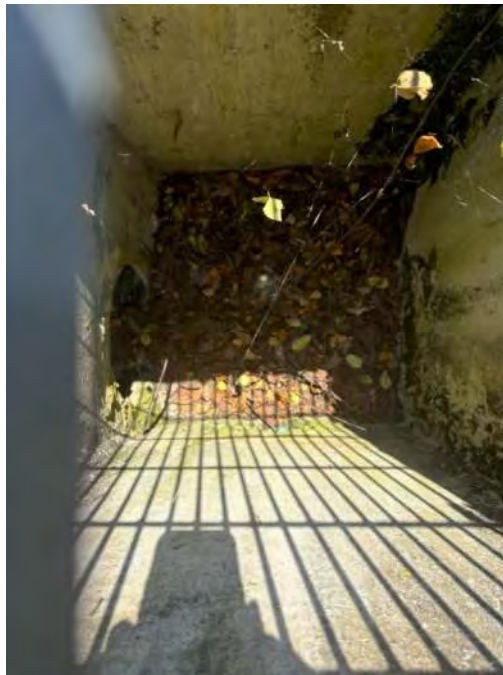
Vegetation Obstructing Inflow



Slight Erosion Occurring to Embankment



Control Structure



Spillway

## UMCP20BMP0268 / College Park Academy Micro-Bioretenion 2 Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 11:16 AM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0268	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

### Overall Photo





### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

### **Maintenance & Remediation Recommendations**

continue with routine maintenance

**Additional Photos**



Inflow



Control Structure



Spillway

## UMCP20BMP0269 / College Park Academy Micro-Bioretenion 3 Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 11:20 AM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0269	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	BMP in good condition. Inflow needs repairing
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)	<b>Comment:</b>	

### Overall Photo



### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor maintenance. Repair inflow

**Additional Photos**



Inflow



Erosion Occurring to Inflow



Control Structure



Spillway

## UMCP20BMP0270 / College Park Academy Micro-Bioretenion 4 Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 11:25 AM	<b>Inspector Initials:</b>	SK,TG
<b>BMP ID:</b>	UMCP20BMP0270	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	BMP in good condition, inflow needs repairing
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)	<b>Comment:</b>	

### Overall Photo



### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor maintenance. Repair inflow

**Additional Photos**



Inflow



Erosion Occurring to Inflow



Control Structure



Control Structure



Spillway

## UMCP20BMP0271 / College Park Academy Micro-Bioretenion 5 Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 11:29 AM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP20BMP0271	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	BMP in good condition
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)	<b>Comment:</b>	

### Overall Photo



### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

### **Maintenance & Remediation Recommendations**

continue with routine maintenance

**Additional Photos**



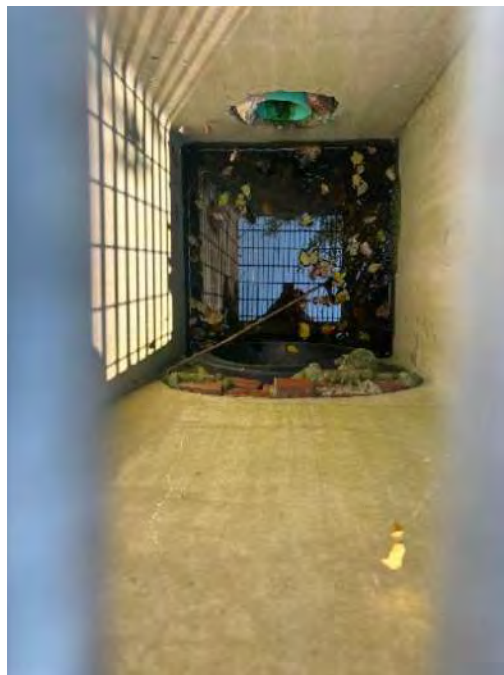
Inflow



Inflow



Control Structure



Spillway

## UMCP20BMP0272 / College Park Academy Submerged Gravel Wetland 1 Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 11:36 AM	<b>Inspector Initials:</b>	SK,TG
<b>BMP ID:</b>	UMCP20BMP0272	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Submerged Gravel Wetland	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Bmp in good condition, inflows have minor erosion/cracking
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

### Overall Photo



### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - Good

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - Good

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor maintenance. Repair inflows

**Additional Photos**



Treatment Area



Forebay



Erosion Occurring to Inflow



Inflow



Inflow



Inflow



Control Structure



Control Structure



Treatment Area

# UMCP20BMP0273 / NOAA Green Roof 1

## Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 28, 2024 10:04 AM	<b>Inspector Initials:</b>	SK,PP
<b>BMP ID:</b>	UMCP20BMP0273	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition, minor bare spots
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

### Overall Photo







Wes Moore GOVERNOR

Aruna Miller LT. GOVERNOR

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

### Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

### Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### Maintenance & Remediation Recommendations

Reseed bare spots

**Additional Photos**



Overall



Overall



Minor bare areas



Minor bare areas



Minor bare areas

## UMCP20BMP0274 / NOAA Bioretention

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 26, 2024 3:18 PM	<b>Inspector Initials:</b>	SAL,BTWS
<b>BMP ID:</b>	UMCP20BMP0274	<b>Inspection Firm:</b>	MES
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	Minor erosion at building from waterfall inflow, Cattails growth in Riprap
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)	<b>Comment:</b>	







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Aruna Miller LT. GOVERNOR

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### Site Conditions

- **BMP Access** - Fair
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:** Aquatic Vegetation growing in riprap

### Inflow and Forebay

- **Inflow Condition** - Fair
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding** - Good/**Water Depth** - 0

### Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### Outlet/Control Structure

- **Low Flow Orifice** - Good
- **Outlet / Control Structure** - Good
- **Principal Spillway** - Good

### Outfall and Downstream Condition

- **Spillway Outfall** - Good
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### Maintenance & Remediation Recommendations

Repair Erosion at building. Ensure drainage to waterfall inflow. Monitor cattail growth in riprap.

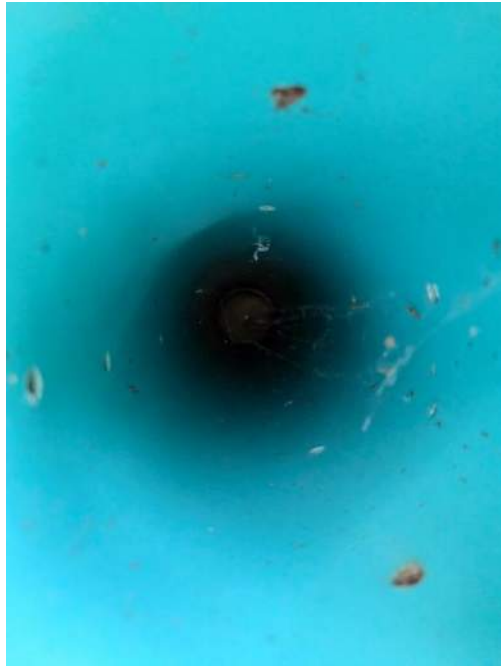
Additional Photos



Roof drain inflow



Erosion at building



Cleanout 1



Vegetation growth in riprap



Inflow



Cleanout 2



Control Structure



Control structure interior



Spillway



Upstream Overgrown Vegetation/Bridge over bioretention



Embankment

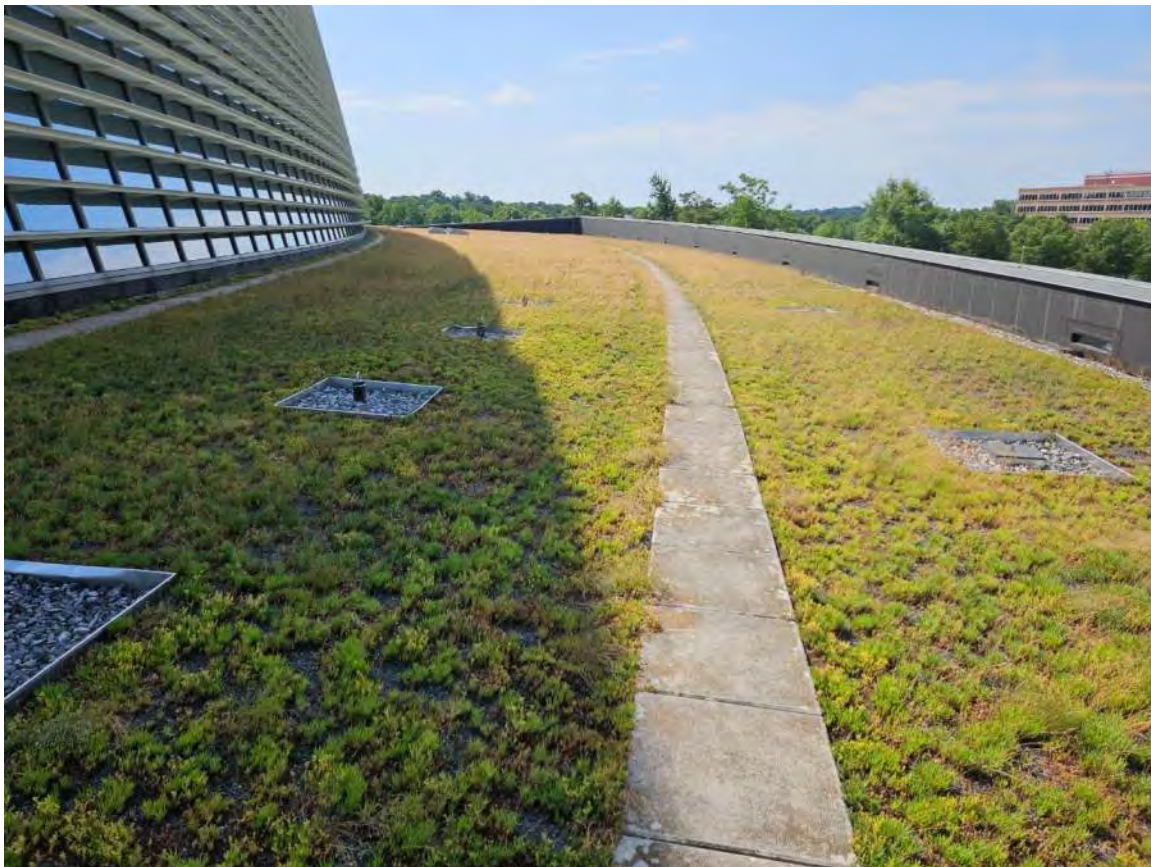
## UMCP20BMP0275 / NOAA Green Roof 2

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 28, 2024 10:19 AM	<b>Inspector Initials:</b>	SK,TG
<b>BMP ID:</b>	UMCP20BMP0275	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Green Roof - Extensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition. Replant bare areas.
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

#### Overall Photo







Wes Moore GOVERNOR

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### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - N/A
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Overall in good condition. Replant bare areas.

**Additional Photos**



Overall



Overall



Minor bare areas



Bare areas



Overflow Structure



Spillway

## UMCP20BMP0276 / NOAA WQ Manhole 1

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 26, 2024 8:39 AM	<b>Inspector Initials:</b>	SAL,BTWS
<b>BMP ID:</b>	UMCP20BMP0276	<b>Inspection Firm:</b>	MES
<b>BMP Type:</b>	Oil Grit Separator	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Fail	<b>Overall Inspection Comment:</b>	4' of Sediment/Mud within Facility
<b>Maintenance Level</b>	Major Maintenance (Use of Heavy Machinery for Repairs)		

#### Overall Photo





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### Site Conditions

- **BMP Access** - Fair
- **Debris & Sediment** - Poor
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:** 4' sediment and mud within facility.

### Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding** - Good/**Water Depth** - 0

### Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### Outlet/Control Structure

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - Good

### Outfall and Downstream Condition

- **Spillway Outfall** - Good
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Major Maintenance (Use of Heavy Machinery for Repairs)

### Maintenance & Remediation Recommendations

Clear sediment from facility to allow for continued filtration

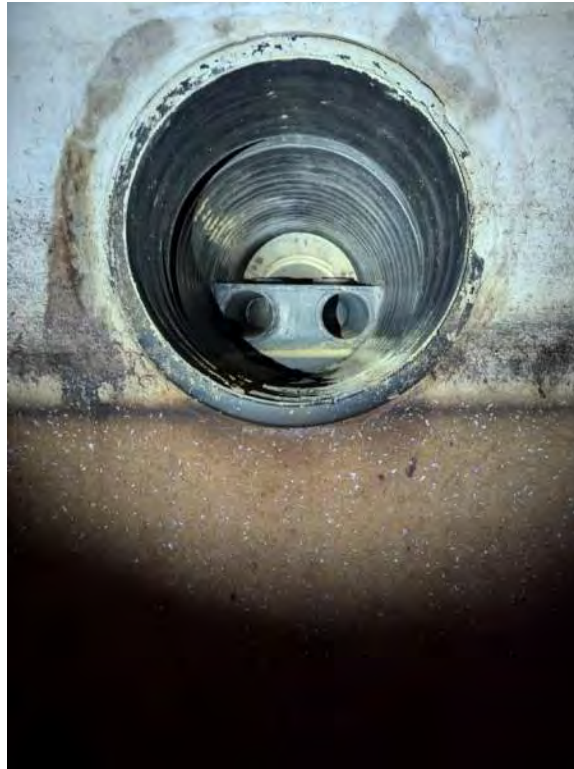
Additional Photos



Access manhole



Measured 4ft of sediment accumulation



Spillway

## UMCP20BMP0277 / NOAA Underground Cistern Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 26, 2024 4:02 PM	<b>Inspector Initials:</b>	SAL,BTWS
<b>BMP ID:</b>	UMCP20BMP0277	<b>Inspection Firm:</b>	MES
<b>BMP Type:</b>	Rainwater Harvesting	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		





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### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - Good

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding** - Good/**Water Depth** - 0

### **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### **Outlet/Control Structure**

- **Low Flow Orifice** - Good
- **Outlet / Control Structure** - Good
- **Principal Spillway** - Good

### **Outfall and Downstream Condition**

- **Spillway Outfall** - Good
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

### **Maintenance & Remediation Recommendations**

Continue Routine Maintenance

### **Additional Photos**



Inflow chamber



Connection to irrigation



Inflow from WQ Inlet



Spillway from inflow chamber



Discoloration on structure wall



Outflow pipe



Connection pipe to irrigation



Connection pipe to irrigation



Principal Spillway

## UMCP20BMP0278 / NOAA WQ Manhole 2

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 26, 2024 3:06 PM	<b>Inspector Initials:</b>	SAL,BTWS
<b>BMP ID:</b>	UMCP20BMP0278	<b>Inspection Firm:</b>	MES
<b>BMP Type:</b>	Oil Grit Separator	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Pass	<b>Overall Inspection</b>	BMP in Good Condition
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)	<b>Comment:</b>	

#### Overall Photo





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### Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding - Good/Water Depth** - 0

### Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### Outlet/Control Structure

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - Good

### Outfall and Downstream Condition

- **Spillway Outfall** - Good
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

### Maintenance & Remediation Recommendations

Continue Routine Maintenance and Monitoring

### Additional Photos

## UMCP20BMP0279 / NOAA WQ Manhole 3

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 26, 2024 3:14 PM	<b>Inspector Initials:</b>	SAL,BTWS
<b>BMP ID:</b>	UMCP20BMP0279	<b>Inspection Firm:</b>	MES
<b>BMP Type:</b>	Oil Grit Separator	<b>Underground BMP?</b>	Yes
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Unable to locate control structure pipe. BMP appears to be in good condition and not holding sediment
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

#### Overall Photo







Wes Moore GOVERNOR

Aruna Miller LT. GOVERNOR

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

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - N/A
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Not Rated
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - Good/Water Depth** - 0

### **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - Not Rated

### **Outfall and Downstream Condition**

- **Spillway Outfall** - Not Rated
- **Downstream Condition** - Not Rated

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

### **Maintenance & Remediation Recommendations**

Continue monitoring and maintenance as needed



# FACILITIES MANAGEMENT

UMCP20BMP0282 / Presidents House Disconnect 2-2

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 11:52 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP20BMP0282	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Non-Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Site in good condition
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP20BMP0282 / Presidents House Disconnect 2-2

Date of Inspection: June 24, 2024 11:52 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP20BMP0285 / Presidents House Disconnect 2-5

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 11:59 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP20BMP0285	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Non-Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	In good condition
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP20BMP0285 / Presidents House Disconnect 2-5

Date of Inspection: June 24, 2024 11:59 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP20BMP0286 / Presidents House Disconnect 2-3

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 11:45 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP20BMP0286	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Area is intact and stable
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP20BMP0286 / Presidents House Disconnect 2-3

Date of Inspection: June 24, 2024 11:45 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP20BMP0287 / Presidents House Disconnect 2-4

Stormwater Management Facility BMP Inspection

## **Inspection Data**

<b>Date of Inspection:</b>	June 24, 2024 11:49 AM	<b>Inspector Initials:</b>	MMC
<b>BMP ID:</b>	UMCP20BMP0287	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	In good condition, no need for maintenance
<b>Maintenance Level</b>	No Maintenance Needed		

## **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

## **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

## **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - Good

**BMP Status** - Pass

**Maintenance Level** - No Maintenance Needed

## **Maintenance & Remediation Recommendations**

UMCP20BMP0287 / Presidents House Disconnect 2-4

Date of Inspection: June 24, 2024 11:49 AM



# FACILITIES MANAGEMENT

## **Additional Photos**



# UMCP21BMP0289/ 4109 Metzert Rd Impervious Removal

## Stormwater Management Facility BMP Inspection

### Inspection Data

Date of Inspection:	March 26, 2024 12:20 PM	Inspector Initials:	PP,SK
BMP ID:	UMCP21BMP0289	Inspection Firm:	UMD
BMP Type:	Impervious Removal	Underground BMP?	No
BMP Status:	Pass	Overall Inspection	Bmp in good condition, continue with routine maintenance
<b>Maintenance Level:</b>	Routine Maintenance	Comment:	

### Site Conditions



Treatment Area

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - N/A
- **Upstream Embankment** - N/A
- **Downstream Embankment** - N/A

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### **Outfall and Downstream Condition**

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue with routine maintenance

## UMCP21BMP0288 / 4100 Metzerott Rd Impervious Removal

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 10:15 AM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP21BMP0288	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Impervious Removal	<b>Underground BMP?</b>	No
<b>BMP Status:</b>	Pass	<b>Overall Inspection</b>	BMP in good condition,
<b>Maintenance Level:</b>	Routine Maintenance	<b>Comment:</b>	continue with routine maintenance

#### Overall Photo







Wes Moore GOVERNOR

Aruna Miller LT. GOVERNOR

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

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - N/A
- **Upstream Embankment** - N/A
- **Downstream Embankment** - N/A

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### **Outfall and Downstream Condition**

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue with routine maintenance

**Additional Photos**



Treatment Area



Treatment Area



# FACILITIES MANAGEMENT

UMCP21BMP0292 / Cole Field House Green Roof 1  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	July 3, 2024 10:51 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP21BMP0292	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof -Intensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP21BMP0293 / Cole Field House Green Roof 2

Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	July 3, 2024 10:46 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP21BMP0293	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof -Intensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations

UMCP21BMP0293 / Cole Field House Green Roof 2

Date of Inspection: July 3, 2024 10:46 AM



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP21BMP0294 / Cole Field House Green Roof 3  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	July 3, 2024 10:50 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP21BMP0294	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof -Intensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**





# FACILITIES MANAGEMENT

UMCP21BMP0295 / Cole Field House Green Roof 4  
Stormwater Management Facility BMP Inspection

## Inspection Data

<b>Date of Inspection:</b>	July 3, 2024 10:54 AM	<b>Inspector Initials:</b>	FUR
<b>BMP ID:</b>	UMCP21BMP0295	<b>Inspection Firm:</b>	FUR
<b>BMP Type:</b>	Green Roof -Intensive	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

## Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Fair
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

## Inflow and Forebay

- **Inflow Condition** - N/A
- **Forebay** - N/A

## Treatment Area

- **Conveyance Stability** - N/A
- **Ponding - /Water Depth** -

## Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

## Outlet/Control Structure

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

## Outfall and Downstream Condition

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

## Maintenance & Remediation Recommendations



# FACILITIES MANAGEMENT

## **Additional Photos**



## UMCP21BMP0296 / 8920 Azalea Ln Impervious Removal Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 12:45 PM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP21BMP0296	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Impervious Removal	<b>Underground BMP?</b>	No
<b>BMP Status:</b>	Pass	<b>Overall Inspection Comment:</b>	Bmp in good condition continue with routine maintenance

### Overall Photo







Wes Moore GOVERNOR

Aruna Miller LT. GOVERNOR

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

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - N/A
- **Upstream Embankment** - N/A
- **Downstream Embankment** - N/A

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### **Outfall and Downstream Condition**

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue with routine maintenance

**Additional Photos**



Treatment Area

# UMCP21BMP0297/Wooded Hillock Impervious Removal 2

## Stormwater Management Facility BMP Inspection

### Inspection Data

Date of Inspection:	March 26, 2024 12:10 PM	Inspector Initials:	PP,SK
BMP ID:	UMCP21BMP0297	Inspection Firm:	UMD
BMP Type:	Impervious Removal	Underground BMP?	No
BMP Status:	Pass	Overall Inspection	BMP in good condition, continue with routine maintenance
<b>Maintenance Level:</b>	Routine Maintenance	Comment:	

### Site Conditions



Treatment Area



Treatment Area

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - N/A
- **Upstream Embankment** - N/A
- **Downstream Embankment** - N/A

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### **Outfall and Downstream Condition**

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue with routine maintenance

# UMCP21BMP0298/Wooded Hillock Impervious Removal 1

## Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	March 26, 2024 12:20 PM	<b>Inspector Initials:</b>	PP,SK
<b>BMP ID:</b>	UMCP21BMP0298	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Impervious Removal	<b>Underground BMP?</b>	No
<b>BMP Status:</b>	Pass	<b>Overall Inspection</b>	Bmp in good condition
<b>Maintenance Level:</b>	Routine Maintenance	<b>Comment:</b>	continue with routine maintenance

### Site Conditions



Treatment Area

### Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

**Embankment**

- Embankment Cover - N/A
- Upstream Embankment - N/A
- Downstream Embankment - N/A

**Outlet/Control Structure**

- Low Flow Orifice - N/A
- Outlet / Control Structure - N/A
- Principal Spillway - N/A

**Outfall and Downstream Condition**

- Spillway Outfall - N/A
- Downstream Condition - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

**Maintenance & Remediation Recommendations**

Continue with routine maintenance

## UMCP21BMP0299 / 4103 Metzerott Rd Impervious Removal

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 10:10 AM	<b>Inspector Initials:</b>	SK, TG
<b>BMP ID:</b>	UMCP21BMP0299	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Impervious Removal	<b>Underground BMP?</b>	No
<b>BMP Status:</b>	Pass	<b>Overall Inspection</b>	Bmp in good condition
<b>Maintenance Level:</b>	Routine Maintenance	<b>Comment:</b>	continue with routine maintenance

#### Overall Photo





Wes Moore GOVERNOR

Aruna Miller LT. GOVERNOR

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

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - N/A
- **Upstream Embankment** - N/A
- **Downstream Embankment** - N/A

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### **Outfall and Downstream Condition**

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue with routine maintenance

**Additional Photos**



Treatment Area



Treatment Area

# UMCP21BMP0300/Cole Field House Impervious Surface Removal Stormwater Management Facility BMP Inspection

## **Inspection Data**

Date of Inspection:	March 26, 2024 11:05 AM	Inspector Initials:	PP,SK
BMP ID:	UMCP21BMP0300	Inspection Firm:	UMD
BMP Type:	Impervious Removal	Underground BMP?	No
BMP Status:	Pass	Overall Inspection Comment:	BMP in good condition, continue with routine maintenance
<b>Maintenance Level:</b>	Routine Maintenance		

## **Site Conditions**



Treatment Area



Treatment Area

### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - N/A
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Good
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** - N/A
- **Upstream Embankment** - N/A
- **Downstream Embankment** - N/A

### **Outlet/Control Structure**

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### **Outfall and Downstream Condition**

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** – Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue with routine maintenance

## UMCP23BMP0326 / Throwing Event Relocation Bio-Swale

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	March 26, 2024 12:50 PM	<b>Inspector Initials:</b>	PP,SK
<b>BMP ID:</b>	UMCP23BMP0326	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bio-Swale	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition. Recommend adding more grass seed
<b>Maintenance Level</b>	Routine Maintenance		

#### Overall Photo





### Site Conditions

- **BMP Access** - Fair
- **Debris & Sediment** - Good
- **Vegetation** - Not Rated
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - Good

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding – Good / Water Depth** - 0

### Embankment

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - N/A

### Outlet/Control Structure

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - N/A
- **Principal Spillway** - N/A

### Outfall and Downstream Condition

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance

### **Maintenance & Remediation Recommendations**

Continue routine maintenance. Recommend adding more grass seed.

**Additional Photos**



Cleanout



Upstream Portion of Swale



Outfall

## UMCP23BMP0327 / Throwing Event Relocation Non-Rooftop Disconnection

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	March 27, 2024 11:52 AM	<b>Inspector Initials:</b>	PP,SK
<b>BMP ID:</b>	UMCP23BMP0327	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Non-Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition. Recommend adding more grass seed
<b>Maintenance Level</b>	Routine Maintenance		

#### Overall Photo





### Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Not Rated
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding - Good/Water Depth** - 0

### Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### Outlet/Control Structure

- **Low Flow Orifice** - Good
- **Outlet / Control Structure** - Good
- **Principal Spillway** - Good

### Outfall and Downstream Condition

- **Spillway Outfall** - Not Rated
- **Downstream Condition** - Not Rated

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance

### **Maintenance & Remediation Recommendations**

Recommend adding more grass seed. Continue routine maintenance

**Additional Photos**



Control Structure



Spillway

## UMCP23BMP0328 / UMCP Field Hockey

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	March 26, 2024 4:08 PM	<b>Inspector Initials:</b>	PP,SK
<b>BMP ID:</b>	UMCP23BMP0328	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Micro-Bioretenion	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP has active water flow
<b>Maintenance Level</b>	Minor Maintenance		

#### Overall Photo





### Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Not Rated
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - Poor
- **Forebay** - N/A

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding - Poor/Water Depth** - 0.4

### Embankment

- **Embankment Cover** - Good
- **Upstream Embankment** - Good
- **Downstream Embankment** - N/A

### Outlet/Control Structure

- **Low Flow Orifice** - N/A
- **Outlet / Control Structure** - Good
- **Principal Spillway** - Good

### Outfall and Downstream Condition

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Fail

**Maintenance Level** - Minor Maintenance

### **Maintenance & Remediation Recommendations**

Monitor ponding and source of flow

**Additional Photos**



3

Inlet



Inlet



Inlet



Conveyance Area



Control Structure



Spillway



Spillway

## UMCP23BMP0329 / Chemistry Wing 1 Micro-bioretenion

### Stormwater Management Facility BMP Inspection

#### Inspection Data

<b>Date of Inspection:</b>	March 26, 2024 11:26 AM	<b>Inspector Initials:</b>	PP,SK
<b>BMP ID:</b>	UMCP23BMP0329	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Bioretention	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition
<b>Maintenance Level</b>	Routine Maintenance		

#### Site Conditions





### Site Conditions

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Not Rated
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### Inflow and Forebay

- **Inflow Condition** - Good
- **Forebay** - Not Rated

### Treatment Area

- **Conveyance Stability** - Good
- **Ponding - Good/Water Depth** - 0

### Embankment

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### Outlet/Control Structure

- **Low Flow Orifice** - Not Rated
- **Outlet / Control Structure** - Good
- **Principal Spillway** - Good

### Outfall and Downstream Condition

- **Spillway Outfall** - N/A
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance

### **Maintenance & Remediation Recommendations**

**Additional Photos**



Control Structure



Spillway



Inflow

## UMCP23BMP0330 / Chemistry Wing 1 Non-rooftop Disconnection 1A Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 10:37 AM	<b>Inspector Initials:</b>	SK,TG
<b>BMP ID:</b>	UMCP23BMP0330	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Non-Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	Repair erosion on grassy area
<b>Maintenance Level</b>	Minor Maintenance (Use of Hand Equipment for Repairs)		

### Overall Photo





### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Fair
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Fair
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Minor Maintenance (Use of Hand Equipment for Repairs)

### **Maintenance & Remediation Recommendations**

Minor Maintenance

**Additional Photos**



Inlet



Erosion Affecting Grassy Area



Erosion Affecting Grassy Area

## UMCP23BMP0331 / Chemistry Wing 1 Non-rooftop Disconnection 1B Stormwater Management Facility BMP Inspection

### Inspection Data

<b>Date of Inspection:</b>	June 17, 2024 10:31 AM	<b>Inspector Initials:</b>	SK,TG
<b>BMP ID:</b>	UMCP23BMP0331	<b>Inspection Firm:</b>	UMD
<b>BMP Type:</b>	Disconnection of Non-Rooftop Runoff	<b>Underground BMP?</b>	No
<b>BMP Status</b>	Pass	<b>Overall Inspection Comment:</b>	BMP in good condition
<b>Maintenance Level</b>	Routine Maintenance (Only needs Routine Maintenance)		

### Overall Photo



### **Site Conditions**

- **BMP Access** - Good
- **Debris & Sediment** - Good
- **Vegetation** - Good
- **BMP Contamination** - Good
- **General Site Conditions Comments:**

### **Inflow and Forebay**

- **Inflow Condition** - Good
- **Forebay** - N/A

### **Treatment Area**

- **Conveyance Stability** - Fair
- **Ponding - /Water Depth** -

### **Embankment**

- **Embankment Cover** -
- **Upstream Embankment** -
- **Downstream Embankment** -

### **Outlet/Control Structure**

- **Low Flow Orifice** -
- **Outlet / Control Structure** -
- **Principal Spillway** -

### **Outfall and Downstream Condition**

- **Spillway Outfall** -
- **Downstream Condition** - N/A

**BMP Status** - Pass

**Maintenance Level** - Routine Maintenance (Only needs Routine Maintenance)

**Maintenance & Remediation Recommendations** – Continue Routine Maintenance

**Additional Photos**



Treatment Area

## Phase II MS4 Restoration Activity Schedule

**Total Acreage (1327); Impervious Acre Baseline (456.04); 20% Restoration Target ( 79.25 acres)**

Type of Restoration Project	BMP Code	BMP ID	Cost (\$K)	Imperv Acres Treated	Imperv Acre Target and Balance	Project Status	Year Complete or Projected Implementation Year (by 2025)	MD Grid Coordinates (Northing/Easting)	
					79.25				
IBBR Outfall Stabilization	OUT	USG19BMP0004	10	0.50	78.75	C	2006	158456.27	382786.21
University House Southern Micro-Bioretenion	MMBR	UMCP19BMP0040	10	0.03	78.72	C	2011	146679.14	404093.23
Denton Courtyard Micro-Bioretenion	MMBR	UMCP19BMP0122	15	0.10	78.62	C	2012	147179.85	404313.09
Shuttle Facility Green Roof	AGRE	UMCP19BMP0016	50	0.11	78.51	C	2012	147510.65	405436.50
Shuttle Facility Green Roof	AGRE	UMCP19BMP0017	50	0.11	78.40	C	2012	147512.86	405458.48
Shuttle Facility Dry Swale	ODSW	UMCP19BMP0026	30	1.71	76.69	C	2012	147485.93	405590.45
Heavy Equipment Building Micro-Bioretenion	MMBR	UMCP19BMP0055	15	0.10	76.59	C	2012	147573.67	404943.77
Denton Dining Micro-Bioretenion	MMBR	UMCP19BMP0059	30	0.24	76.35	C	2012	147173.55	405348.39
Denton Quad Micro-Bioretenion 3	MMBR	UMCP19BMP0070	15	0.07	76.28	C	2012	147151.76	404275.04
Shuttle Bus Pond	PWET	UMCP19BMP0106	40	0.14	76.14	C	2012	147494.20	405574.94
Physical Science Complex Green Roof	AGRE	UMCP19BMP0078	100	0.21	75.93	C	2013	147002.04	405068.40
Computer and Space Sciences Green Roof	AGRE	UMCP19BMP0049	35	0.08	75.85	C	2013	147031.24	405023.82
Prince Frederick Hall Micro-Bioretenion Cell 1	MMBR	UMCP19BMP0124	30	0.14	75.71	C	2014	146101.64	404687.09
Impervious Surface Removal to Pervious 4100 Metzertott Rd	IMPP	UMCP20BMP0288	5	0.17	75.54	C	2016	148038.42	405387.54
West Side of Edward St. John Green Roof	AGRE	UMCP19BMP0157	50	0.06	75.48	C	2017	146559.97	405023.75
West Side of Edward St. John Green Roof	AGRE	UMCP19BMP0158	50	0.06	75.42	C	2017	146560.89	405040.90
Impervious Surface Removal to Pervious 4109 Metzertott Rd	IMPP	UMCP20BMP0289	5	0.03	75.40	C	2017	147899.26	405369.20
Clark Hall Bioretention 1	MMBR	UMCP19BMP0231	60.0	0.33	75.07	C	2017	147129.96	405375.41
Clark Hall Micro-Bioretenion 2	MMBR	UMCP19BMP0232	50	0.29	74.78	C	2017	147109.93	405375.62
M Square SGW 1	MSGW	UMCP20BMP0258	90	1.86	72.92	C	2018	144408.70	405905.68
M Square SGW 2	MSGW	UMCP20BMP0259	40	0.72	72.20	C	2018	144567.14	405880.11
M Square MBR1	MMBR	UMCP20BMP0260	30	0.35	71.85	C	2018	144555.93	406065.15
Lot GG MB5	MMBR	UMCP19BMP0152	25	0.27	71.58	C	2018	146930.84	405581.69
Lot GG MB3	MMBR	UMCP19BMP0153	15	0.14	71.44	C	2018	147007.47	405562.48
Lot GG MB4	MMBR	UMCP19BMP0154	35	0.31	71.13	C	2018	146975.71	405568.77
Brendan Iribe Micro-Bioretenion 1	MMBR	UMCP19BMP0241	30	0.27	70.86	C	2019	146906.29	405596.76
Brendan Iribe Micro-Bioretenion 2	MMBR	UMCP19BMP0242	40	0.32	70.54	C	2019	146855.63	405574.14
Brendan Iribe 4	APRP	UMCP19BMP0244	20	0.15	70.39	C	2019	146849.94	405510.90
Brendan Iribe 5	AGRI	UMCP19BMP0245	20	0.14	70.25	C	2019	146819.29	405548.24
Campus Creek Stream Restoration Phase 1	STRE	UMCP19BMP0249	1200	104.80	-34.56	C	2019	147429.67	404606.19
Regenerative Step Pool Conveyance	SPSC	UMCP19BMP0250	20	0.58	-35.14	C	2019	147431.84	404451.93
Regenerative Step Pool Conveyance	SPSC	UMCP20BMP0290	20	0.31	-35.45	C	2019	147441.85	404475.02
Stormwater Bar	OUT	UMCP20BMP0291	10	0.13	-35.58	C	2019	147345.11	404978.06
Wooded Hillcock Impervious Removal 3	IMPP	UMCP21BMP0296	5	0.02	-35.60	C	2020	147957.18	404955.17
Wooded Hillcock Impervious Removal 2	IMPP	UMCP21BMP0297	5	0.02	-35.61	C	2020	147940.09	404868.38
Wooded Hillcock Impervious Removal 1	IMPP	UMCP21BMP0298	5	0.05	-35.66	C	2020	147868.97	404758.74
Knight Hall	MRWH	UMCP19BMP0082	50	0.39	-36.05	C	2020	146527.74	404476.54
Cole Field House Impervious Removal	IMPP	UMCP21BMP0300	500	2.30	-38.35	C	2021	146705.18	404486.51
4103 Metzertott Rd Impervious Removal	IMPP	UMCP21BMP0299	15	0.07	-38.42	C	2021	147959.30	405348.54
Presidents house Disconnect 1	NDNR	UMCP19BMP0239	10	0.01	-38.43	C	2021	146721.81	404139.61
Prince Frederick Hall Bioretention Cell 2	MMBR	UMCP19BMP0125	45.2	0.33	-38.76	C	2022	146116.11	404734.63
Brendan Iribe 3	MSWB	UMCP19BMP0243	25	0.19	-38.95	C	2023	146803.50	405608.07
School of Public Policy Bioretention 1	MMBR	UMCP22BMP0321	30	0.16	-39.11	C	2023	146340.64	405239.55
School of Public Policy Bioretention 2	MMBR	UMCP22BMP0322	30	0.30	-39.41	C	2023	146385.29	405356.00
School of Public Policy Pocket Wetland 1	WPKT	UMCP22BMP0323	40	0.55	-39.96	C	2023	146347.72	405349.05
School of Public Policy Non-Rooftop Disconnect 1	NDNR	UMCP22BMP0324	5	0.04	-40.00	C	2023	146304.01	405341.42
Cole Field House Green Roof 1	AGRI	UMCP21BMP0292	50	0.32	-40.32	C	2021	146766.15	404615.60
Cole Field House Green Roof 2	AGRI	UMCP21BMP0293	50	0.07	-40.39	C	2021	146866.74	404556.07
Cole Field House Green Roof 3	AGRI	UMCP21BMP0294	50	0.37	-40.76	C	2021	146672.51	404557.39
Cole Field House Green Roof 4	AGRI	UMCP21BMP0295	50	0.86	-41.62	C	2021	146626.26	404516.83
Idea Factory Micro-Bioretenion 4	MMBR	UMCP22BMP0301	30	0.08	-41.70	C	2021	146933.90	405411.70
Idea Factory Micro-Bioretenion 2	MMBR	UMCP22BMP0302	30	0.06	-41.76	C	2021	146926.50	405335.62
Idea Factory Micro-Bioretenion 1	MMBR	UMCP22BMP0303	30	0.07	-41.83	C	2021	146926.84	405357.94
Idea Factory Micro-Bioretenion 3	MMBR	UMCP22BMP0304	30	0.04	-41.87	C	2021	146926.96	405378.99
UMCP Field Hockey & Lacrosse Complex	MMBR	UMCP22BMP0328	50	0.25	-42.12	C	2024	147395.18	405446.70
Chemistry Wing 1 Micro-Bioretenion	MMBR	UMCP22BMP0329	40	0.36	-42.48	C	2024	146865.77	405274.92
Chemistry Wing 1 Non-rooftop Disconnection 1A	NDNR	UMCP22BMP0330	5	0.01	-42.49	C	2024	146911.60	405288.65
Chemistry Wing 1 Non-rooftop Disconnection 1B	NDNR	UMCP22BMP0331	5	0.02	-42.51	C	2024	146888.61	405307.84
Animal Science pond	PWET	UMCP19BMP0021	338.8	8.95	-51.46	P	2025	147226.59	405331.71
Campus Creek Stream Restoration Phase 2	STRE		1700	45.20	-96.66	P	2025	147351.99	404982.82
<b>Total Restoration Credit =</b>				<b>175.91</b>					

ATTACHMENT G  
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	REPORTING_YEAR	MD_NORTH	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
UMCP198MP0002	2024	147378.67	404651.41	13-SF_5501	94-SF-0311	Lot 2 retention pond	S	PWET	NEWD	7/2/2021	P	8/27/2021			Apply parking lot pond. With riprap overflow into vegetated swale.
UMCP198MP0005	2024	146534.80	404139.47	13-SF_5501	02-SF-0247	Peace and Friendship Garden	S	FSND	REDE	6/10/2022	P	9/26/2023			Basis of UMD SWM Bank. Restoration completed 11/2021.
UMCP198MP0010	2024	148438.32	404925.45	13-SF_5501	91-SF-0059	Laboratory for Physical Science	S	PWED	NEWD	3/23/2021	P	8/16/2021			heavy sedimentation. heavy cattail growth. nice wooded edge condition favorable wildlife habitat
UMCP198MP0011	2024	147097.10	404208.05	13-SF_5501	03-SF-0282	CSPAC Shallow Marsh Wetland	S	WSHW	NEWD	9/27/2023	P	9/27/2023			recommend annual perennial cut back. High habitat value. Many species of Birds observed.
UMCP198MP0012	2024	147658.28	405172.72	13-SF_5501	00-SF-0275	Softball Complex retention pond	S	PWET	REDE	6/11/2024	P	6/11/2024			Heavy vegetation around edge of facility. Annual reduction of cattails recommended.
UMCP198MP0013	2024	148196.94	405115.88	13-SF_5501		Courtyards retention pond	S	PWET	NEWD	6/6/2023	P	6/6/2023			sediments and trash at swale/inlet into pond
UMCP198MP0014	2024	146352.34	405004.26	13-SF_5501		Woods Hall	S	FBIO	REDE	9/21/2023	P	9/21/2023			Garden Area Flood by AWS and DNR
UMCP198MP0016	2024	147510.65	405436.50	13-SF_5501	11-SF-0002	Shuttle Facility Lower Roof	E	AGRE	REDE	4/16/2024	P	4/16/2024			sedum green roof. in bloom many observed pollinator bees. interviewed facility staff, no problems experienced so far. 75% plant cover, room to fill in
UMCP198MP0017	2024	147512.86	405458.48	13-SF_5501	11-SF-0002	Shuttle Facility Upper Roof	E	AGRE	REDE	4/16/2024	P	4/19/2022			same as lower roof
UMCP198MP0018	2024	147569.38	404959.19	13-SF_5501	11-SF-0139	BLS Heavy Equipment	E	AGRE	NEWD	4/16/2024	P	4/16/2024			
UMCP198MP0019	2024	146672.76	404025.06	13-SF_5501	13-SF-0237	University House Parking Lot	E	MMBR	NEWD	9/21/2021	P	9/21/2021			Facility outfall presents an issue with eroding the hillside.
UMCP198MP0020	2024	148418.20	405181.87	13-SF_5501	98-SF-0319	VetMed research pond	S	PWET	NEWD	12/8/2022	P	12/8/2022			
UMCP198MP0021	2024	147226.59	405331.71	13-SF_5501	98-SF-0319	Animal Science pond	S	XBDP	NEWD	1/20/2022	F	12/15/2016			Renewal Design in progress
UMCP198MP0022	2024	147243.08	405582.00	13-SF_5501		Lot 11b	S	FBIO	REST	9/21/2023	F	5/16/2017			Dr. Davis bioretention
UMCP198MP0023	2024	147158.61	405364.43	13-SF_5501		Neutral Buoyancy Conveyance	E	MSWW	REDE	5/31/2023	P	5/31/2023			Excessive sediment near outfall. Minor erosion no observed safety bench at pond edge. algae bloom mid June. retrofit candid?
UMCP198MP0024	2024	147410.58	404873.61	13-SF_5501	01-SF-0005	Terrapin Trail Garage retention pond	S	PWET	NEWD	5/18/2023	P	5/18/2023			SHA built for CSX grade separation PG1825147
UMCP198MP0026	2024	147529.74	405584.51	13-SF_5501	11-SF-0002	Shuttle Facility	S	OSDW	NEWD	6/24/2024	P	6/24/2024			Dr. Davis bioretention. Built w/ EPA/PG \$ (5250K for 4 facilities)
UMCP198MP0027	2024	147267.42	405147.05	13-SF_5501		Lot P2 Bioretention	S	FBIO	REST	9/21/2023	P	9/21/2023			Bioretention North
UMCP198MP0033	2024	146807.37	404129.62	13-SF_5501	11-SF-0184	University House MBR 1C	E	MMBR	NEWD	9/21/2021	P	9/21/2021			Bioretention North
UMCP198MP0034	2024	146818.84	404118.76	13-SF_5501	11-SF-0184	University House MBR 1B	E	MMBR	NEWD	9/21/2021	F	9/21/2021			Bioretention North
UMCP198MP0035	2024	146832.82	404103.80	13-SF_5501	11-SF-0184	University House MBR 1A	E	MMBR	NEWD	10/20/2021	P	10/20/2021			Bioretention North
UMCP198MP0036	2024	146322.54	404288.16	13-SF_5501		Lot Three (Guilford Park Bioretention)	S	FBIO	REST	6/6/2023	P	5/18/2023			Middle Guilford Bioretention.
UMCP198MP0039	2024	146978.37	405216.60	13-SF_5501		Chem-Nuc BLDG	S	FBIO	REST	9/21/2023	P	9/21/2023			North Cell
UMCP198MP0040	2024	146679.14	404093.23	13-SF_5501	11-SF-0184	University House MBR 3	E	MMBR	REST	9/21/2021	P	9/21/2021			Bioretention South
UMCP198MP0041	2024	146731.82	404095.08	13-SF_5501	11-SF-0184	University House MBR 2	E	MMBR	NEWD	9/21/2021	P	9/21/2021			Bioretention South
UMCP198MP0042	2024	147527.84	404852.38	13-SF_5501	13-SF-0233	Wye Oak Building	E	MMBR	NEWD	6/1/2024	P	6/12/2024			
UMCP198MP0043	2024	147241.07	405591.22	13-SF_5501		Lot 11b bioretention	S	FBIO	REST	4/2/2019	F	5/16/2017			Dr. Davis bioretention
UMCP198MP0046	2024	146577.57	405168.75	13-SF_5501		Symons Hall Rain Garden North	E	MRNG	REST	4/2/2019	P	4/2/2019			
UMCP198MP0047	2024	146570.86	405168.72	13-SF_5501		Symons Hall Rain Garden South	E	MRNG	REST	4/2/2019	P	4/2/2019			
UMCP198MP0048	2024	146574.81	405168.57	13-SF_5501		Symons Hall Previous Pavement	E	APRP	REST	4/2/2019	F	4/2/2019			
UMCP198MP0049	2024	147031.24	405033.82	13-SF_5501	10-SF-0085	Computer and Space Sciences Green Roof	E	AGRE	REDE	4/10/2024	P	4/10/2024			
UMCP198MP0050	2024	147147.67	404856.25	13-SF_5501		Cumberland Green Roof	E	AGRE	REST	4/10/2024	P	4/10/2024			south cell. same condition as others.
UMCP198MP0055	2024	147573.60	404936.27	13-SF_5501	11-SF-0139	Heavy Equipment Building	E	MMBR	REDE	6/11/2024	P	6/11/2024			BLS Bioretention. no observed plants. room for enhanced planting.
UMCP198MP0056	2024	147750.78	405055.88	13-SF_5501	01-SF-0167	Comcast North retention pond	S	PWET	REDE	4/17/2024	P	4/17/2024			Comcast/Chesapeake Pond. Reported problems with overflow during large rains events. Geese infestation.
UMCP198MP0059	2024	147173.55	404348.39	13-SF_5501	12-SF-0215	Denton Dining	E	MMBR	REDE	9/27/2023	P	9/27/2023			Plans identify BMP as a Grass Swale, originally identified as dry pond
UMCP198MP0065	2024	148724.97	405016.86	13-SF_5501	04-SF-0066	Greenmade North Grass Channel B	S	MSWG	NEWD	9/16/2022	P	4/11/2022			
UMCP198MP0066	2024	148721.15	405017.68	13-SF_5501	04-SF-0066	Greenmade North Grass Channel A	S	MSWG	NEWD	4/26/2022	P	4/26/2022			
UMCP198MP0068	2024	148324.92	405076.19	13-SF_5501		Courtyards Northeast Parking	S	FBIO	NEWD	6/6/2023	F				sheet flow to bioretention curb at north edge collapsed
UMCP198MP0069	2024	148316.39	405094.46	13-SF_5501		Courtyards Northeast Parking	S	FBIO	NEWD	6/6/2023	F				sheet flow to bioretention
UMCP198MP0070	2024	147151.76	404275.04	13-SF_5501	12-SF-0215	Denton Quad MB 3	E	MMBR	REDE	3/26/2020	P	12/2/2016			
UMCP198MP0073	2024	146673.19	404758.47	13-SF_5501		Stamp Green Roof West	E	AGRE	REST	4/16/2024	P	9/30/2021			Good condition. Some volunteer weeds should be removed. verify LEED status
UMCP198MP0074	2024	146671.05	404793.63	13-SF_5501		Stamp Green Roof East	E	AGRE	REST	4/16/2024	P	9/30/2021			same as other stamp green roof verify LEED status
UMCP198MP0075	2024	147163.19	404277.92	13-SF_5501		Denton	E	APRP	REST	6/4/2019	F				Service parking permeable paving.
UMCP198MP0076	2024	147256.74	404824.99	13-SF_5501		Public Health Garden	S	FBIO	REST	6/1/2021	P	2/7/2020			Water enters facility too rapidly, causing scouring and channeling of swale bays. BMP not permitted by MDE.
UMCP198MP0077	2024	147272.45	404825.22	13-SF_5501		Public Health Garden	S	MRWH	REST	6/4/2019	P	2/6/2020			BMP not permitted by MDE.
UMCP198MP0078	2024	147002.04	405068.40	13-SF_5501	10-SF-0085	Physical Science Complex Green Roof	E	AGRE	REDE	4/10/2024	P	4/10/2024			
UMCP198MP0079	2024	146754.86	405303.38	13-SF_5501		Glenn L Martin Hall	E	APRP	NEWD	1/20/2022	P	1/20/2022			Engineering permeable paving
UMCP198MP0080	2024	147250.06	405278.89	13-SF_5501		Lot FF2	E	APRP	REST	5/31/2023	P	5/31/2023			Dr. Davis permeable paving research with treatment vault for nitrogen reduction.
UMCP198MP0081	2024	147230.34	404409.42	13-SF_5501		Denton Hall	E	MRWH	NEWD	5/31/2023	P	5/31/2023			
UMCP198MP0082	2024	146527.74	404476.54	13-SF_5501	08-SF-0085	Knights Hall	E	MRWH	REDE	7/15/2021	P	7/15/2021			
UMCP198MP0083	2024	147257.84	404359.90	13-SF_5501		Denton Hall	E	MRWH	NEWD	5/31/2023	P	5/31/2023			
UMCP198MP0085	2024	146052.57	405080.49	13-SF_5501		Washington Quad	E	MRWH	REST		F				Washington Quad, Listed as failing until inspection/PE 1
UMCP198MP0086	2024	146952.04	404182.71	13-SF_5501		CSPAC	E	APRP	NEWD	4/4/2019	F	8/24/2018			CSPAC landscape service building permeable paving. Some weeds/sediment buildup in joints.
UMCP198MP0088	2024	146958.99	405215.94	13-SF_5501		Chem-Nuc BLDG	S	FBIO	REST	9/21/2023	P	9/21/2023			South Cell
UMCP198MP0089	2024	147350.63	404155.05	13-SF_5501		Golf Course Pond (lower)	S	PWET	NEWD	11/6/2020	F				Dam failed years ago. No funding identified for fix. Undermined condition presents safety hazard. Confirm status w/ course manager - In-Stream Pond Campus Creek
UMCP198MP0090	2024	147315.44	405100.67	13-SF_5501	00-SF-0275	Lot UU Bioretention	S	FBIO	REST	6/16/2022	P	8/27/2021			Treats part of Xfinity Roof
UMCP198MP0091	2024	147294.93	405324.85	13-SF_5501		Regents Drive Bioretention	S	FBIO	REST	5/31/2023	F	5/16/2018			Dr. Davis bioretention. Built w/ EPA/PG \$ (5250K for 4 facilities)
UMCP198MP0092	2024	147374.45	405327.15	13-SF_5501		Lot 9 Bioretention	S	FBIO	REST	6/6/2023	F				Dr. Davis bioretention. Built w/ EPA/PG \$ (5250K for 4 facilities)
UMCP198MP0093	2024	147291.94	405246.25	13-SF_5501		Regents Drive Bioretention	S	FBIO	REST	5/31/2023	F	5/16/2018			Dr. Davis bioretention. Built w/ EPA/PG \$ (5250K for 4 facilities)
UMCP198MP0094	2024	147238.55	405446.42	13-SF_5501		Paint Branch Drive Bioretention	S	FBIO	REDE	6/6/2023	F	5/16/2017			Dr. Davis bioretention. Built w/ EPA/PG \$ (5250K for 4 facilities)
UMCP198MP0098	2024	147513.27	405342.47	13-SF_5501	95-SF-0032	Artificial Turf Field	S	PWET	NEWD	1/20/2022	P	8/28/2021			Not intended for SWM. Drainage only.
UMCP198MP0106	2024	147494.20	405574.94	13-SF_5501	11-SF-0002	Shuttle Bus	S	PWET	REDE	9/30/2022	P	5/9/2022			
UMCP198MP0107	2024	147573.07	405296.44	13-SF_5501	01-SF-0255	Taylor Stadium	S	FBIO	NEWD	3/26/2024	F	3/26/2024			
UMCP198MP0108	2024	147903.37	405030.76	13-SF_5501	00-SF-0275	Chesapeake Parking Lot East	S	FUND	NEWD	6/11/2024	P	6/12/2024			
UMCP198MP0109	2024	148134.97	404878.53	13-SF_5501		Metzerott Rd. and Greenmead Dr.	S	PWET	NEWD	9/8/2021	P	9/8/2021			
UMCP198MP0112	2024	146967.82	404041.11	13-SF_5501	98-SF-0218	Golf Course Parking Lot	E	MMBR	REDE	4/8/2020	F	10/30/2018			Bioretention discovered during inspection of Golf Course Rd. drainage swale-December 2014

BMP_ID <sup>1</sup>	REPORTING_YEAR	MD_NORTH <sup>2</sup>	MD_EAST	PERMIT_NUM	LOCAL_BMP_ID	BMP_NAME	BMP_CLASS	BMP_TYPE	CON_PURPOSE	LAST_INSP_DATE	BMP_STATUS	MAIN_DATE	REINSR_DATE	REINSR_STATUS	GEN_COMMENTS
UMCP198MP0122	2024	147179.85	404313.09	13-SF_5501	12-SF-0215	Denton Courtyard Bioretention	E	MMBR	REDE	9/27/2023	P	9/27/2023			
UMCP198MP0124	2024	146101.64	404687.09	13-SF_5501	12-SF-0232	Prince Frederick Hall Bioretention Cell 1	E	MMBR	REDE	9/21/2021	P	9/21/2021			
UMCP198MP0125	2024	146116.11	404734.63	13-SF_5501	12-SF-0232	Prince Frederick Hall Bioretention Cell 2	E	MMBR	REDE	11/22/2022	P	11/15/2022			Sewer or potable pipe tied in to East inflow, flushing noise observed in field
UMCP198MP0127	2024	146180.60	405944.12	13-SF_5501		Paint Branch Dr & Rossborough Ln	S	FBIO	REST	5/1/2019	F	4/1/2017			To be removed and replaced by Leonardtown development.
UMCP198MP0128	2024	146168.89	405972.95	13-SF_5501		Paint Branch Dr & Rossborough Ln	S	FBIO	REST	5/1/2019	F	4/1/2017			City of College Park constructed and maintained. Not university.
UMCP198MP0129	2024	146479.88	405249.72	13-SF_5501		North side of Reckard Armory	E	MRNG	REST	1/18/2022	F				Built as part of sustainability fund student project
UMCP198MP0130	2024	146691.80	405287.54	13-SF_5501		Kirwan Hall Pavers	E	APRP	NEWD	6/6/2023	F	6/5/2019			MES Inspection 6/6/23: No longer permeable, brick appears to have been grouted.
UMCP198MP0133	2024	146961.40	405387.38	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0134	2024	146947.98	405387.45	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0135	2024	146934.26	405387.46	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0136	2024	146948.05	405400.84	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0137	2024	146934.33	405400.85	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0138	2024	146961.45	405400.81	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0139	2024	146961.51	405414.15	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0140	2024	146948.10	405414.19	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0141	2024	146934.45	405414.24	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	4/2/2019	F				Removed
UMCP198MP0142	2024	146981.56	405407.42	13-SF_5501	02-SF-0279	Kim Plaza	E	MMBR	REDE	6/24/2024	P	6/24/2024			
UMCP198MP0143	2024	147092.53	405326.54	13-SF_5501		Central Animal Resources Facility & ENST	E	APRP	NEWD	5/31/2023	P	5/31/2023			
UMCP198MP0144	2024	146956.32	404032.55	13-SF_5501		North East corner of Golf Course parking Lot	E	MRNG	REST	9/25/2021	P	9/25/2021			Built as part of CBT grant; built in-house by BLM; drawings consist of profile and plan view- no detail drawings were created; construction cost include all 3 facilities combined.
UMCP198MP0146	2024	146970.08	403914.01	13-SF_5501		Northwest corner of Golf Course parking lot	E	MRNG	REST	9/25/2021	P	9/25/2021			Built as part of CBT grant; built in-house by BLM; drawings consist of profile and plan view- no detail drawings were created; construction cost include all 3 facilities combined.
UMCP198MP0147	2024	146905.41	403933.00	13-SF_5501		Southwest corner of Golf Course parking lot	E	MRNG	REST	5/1/2019	F	10/30/2018			RG2. Built as part of CBT grant; built in-house by BLM; drawings consist of profile and plan view- no detail drawings were created; construction cost include all 3 facilities combined. 6" Inflow pipe from swale is below grade.
UMCP198MP0149	2024	146859.36	404863.09	13-SF_5501	11-SF-0366	Bob Turtle Smith Stadium at Shipley Field Underground Detention System	S	XDPD	REDE		F				Listed as failing until inspection
UMCP198MP0150	2024	146581.05	405108.91	13-SF_5501	14-SF-0181	Edward St. John Learning and Teaching Center Underground Detention	S	XDPD	REDE	2/16/2023	F	2/16/2023			Listed as failing until inspection
UMCP198MP0151	2024	146926.77	404572.99	13-SF_5501	11-SF-0366	Maryland Stadium Underground Detention Facility	S	XDPD	REDE		F				Listed as failing until inspection
UMCP198MP0152	2024	146930.84	405581.69	13-SF_5501	16-SF-0064	Let GG M85	E	MMBR	REDE	6/16/2022	P	6/16/2022			
UMCP198MP0153	2024	147007.47	405562.48	13-SF_5501	16-SF-0064	Let GG M84	E	MMBR	REDE	6/16/2022	P	6/16/2022			
UMCP198MP0154	2024	146975.71	405568.77	13-SF_5501	16-SF-0064	Let GG M83	E	MMBR	REDE	6/16/2022	P	6/16/2022			
UMCP198MP0155	2024	146600.38	404987.86	13-SF_5501	14-SF-0182	West of Edward St. John	E	AGRE	NEWD	6/24/2024	P	6/25/2024			
UMCP198MP0157	2024	146559.97	405023.75	13-SF_5501	14-SF-0182	West Side of Edward St. John	E	AGRE	REDE	6/4/2024	P	6/4/2024			
UMCP198MP0158	2024	146560.89	405040.90	13-SF_5501	14-SF-0182	West Side of Edward St. John	E	AGRE	REDE	6/4/2024	P	6/4/2024			
UMCP198MP0159	2024	146543.52	405082.70	13-SF_5501	14-SF-0182	East Side of Edwards St. John	E	AGRE	NEWD	6/4/2024	P	6/4/2024			
UMCP198MP0161	2024	147279.19	404391.62	13-SF_5501	09-SF-0390	Oakland Hall Sandfilter	S	FUND	NEWD	6/24/2024	P	6/25/2024			
UMCP198MP0162	2024	147481.23	404827.56	13-SF_5501	01-SF-0005	Terrapin Trail Garage Baysaver unit	S	XOGS	NEWD	6/24/2024	P	9/27/2023			Pretreatment for UMCP198MP0024
UMCP198MP0163	2024	147735.71	406600.68	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0164	2024	147712.03	406666.15	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0165	2024	147737.54	406731.88	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0166	2024	147754.36	406779.12	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0167	2024	147706.10	406826.42	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0168	2024	147645.38	406810.81	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0169	2024	147592.40	406616.94	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0170	2024	147521.04	406637.05	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0171	2024	147461.79	406760.11	13-SF_5501		Severn Stormceptor	S	XOGS	REDE	6/19/2019	P	6/19/2018			
UMCP198MP0172	2024	148164.15	405013.40	13-SF_5501		Courtyards South Parking	S	FBIO	REDE	6/6/2023	P	6/6/2023			Structure identified from imagery. Field confirmation required. Check with the Courtyards for existing plan set.
UMCP198MP0231	2024	147129.96	405375.41	13-SF_5501	14-SF-0265	Clark Hall Bioretention 1	E	MMBR	REDE	9/21/2023	P	9/21/2023			West side of Clark Hall
UMCP198MP0232	2024	147109.93	405375.62	13-SF_5501	14-SF-0265	Clark Hall Bioretention 2	E	MMBR	REDE	9/21/2023	P	9/21/2023			
UMCP198MP0235	2024	147510.82	403943.30	13-SF_5501		Upper Golf Course	S	PWET	NEWD	6/2/2023	F	6/6/2023			Dam observed failed during field inspection. In-Stream Pond Campus Creek
UMCP198MP0236	2024	148330.53	405108.59	13-SF_5501		Courtyards Sheeflow to Conservation 1	E	NSCA	NEWD	6/6/2023	P	6/6/2023			
UMCP198MP0237	2024	148240.53	405124.25	13-SF_5501		Courtyards Sheeflow to Conservation 2	E	NSCA	NEWD	6/6/2023	P	6/6/2023			
UMCP198MP0238	2024	147246.59	405086.26	13-SF_5501		Wellness Way Bioretention	E	MSWB	REST	8/4/2021	P	8/4/2021			BMP field identified by MES, listed as bioswale constructed by MDSE. DA still needs to be confirmed, no plans - Retrofit conducted 11/13/2019 to expand storage capacity
UMCP198MP0239	2024	146721.81	404139.61	13-SF_5501	11-SF-0184	Presidents House Disconnect 1	E	NDNR	REDE	9/21/2021	P	9/10/2021			
UMCP198MP0240	2024	146803.85	404051.79	13-SF_5501	11-SF-0184	Presidents House Disconnect 2-1	E	NDNR	NEWD	6/24/2024	P	6/24/2024			
UMCP198MP0241	2024	146906.29	405596.76	13-SF_5501	16-SF-0064	Brendan Iribe 1	E	MMBR	REDE	6/16/2022	P	3/18/2022			
UMCP198MP0242	2024	146855.63	405574.14	13-SF_5501	16-SF-0064	Brendan Iribe 2	E	MMBR	REDE	6/16/2022	P	3/18/2022			
UMCP198MP0243	2024	146803.50	405608.07	13-SF_5501	16-SF-0064	Brendan Iribe 3	E	MSWB	REDE	8/10/2022	P	7/26/2021			
UMCP198MP0244	2024	146849.94	405510.90	13-SF_5501	16-SF-0064	Brendan Iribe 4	E	APRP	REDE	7/26/2021	P	7/26/2021			
UMCP198MP0245	2024	146819.24	405548.24	13-SF_5501	16-SF-0064	Brendan Iribe 5	E	AGRI	REDE	7/15/2021	P	7/15/2021			
UMCP198MP0248	2024	146488.56	405597.71	13-SF_5501		Service Building Bioretention	S	FBIO	REDE		F				Listed as failing until inspection
UMCP198MP0249	2024	147429.67	404606.19	13-SF_5501	18-SF-0204	Campus Creek Restoration	A	STRE	REST	7/1/2022	P	6/8/2020			
UMCP198MP0250	2024	147431.84	404451.93	13-SF_5501	18-SF-0204	Campus Creek Regenerative Step Pool Conveyance 1	A	SPSC	REST	7/1/2022	P	6/8/2020			
UMCP208MP0251	2024	146831.11	405741.86	13-SF_5501	92-SF-0055	Fire Station Infiltration Trench	S	ITRN	NEWD	12/15/2021	F				Very overgrown, only observation well located,
UMCP208MP0252	2024	146873.75	405748.03	13-SF_5501	92-SF-0055	Fire Station WQ Inlet 1	S	XOTH	NEWD	7/8/2020	P	7/9/2020			Pretreatment
UMCP208MP0253	2024	146874.87	405733.03	13-SF_5501	92-SF-0055	Fire Station WQ Inlet 2	S	XOTH	NEWD	7/8/2020	P	7/9/2020			Pretreatment
UMCP208MP0255	2024	146730.13	405123.97	13-SF_5501	92-SF-0217	Plant Sciences WQ Inlet	S	XOTH	REDE	7/8/2020	F	7/9/2020			Pretreatment
UMCP208MP0256	2024	145923.34	405209.35	13-SF_5501	01-SF-0245	UMCP Student Housing Building A	S	FUND	REDE	7/9/2020	P	7/8/2020			
UMCP208MP0257	2024	145927.60	405022.54	13-SF_5501	01-SF-0245	UMCP Student Housing Building B	S	FUND	REDE	9/16/2022	P	9/16/2022			
UMCP208MP0258	2024	144408.70	405905.68	13-SF_5501	17-SF-0092	M Square SGW 1	E	MSGW	REDE	6/17/2024	P	6/17/2024			
UMCP208MP0259	2024	144567.14	405880.11	13-SF_5501	17-SF-0092	M Square SGW 2	E	MSGW	REDE	6/17/2024	P	6/17/2024			
UMCP208MP0260	2024	144555.91	406065.15	13-SF_5501	17-SF-0092	M Square MBR1	E	MMBR	REDE	6/17/2024	P	6/17/2024			
UMCP208MP0261	2024	146671.76	405055.69	13-SF_5501	07-SF-0155	Mosquito Control MBR	E	MMBR							

BMP_ID <sup>1</sup>	REPORTING_YEAR	MD_NORTH <sup>2</sup>	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
UMCP20BMP0272	2024	144421.94	406333.65	13-SF-5501	16-SF-0261	College Park Academy Submerged Gravel Wetland 1	E	M5GW	NEW		NEW	6/17/2024			
UMCP20BMP0273	2024	144926.11	406544.69	13-SF-5501		NOAA Green Roof 1	E	AGRE	NEW	6/28/2024	P	6/28/2024			
UMCP20BMP0274	2024	144886.19	406587.24	13-SF-5501		NOAA Bioretention	S	FBIO	NEW	6/26/2024	P	6/26/2024			
UMCP20BMP0275	2024	144912.28	406484.39	13-SF-5501		NOAA Green Roof 2	E	AGRE	NEW	6/28/2024	P	6/28/2024			
UMCP20BMP0276	2024	144820.74	406556.58	13-SF-5501		NOAA WQ Manhole 1	S	XOGS	NEW	6/26/2024	F	4/30/2021			Pretreatment for BMP UMC20BMP0277
UMCP20BMP0277	2024	144818.31	406568.70	13-SF-5501		NOAA Underground Cistern	E	MRRWH	NEW	6/26/2024	P	6/26/2024			
UMCP20BMP0278	2024	144877.80	406600.31	13-SF-5501		NOAA WQ Manhole 2	S	XOGS	NEW	6/26/2024	P	6/26/2024			Pretreatment
UMCP20BMP0279	2024	144761.17	406630.26	13-SF-5501		NOAA WQ Manhole 3	S	XOGS	NEW	6/26/2024	P	6/26/2024			Pretreatment
UMCP20BMP0280	2024	147734.94	406718.21	13-SF-5501		Severn Building Micro-Bioretention Area	E	MMBR	REDE	6/1/2021	F				Pretreatment for UMC20BMP0066, Listed as failing until inspection
UMCP20BMP0281	2024	148600.46	404970.95	13-SF-5501	04-SF-0066	Greenmade North Stormceptor	S	XOGS	NEW	4/26/2022	P	4/26/2022			
UMCP20BMP0282	2024	146792.93	404034.04	13-SF-5501	11-SF-0184	Presidents House Disconnect 2-2	E	NDNR	NEW	6/24/2024	P	6/24/2024			
UMCP20BMP0285	2024	146737.23	404002.00	13-SF-5501	11-SF-0184	Presidents House Disconnect 2-5	E	NDNR	NEW	6/24/2024	P	6/24/2024			
UMCP20BMP0286	2024	146767.31	404060.33	13-SF-5501	11-SF-0184	Presidents House Disconnect 2-3	E	NDNR	NEW	6/24/2024	P	6/24/2024			
UMCP20BMP0287	2024	146776.13	404048.53	13-SF-5501	11-SF-0184	Presidents House Disconnect 2-4	E	NDNR	NEW	6/24/2024	P	6/24/2024			
UMCP20BMP0288	2024	148038.42	405387.54	13-SF-5501		4100 Metzertott Rd Impervious Removal	A	IMPP	REST	3/26/2024	P	3/26/2024			
UMCP20BMP0289	2024	147899.26	405369.20	13-SF-5501		4109 Metzertott Rd Impervious Removal	A	IMPP	REST	3/26/2024	P	3/26/2024			
UMCP20BMP0290	2024	147441.85	404475.02	13-SF-5501	18-SF-0204	Campus Creek Regenerative Step Pool Conveyance 2	A	SPSC	REST	7/1/2023	P	6/8/2020			
UMCP20BMP0291	2024	147345.11	404978.06	13-SF-5501	18-SF-0204	Campus Creek Stormwater Bar	A	OUT	REST	7/1/2023	P	6/8/2020			
UMCP21BMP0292	2024	146766.15	404615.60	13-SF-5501	16-SF-0061	Cole Field House Green Roof 1	E	AGRI	REDE	7/3/2024	P	7/3/2024			
UMCP21BMP0293	2024	146766.74	404556.07	13-SF-5501	16-SF-0061	Cole Field House Green Roof 2	E	AGRI	REDE	7/3/2024	P	7/3/2024			
UMCP21BMP0294	2024	146672.41	404557.39	13-SF-5501	16-SF-0061	Cole Field House Green Roof 3	E	AGRI	REDE	7/3/2024	P	7/3/2024			
UMCP21BMP0295	2024	146626.26	404516.83	13-SF-5501	16-SF-0061	Cole Field House Green Roof 4	E	AGRI	REDE	7/3/2024	P	7/3/2024			
UMCP21BMP0296	2024	147957.18	404955.17	13-SF-5501		Wooded Hillcock Impervious Removal 3	A	IMPP	REST	6/17/2024	P	6/17/2024			
UMCP21BMP0297	2024	147940.09	404868.38	13-SF-5501		Wooded Hillcock Impervious Removal 2	A	IMPP	REST	3/26/2024	P	3/26/2024			
UMCP21BMP0298	2024	147868.97	404758.74	13-SF-5501		Wooded Hillcock Impervious Removal 1	A	IMPP	REST	3/26/2024	P	3/26/2024			
UMCP21BMP0299	2024	147959.30	405348.54	13-SF-5501		4103 Metzertott Rd Impervious Removal	A	IMPP	REST	6/17/2024	P	6/17/2024			
UMCP21BMP0300	2024	146705.18	404486.51	13-SF-5501	16-SF-0061	Cole Field House Impervious Surface Removal	A	IMPP	REST	3/26/2024	P	3/26/2024			
UMCP22BMP0301	2024	146939.30	405117.70	13-SF-5501	19-SF-0162	Idea Factory Micro-Bioretention 4	E	MMBR	REDE	6/6/2023	P	6/6/2023			
UMCP22BMP0302	2024	146926.50	405335.62	13-SF-5501	19-SF-0162	Idea Factory Micro-Bioretention 2	E	MMBR	REDE	6/6/2023	P	6/6/2023			
UMCP22BMP0303	2024	146926.84	405357.94	13-SF-5501	19-SF-0162	Idea Factory Micro-Bioretention 1	E	MMBR	REDE	6/6/2023	P	6/6/2023			
UMCP22BMP0304	2024	146926.96	405378.99	13-SF-5501	19-SF-0162	Idea Factory Micro-Bioretention 3	E	MMBR	REDE	6/6/2023	P	6/6/2023			
UMCP22BMP0306	2024	147032.46	404673.48	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 7A	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0307	2024	147034.31	404708.23	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 6A	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0308	2024	147048.00	404708.00	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 5A	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0309	2024	147059.96	404708.57	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 5	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0310	2024	147023.03	404713.64	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 6	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0311	2024	146994.15	404714.90	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 8	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0312	2024	146994.04	404735.27	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 8A	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0313	2024	147121.00	404821.44	13-SF-5501	19-SF-0094	Pyon-Chen Hall Micro-Bioretention 9	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0314	2024	147092.91	404788.29	13-SF-5501	19-SF-0094	Pyon-Chen Hall Micro-Bioretention 3A	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0315	2024	147099.65	404778.46	13-SF-5501	19-SF-0094	Pyon-Chen Hall Micro-Bioretention 3	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0316	2024	147076.90	404829.30	13-SF-5501	19-SF-0094	Pyon-Chen Hall Micro-Bioretention 4	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0317	2024	147092.91	404749.25	13-SF-5501	19-SF-0094	Pyon-Chen Hall Micro-Bioretention 2	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0318	2024	147091.79	404719.75	13-SF-5501	19-SF-0094	Pyon-Chen Hall Micro-Bioretention 1	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0319	2024	147127.18	404793.63	13-SF-5501	19-SF-0094	Pyon-Chen Hall Non-Rooftop Disconnect 1	E	NDNR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0320	2024	147034.19	404662.09	13-SF-5501	19-SF-0094	Johnson-Whittle Hall Micro-Bioretention 7	E	MMBR	NEW	5/31/2023	P	5/31/2023			
UMCP22BMP0321	2024	146340.64	405239.55	13-SF-5501	19-SF-0062	Thurgood Marshall School of Public Policy Micro-Bioretention 1	E	MMBR	REDE	6/2/2023	P	6/2/2023			
UMCP22BMP0322	2024	146385.29	405356.00	13-SF-5501	19-SF-0062	Thurgood Marshall School of Public Policy Micro-Bioretention 3	E	MMBR	REDE	6/2/2023	P	6/2/2023			
UMCP22BMP0323	2024	146340.72	405349.05	13-SF-5501	19-SF-0062	Thurgood Marshall School of Public Policy Pocket Wetland 1	E	WPKT	REDE	6/2/2023	P	6/2/2023			
UMCP22BMP0324	2024	146330.59	405364.37	13-SF-5501	19-SF-0062	Thurgood Marshall School of Public Policy Non-Rooftop Disconnect 1	E	NDNR	REDE	6/2/2023	P	6/2/2023			
UMCP23BMP0325	2024	147494.22	404890.39	13-SF-5501	11-SF-0139	Heavy Equipment Dry Well	E	MIDW	REDE	2/16/2023	F				
UMCP23BMP0326	2024	146581.24	404216.11	13-SF-5501	17-SF-0191	Throwing Event Relocation Bio-Swale	E	M5WB	NEW	3/26/2024	P	3/26/2024			
UMCP23BMP0327	2024	146591.71	404280.48	13-SF-5501	17-SF-0191	Throwing Event Relocation Non-Rooftop Disconnection	E	NDNR	NEW	3/27/2024	P	3/27/2024			
UMCP23BMP0328	2024	147395.18	405446.70	13-SF-5501	22-SF-0016	UMCP Field Hockey & Lacrosse Complex Modular Wetland	E	MMBR	REDE	3/26/2024	P	3/26/2024			
UMCP23BMP0329	2024	146865.77	405274.92	13-SF-5501	20-SF-0184	Chemistry Wing 1 Micro-bioretention	E	MMBR	REDE	3/26/2024	P	3/26/2024			
UMCP23BMP0330	2024	146911.60	405288.65	13-SF-5501	20-SF-0184	Chemistry Wing 1 Non-rooftop Disconnection 1A	E	NDNR	REDE	6/17/2024	P	6/17/2024			
UMCP23BMP0331	2024	146888.61	405307.84	13-SF-5501	20-SF-0184	Chemistry Wing 1 Non-rooftop Disconnection 1B	E	NDNR	REDE	3/27/2024	P	6/17/2024			
USG19BMP00003	2024	158508.02	382721.74	13-SF-5501	02-SF-0033	Infiltration Trench 1 at IBRR	S	ITRN	NEW	6/21/2022	P	11/1/2020			
USG19BMP00004	2024	158453.82	382793.55	13-SF-5501	02-SF-0033	IBRR Outfall Stabilization	A	OUT	NEW	6/17/2022	P	6/17/2022			
USG19BMP00005	2024	158419.50	382716.02	13-SF-5501	02-SF-0033	Infiltration Trench 2 at IBRR	S	ITRN	NEW	6/21/2022	P	11/1/2020			
USG19BMP00006	2024	158380.25	382711.80	13-SF-5501	02-SF-0033	Infiltration Trench 3 at IBRR	S	ITRN	NEW	6/21/2022	F	11/1/2020			
USG19BMP00007	2024	158338.60	382749.67	13-SF-5501	22-SF-0016	IBRR Pond	S	PWET	NEW	6/16/2023	P	6/16/2023			
USG19BMP00042	2024	158281.34	382830.74	13-SF-5501	16-SF-0044	IBRR Non-Rooftop Disconnect	E	NDNR	NEW	6/21/2022	P	6/21/2022			

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.

<sup>1</sup> 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

<sup>2</sup> 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](#)

**Table B.1.b. Reporting Requirements for ESD and Structural Practices**

More specific data related to ESD and structural BMPs is populated in this table.

BMP_ID <sup>1</sup>	NUM_BMPS <sup>2</sup>	ON_OFF_SITE	CONVERTED_FROM	BMP_STATUS	BMP_DRAIN_AREA	IMP_ACRES <sup>3</sup>	PE_ADR	APPR_DATE	BUILT_DATE	GEN_COMMENTS
UMCP19BMP0002	1	ON		ACT	6.43	3.52	0	8/10/1995	3/26/1998	Lot 2 retention pond
UMCP19BMP0005	1	ON		ACT	23.88	10.91	1	6/16/2003	5/9/2005	Peace Garden Sand Filter/0.58 ac nested IA; 2 ac allocated to UMGC
UMCP19BMP0010	1	ON		ACT	8.7	2.7	0	2/15/1991	4/1/1994	Laboratory for Physical Science wet pond
UMCP19BMP0011	1	ON		ACT	28.16	9.94	0.8	5/30/2003	12/24/2005	CSPAC Shallow Marsh Wetland. Retrofit conducted in 2003.
UMCP19BMP0012	1	ON		ACT	10.59	8.26	1	12/14/2000	12/11/2002	Softball complex retention pond
UMCP19BMP0013	1	ON		ACT	8.6	4.87	0.5		9/11/2001	Courtyards retention pond
UMCP19BMP0014	1	ON		ACT	0.23	0.07	1	11/17/2011	10/12/2012	Woods Hall Bioretention
UMCP19BMP0016	1	ON		ACT	0.11	0.11	1	10/28/2010	10/14/2012	Shuttle Facility
UMCP19BMP0017	1	ON		ACT	0.11	0.11	1	10/28/2010	10/14/2012	Shuttle Facility
UMCP19BMP0018	1	ON		ACT	0.05	0.05	1	2/18/2011	10/12/2012	BLS Heavy Equipment
UMCP19BMP0019	1	ON		ACT	0.63	0.29	1	5/29/2013	8/28/2014	University House Parking Lot
UMCP19BMP0020	1	ON		ACT	18.64	7.14	1	1/23/1987	4/4/1988	VetMed research pond
UMCP19BMP0021	1	ON		ACT	11.8	7.23	0	4/1/1988	4/1/1994	Animal science retention pond/PE 0
UMCP19BMP0022	1	ON		ACT	0.86	0.82	0		12/11/2002	Lot 11b bioretention/PE 1
UMCP19BMP0023	1	ON		ACT	1.42	0.72	0		10/26/2017	SWF 23/PE 0
UMCP19BMP0024	1	ON		ACT	9.58	3.85	1	10/4/2000	9/11/2001	Terrapin Trail Garage retention pond
UMCP19BMP0026	1	ON		ACT	2.82	2.23	0.77	9/29/2010	10/12/2012	Shuttle Facility dry swale. 0.14 acres treated by nested BMP 106
UMCP19BMP0027	1	ON		ACT	0.32	0.32	0	7/1/2003	5/9/2005	Lot PP2 bioretention/PE 1
UMCP19BMP0033	1	ON		ACT	0.47	0.14	1	9/2/2011	8/16/2012	University House
UMCP19BMP0034	1	ON		ACT	0.21	0.1	0	9/1/2011	8/15/2012	University House/PE 1
UMCP19BMP0035	1	ON		ACT	0.41	0.2	1	9/1/2011	8/15/2012	University House
UMCP19BMP0036	1	ON		ACT	2.11	1.59	1		3/29/2011	Lot Three - Guilford Park Bioretention
UMCP19BMP0039	1	ON		ACT	0.24	0.19	0		12/6/2012	Chem-Nuc Bldg bioretention/PE 1
UMCP19BMP0040	1	ON		ACT	0.28	0.03	1	9/2/2011	8/16/2012	University House
UMCP19BMP0041	1	ON		ACT	0.38	0.09	1	9/2/2011	8/16/2012	University House
UMCP19BMP0042	1	ON		ACT	0.35	0.27	1	3/18/2013	2/24/2014	Wye Oak Building bioretention
UMCP19BMP0043	1	ON		ACT	0.57	0.54	0		12/11/2002	Lot 11b bioretention/PE 1
UMCP19BMP0046	1	ON		ACT	0.01	0.003	1		2/26/2009	Symons Hall
UMCP19BMP0047	1	ON		ACT	0.01	0.003	1		2/26/2009	Symons Hall
UMCP19BMP0048	1	ON		ACT	0.04	0.04	0		2/26/2009	Symons Hall/PE 1
UMCP19BMP0049	1	ON		ACT	0.08	0.08	1.2	4/3/2009	12/1/2013	Computer and Space Sciences
UMCP19BMP0050	1	ON		ACT	0.15	0.15	1	7/11/2008	9/30/2008	Cumberland
UMCP19BMP0055	1	ON		ACT	0.17	0.09	1.15	2/18/2011	10/12/2012	Heavy Equipment Building bioretention
UMCP19BMP0056	1	ON		ACT	14.16	5.96	1	12/14/2000	10/1/2002	Comcast north retention pond
UMCP19BMP0059	1	ON		ACT	0.28	0.18	2.28	3/20/2012	10/12/2012	Denton dining bioretention
UMCP19BMP0065	1	ON		ACT	0.5	0.22	1	10/17/2004	6/7/2005	Greenmeade North
UMCP19BMP0066	1	ON		ACT	4.75	2.43	1	10/17/2004	6/7/2005	conveyance to SWF65
UMCP19BMP0068	1	ON		ACT	0.5	0.46	0		9/11/2001	Courtyards Northeast parking/PE 1
UMCP19BMP0069	1	ON		ACT	0.54	0.5	0		9/11/2001	Courtyards Northeast parking/PE 1
UMCP19BMP0070	1	ON		ACT	0.13	0.09	0.76	3/20/2012	11/30/2012	Denton bioretention
UMCP19BMP0073	1	ON		ACT	0.04	0.04	1		4/1/2010	Stamp Green Roof West
UMCP19BMP0074	1	ON		ACT	0.02	0.02	1		4/1/2010	Stamp Green Roof East
UMCP19BMP0075	1	ON		ACT	0.02	0.01	0	3/20/2012	11/30/2012	Denton permeable pavements/PE 1
UMCP19BMP0076	1	ON		ACT	1.04	0.58	0.12	10/24/2012	5/8/2013	Public Health Garden bioretention
UMCP19BMP0077	1	ON		ACT	4.59	2.25	0	10/24/2012	5/8/2013	Public Health Garden rainwater harvesting /Pe 1
UMCP19BMP0078	1	ON		ACT	0.2	0.2	1.2	4/3/2009	12/1/2013	Physical Science
UMCP19BMP0079	1	ON		ACT	0.01	0.01	1		3/9/2009	Glenn L Martin Hall permeable pavements
UMCP19BMP0080	1	ON		ACT	0.04	0.04	0	1/18/2011	12/13/2012	Lot FF2 permeable pavements/PE 1
UMCP19BMP0081	1	ON		ACT	0.02	0.02	0		11/30/2012	Denton Hall rainwater harvesting/PE 0
UMCP19BMP0082	1	ON		ACT	0.45	0.43	0.91	1/22/2008	3/27/2010	Knight Hall
UMCP19BMP0083	1	ON		ACT	0.05	0.05	0		11/30/2012	Denton Hall rainwater harvesting/PE 0
UMCP19BMP0085	1	ON		ACT	0.37	0.36	0	8/27/2007	9/30/2009	Washington Quad/PE 1
UMCP19BMP0086	1	ON		ACT	0.1	0.1	0		5/29/2009	CSPAC permeable pavements/PE 1
UMCP19BMP0088	1	ON		ACT	0.09	0.07	0		12/6/2012	Chem-Nuc Bldg bioretention/PE 1
UMCP19BMP0089	1	ON		ACT	32.84	1.07	0	10/10/1972	1/1/1979	Golf course lower wet pond/PE 0
UMCP19BMP0090	1	ON		ACT	6.2	3.35	0		12/2/2002	Lot PP2 rain garden. Verify 1" treatment
UMCP19BMP0091	1	ON		ACT	0.86	0.79	0	7/1/2003	5/9/2005	Regents Drive bioretention/PE 1
UMCP19BMP0092	1	ON		ACT	2.99	2.67	0	7/1/2003	5/9/2005	Lot 9 bioretention/PE 1
UMCP19BMP0093	1	ON		ACT	0.45	0.34	0	7/1/2003	5/9/2005	Regents Drive bioretention/PE 1
UMCP19BMP0094	1	ON		ACT	0.27	0.17	0	7/1/2003	5/9/2005	Paint Branch Drive bioretention/PE 1
UMCP19BMP0098	1	ON		ACT	3.91	3.59	0	7/20/1994	12/1/2013	Artificial Turf Field swale
UMCP19BMP0106	1	ON		ACT	1.32	1.17	0.12	10/29/2010	10/15/2012	Shuttle Bus wet pond. Pe estimated from survey and post maintenance aerial imagery
UMCP19BMP0107	1	ON		ACT	0.69	0.42	0	3/21/2001	3/31/2002	Taylor stadium bioretention. Failing/Pe = 0.53"
UMCP19BMP0108	1	ON		ACT	3.9	0.56	0.47	1/1/2001	3/31/2002	Chesapeake Parking Lot East
UMCP19BMP0109	1	ON		ACT	7.49	1.32	0.5		4/4/1988	Metzerott Rd and Greenmead Dr wet pond

BMP_ID <sup>1</sup>	NUM_BMPS <sup>2</sup>	ON_OFF_SITE	CONVERTED_FROM	BMP_STATUS	BMP_DRAIN_AREA	IMP_ACRES <sup>3</sup>	PE_ADR	APPR_DATE	BUILT_DATE	GEN_COMMENTS
UMCP19BMP0112	1	ON		ACT	1.48	1.2	0	4/13/1998	3/14/2000	Golf Course Parking Lot rain garden/Receives drainage SWF144/PE 0
UMCP19BMP0122	1	ON		ACT	0.25	0.1	1.03	3/20/2012	11/20/2012	Denton Courtyard bioretention
UMCP19BMP0124	1	ON		ACT	0.23	0.17	0.8	10/5/2012	7/28/2014	Prince Frederick Hall Bioretention Cell 1
UMCP19BMP0125	1	ON		ACT	0.46	0.3	1.36	10/5/2012	7/28/2014	Prince Frederick Hall Bioretention Cell 2
UMCP19BMP0127	1	ON		ACT	0.41	0.14	0		3/14/2000	Paint Branch Dr & Rossborough Ln/PE 1
UMCP19BMP0128	1	ON		ACT	3.14	0.84	0		12/1/2013	Paint Branch Dr & Rossborough Ln bioretention/PE 0
UMCP19BMP0129	1	ON		ACT	0.06	0.04	0			Reckord Armory/PE 1
UMCP19BMP0130	1	ON		ACT	0.04	0.04	0			Kirwan Hall fountain permeable pavements/ PE 1
UMCP19BMP0133	1	ON		REM	0.06	0.02	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0134	1	ON		REM	0.07	0.05	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0135	1	ON		REM	0.06	0.02	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0136	1	ON		REM	0.05	0.04	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0137	1	ON		REM	0.04	0.03	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0138	1	ON		REM	0.04	0.03	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0139	1	ON		REM	0.14	0.13	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0140	1	ON		REM	0.05	0.04	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0141	1	ON		REM	0.04	0.02	0	3/3/2004	5/9/2005	Kim Plaza/PE 0
UMCP19BMP0142	1	ON		ACT	0.17	0.1	1	3/3/2004	5/9/2005	Kim Plaza
UMCP19BMP0143	1	ON		ACT	0.04	0.04	1		5/29/2009	Central Animal Resources Facility & ENST
UMCP19BMP0144	1	ON		ACT	1.25	1.14	0		12/19/2016	North East corner of golf course parking lot rain gardens
UMCP19BMP0146	1	ON		ACT	0.47	0.37	1		12/19/2016	North west corner of golf course parking lot rain garden
UMCP19BMP0147	1	ON		ACT	0.37	0.22	0		12/19/2016	South west corner of golf course parking lot rain garden/PE 1
UMCP19BMP0149	1	ON		ACT	8.11	5.56	0	7/20/2015	1/11/2016	PE 0
UMCP19BMP0150	1	ON		ACT	0.16	0.16	0	9/26/2014	10/26/2017	PE 0
UMCP19BMP0151	1	ON		ACT	2.17	2.11	0	8/22/2011	12/6/2012	PE 0
UMCP19BMP0152	1	ON		ACT	0.68	0.37	1.3	5/22/2017	1/10/2018	A.V. Williams
UMCP19BMP0153	1	ON		ACT	0.62	0.22	0.8	5/22/2017	1/10/2018	A.V. Williams
UMCP19BMP0154	1	ON		ACT	0.35	0.39	1	5/22/2017	1/10/2018	A.V. Williams
UMCP19BMP0155	1	ON		ACT	0.05	0.05	1	9/26/2014	10/26/2017	West of Edward St. John
UMCP19BMP0157	1	ON		ACT	0.06	0.06	1	9/26/2014	10/26/2017	West Side of Edwards St. John
UMCP19BMP0158	1	ON		ACT	0.06	0.06	1	9/26/2014	10/26/2017	West Side of Edwards St. John
UMCP19BMP0159	1	ON		ACT	0.03	0.03	1	9/26/2014	10/26/2017	East Side of Edwards St. John
UMCP19BMP0161	1	ON		ACT	0.4	0.21	1	6/18/2009	6/3/2011	Oakland Hall Sandfilter
UMCP19BMP0162	1	ON		ACT	0	0	0	10/4/2000	9/11/2001	Terrapin Trail Garage BaySaver/PE 0
UMCP19BMP0163	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0164	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0165	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0166	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0167	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0168	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0169	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0170	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0171	1	ON		ACT	0	0	0	4/29/1996	1/1/1998	Severn Stormceptor
UMCP19BMP0172	1	ON		ACT	0.98	0.72	1		9/11/2001	Courtyards South Parking
UMCP19BMP0231	1	ON		ACT	0.33	0.27	1.96	9/18/2015	10/26/2017	A. James Clark Hall
UMCP19BMP0232	1	ON		ACT	0.3	0.21	2.6	9/18/2015	10/26/2017	A. James Clark Hall
UMCP19BMP0235	1	ON		ACT	208.28	7.25	0	10/10/1972	1/1/1979	Upper golf course wet pond/PE 0
UMCP19BMP0236	1	ON		ACT	0.28	0.27	0		9/11/2001	SWFSCA1/PE 0
UMCP19BMP0237	1	ON		ACT	0.06	0.06	0		9/11/2001	SWFSCA2/PE 0
UMCP19BMP0238	1	ON		ACT	1.28	0.87	1		1/1/2017	Wellness Way bio-swale
UMCP19BMP0239	1	ON		ACT	0.56	0.01	1	10/19/2011	10/19/2011	SWFNR1
UMCP19BMP0240	1	ON		ACT	0.02	0.02	1	10/19/2011	8/16/2012	SWFNR2
UMCP19BMP0241	1	ON		ACT	0.45	0.19	2.6	5/10/2016	6/7/2019	Brendan Iribe 1
UMCP19BMP0242	1	ON		ACT	0.44	0.23	2.5	5/10/2016	6/7/2019	Brendan Iribe 2
UMCP19BMP0243	1	ON		ACT	0.76	0.19	1	5/10/2016	6/7/2019	Brendan Iribe 3
UMCP19BMP0244	1	ON		ACT	0.14	0.12	2	5/10/2016	6/7/2019	Brendan Iribe 4
UMCP19BMP0245	1	ON		ACT	0.12	0.12	1.7	5/10/2016	6/7/2019	Brendan Iribe 5
UMCP19BMP0248	1	ON		ACT	0.15	0.15	0	6/3/2015	1/10/2018	Service Building Bioretention/PE 1
UMCP20BMP0251	1	ON		ACT	0	0	0	3/12/1992	4/1/1994	Cannot locate
UMCP20BMP0252	1	ON		ACT	0.22	0.21	0	3/12/1992	4/1/1994	
UMCP20BMP0253	1	ON		ACT	0.26	0.25	0	3/12/1992	4/1/1994	
UMCP20BMP0255	1	ON		ACT	0.24	0.15	0	3/5/1993	1/1/1996	PE 0
UMCP20BMP0256	1	ON		ACT	0.76	0.59	0.63	4/9/2003	1/1/2005	UMCP Student Housing Building A
UMCP20BMP0257	1	ON		ACT	0.96	0.72	0.51	4/9/2003	1/1/2005	UMCP Student Housing Building B
UMCP20BMP0258	1	ON		ACT	3.32	2.33	0.8	3/10/2017	12/26/2018	M Square SGW 1
UMCP20BMP0259	1	ON		ACT	1.45	0.88	0.82	3/10/2017	12/26/2018	M Square SGW 2
UMCP20BMP0260	1	ON		ACT	0.64	0.48	0.73	3/10/2017	12/26/2018	M Square MBR1
UMCP20BMP0261	1	ON		ACT	0.54	0.27	0	11/10/2006	3/10/2008	PE 1
UMCP20BMP0264	1	ON		ACT	1.99	1.06	0	3/5/2001	3/31/2002	PE 0.58
UMCP20BMP0266	1	ON		ACT	0.12	0.12	0.75	8/29/2002	12/31/2004	
UMCP20BMP0267	1	ON		ACT	0.32	0.14	1	8/15/2016	2/1/2018	
UMCP20BMP0268	1	ON		ACT	0.36	0.27	1	8/15/2016	2/1/2018	
UMCP20BMP0269	1	ON		ACT	0.44	0.35	1	8/15/2016	2/1/2018	
UMCP20BMP0270	1	ON		ACT	0.41	0.32	1	8/15/2016	2/1/2018	
UMCP20BMP0271	1	ON		ACT	0.55	0.42	1	8/15/2016	2/1/2018	

BMP_ID <sup>1</sup>	NUM_BMPS <sup>2</sup>	ON_OFF_SITE	CONVERTED_FROM	BMP_STATUS	BMP_DRAIN_AREA	IMP_ACRES <sup>3</sup>	PE_ADR	APPR_DATE	BUILT_DATE	GEN_COMMENTS
UMCP20BMP0272	1	ON		ACT	5.5	1.97	1	8/15/2016	2/1/2018	
UMCP20BMP0273	1	ON		ACT	0.63	0.63	1	10/18/2006	1/1/2012	
UMCP20BMP0274	1	ON		ACT	1.62	1.35	0.92	10/18/2006	1/1/2012	
UMCP20BMP0275	1	ON		ACT	0.33	0.33	1	10/18/2006	1/1/2012	
UMCP20BMP0276	1	ON		ACT	1.04	0.41	0	10/18/2006	1/1/2012	
UMCP20BMP0277	1	ON		ACT	1.04	0.41	0	10/18/2006	1/1/2012	
UMCP20BMP0278	1	ON		ACT	0.98	0.96	0	10/18/2006	1/1/2012	
UMCP20BMP0279	1	ON		ACT	1.69	0.98	0	10/18/2006	1/1/2012	
UMCP20BMP0280	1	ON		ACT	0.79	0.59	0	4/29/1996	1/1/1998	BMP identified from plan/PE 0.02
UMCP20BMP0281	1	ON		ACT	3.4	1.7	0	10/17/2004	6/7/2005	Pretreatment for UMCP20BMP0065
UMCP20BMP0282	1	ON		ACT	0.02	0.02	1	10/19/2011	8/16/2012	
UMCP20BMP0285	1	ON		ACT	0.02	0.02	1	10/19/2011	8/16/2012	
UMCP20BMP0286	1	ON		ACT	0.02	0.02	1	10/19/2011	8/16/2012	
UMCP20BMP0287	1	ON		ACT	0.02	0.02	1	10/19/2011	8/16/2012	
UMCP21BMP0292	1	ON		ACT	0.32	0.32	1	7/21/2017	5/1/2021	
UMCP21BMP0293	1	ON		ACT	0.07	0.07	1	7/21/2017	5/1/2021	
UMCP21BMP0294	1	ON		ACT	0.37	0.37	1	7/21/2017	5/1/2021	
UMCP21BMP0295	1	ON		ACT	0.86	0.86	1	7/21/2017	5/1/2021	
UMCP22BMP0301	1	ON		ACT	0.3	0.12	2.47	4/30/2021	9/14/2021	
UMCP22BMP0302	1	ON		ACT	0.18	0.16	1.34	4/30/2021	9/14/2021	
UMCP22BMP0303	1	ON		ACT	0.14	0.13	1.83	4/30/2021	9/14/2021	
UMCP22BMP0304	1	ON		ACT	0.07	0.06	2.31	4/30/2021	9/14/2021	
UMCP22BMP0306	1	ON		ACT	0.39	0.25	1	3/19/2021	3/15/2022	
UMCP22BMP0307	1	ON		ACT	0.56	0.37	1	3/19/2021	3/15/2022	
UMCP22BMP0308	1	ON		ACT	0.49	0.4	1	3/19/2021	3/15/2022	
UMCP22BMP0309	1	ON		ACT	0.39	0.19	1	3/19/2021	3/15/2022	
UMCP22BMP0310	1	ON		ACT	0.52	0.43	1	3/19/2021	3/15/2022	
UMCP22BMP0311	1	ON		ACT	0.28	0.19	1	3/19/2021	3/15/2022	
UMCP22BMP0312	1	ON		ACT	0.21	0.16	1	3/19/2021	3/15/2022	
UMCP22BMP0313	1	ON		ACT	0.21	0.12	1	3/19/2021	3/15/2022	
UMCP22BMP0314	1	ON		ACT	0.42	0.28	1	3/19/2021	3/15/2022	
UMCP22BMP0315	1	ON		ACT	0.2	0.11	1	3/19/2021	3/15/2022	
UMCP22BMP0316	1	ON		ACT	0.39	0.25	1	3/19/2021	3/15/2022	
UMCP22BMP0317	1	ON		ACT	0.27	0.14	1	3/19/2021	3/15/2022	
UMCP22BMP0318	1	ON		ACT	0.38	0.2	1	3/19/2021	3/15/2022	
UMCP22BMP0319	1	ON		ACT	0.02	0.02	1	3/19/2021	3/15/2022	
UMCP22BMP0320	1	ON		ACT	0.44	0.26	1	3/19/2021	3/15/2022	
UMCP22BMP0321	1	ON		ACT	0.33	0.12	2.25	4/2/2019	5/22/2023	
UMCP22BMP0322	1	ON		ACT	0.39	0.21	2.55	4/2/2019	5/22/2023	
UMCP22BMP0323	1	ON		ACT	0.47	0.39	2.6	4/2/2019	5/22/2023	
UMCP22BMP0324	1	ON		ACT	0.04	0.04	1	4/2/2019	5/22/2023	
UMCP23BMP0325	1	ON		ACT	0.04	0.04	0	2/18/2011	10/12/2012	Pe = 1"
UMCP23BMP0326	1	ON		ACT	0.41	0.05	1	5/30/2018	1/17/2024	
UMCP23BMP0327	1	ON		ACT	0.03	0.03	1	5/30/2018	1/17/2024	
UMCP23BMP0328	1	ON		ACT	0.36	0.29	1.5	1/23/2023	2/4/2024	0.4 ac NEWD; 0.25 ac REDE
UMCP23BMP0329	1	ON		ACT	0.37	0.33	1.15	1/26/2021	2/21/2024	
UMCP23BMP0330	1	ON		ACT	0.02	0.02	1	1/26/2021	2/21/2024	
UMCP23BMP0331	1	ON		ACT	0.02	0.02	1	1/26/2021	2/21/2024	
USG19BMP00003	1	ON		ACT	0.28	0.14	0.5	12/4/2002	8/1/2006	
USG19BMP00005	1	ON		ACT	0.08	0.06	1	12/4/2002	8/1/2006	
USG19BMP00006	1	ON		ACT	0.59	0.48	0	12/4/2002	8/1/2006	PE 0.78
USG19BMP00007	1	ON		ACT	2.84	1.11	0	1/1/1980	1/1/1980	
USG19BMP00042	1	ON		ACT	0.03	0.03	1	4/1/2017	4/13/2018	

Table B.1.c Reporting Requirements for Alternative BMPs										
More specific data related to alternative BMPs is populated in this table.										
BMP_ID	PROJECT_DESC	PROJECT_LENGTH	ACRES_SWEPT	TIMES_SWEPT	ACRES_PLANTED	IMP_ACR_ELIM	EQU_IMP_ACR	INSTALL_DATE	IMPL_COMP_YR	GEN_COMMENTS
UMCP19BMP0249	Campus Creek Restoration	3039					105.8	10/10/2019		
UMCP19BMP0250	Campus Creek Regenerative Step Pool Conveyance 1						0.58	10/10/2019		
UMCP20BMP0288	Impervious Surface Removal to Pervious 4100 Metzert Rd					0.222	0.167		2016	
UMCP20BMP0289	Impervious Surface Removal to Pervious 4109 Metzert Rd					0.0375	0.028		2017	
UMCP20BMP0290	Campus Creek Regenerative Step Pool Conveyance 2						0.31	10/10/2019		
UMCP20BMP0291	Campus Creek Stormwater Bar						0.13	10/10/2019		
UMCP21BMP0296	Impervious Surface Removal to Pervious at Wooded Hillock					0.027	0.02		2020	
UMCP21BMP0297	Impervious Surface Removal to Pervious at Wooded Hillock					0.022	0.017		2020	
UMCP21BMP0298	Impervious Surface Removal to Pervious at Wooded Hillock					0.066	0.05		2020	
UMCP21BMP0299	Impervious Surface Removal to Pervious at 4103 Metzert Rd					0.089	0.067		2021	
UMCP21BMP0300	Cole Field House Impervious Surface Removal					3.07	2.3		2021	
USG19BMP00004	Outfall Stabilization	50					0.5	8/1/2006		