OLD DOMINION UNIVERSITY
IDEA FUSION

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Old Dominion University
MS4 Program Plan

Administered by
Environmental Health and Safety Office

Revised 12/2024

Plan Objective

The purpose of this Municipal Small Storm Sewer System (MS4) Program Plan is to develop, implement, and enforce strategies designed to reduce the discharge of pollutants from the Old Dominion University (ODU) campus top the maximum extent possible, and to meet the requirements of our Small MS4 General Permit, the Clean Water Act, and associated regulations. Ultimately, ODU seeks to protect the water quality of adjacent local waters and the Chesapeake Bay by employing appropriate Best Management Practices (BMPs) that will allow us to do so in an efficient and effective manner.

1.0 Public Education and Outreach on Stormwater Impacts

ODU has implemented a public education program using several Best Management Practices which provide educational materials to the university community and general public related to the impacts of stormwater discharges to local waters. These programs also provide information about what the community can do to reduce the amount of pollutants that enter our storm sewer system. The four areas that we focus on are nutrient management, petroleum releases, litter and debris, and sediment deposition. ODU's public education is achieved through storm drain marking, public service announcements, and pamphlet distribution. These activities are the responsibility of the Director of Environmental Health and Safety. As a goal, stormwater fliers will be distributed to all parking pass permit holders and new employees. These numbers are typically within the 24,000 and 350 range respectively.

ODU has employed a re-occurring system for distributing high-priority stormwater messages. Currently the university uses informational pamphlets that are distributed to faculty, staff and students who purchase parking passes and most often distributed at the beginning of Fall and Spring semesters. The pamphlets are also distributed to all new hires of the university that occurs through the calendar year. ODU also utilizes public service announcements on the information screens of Webb University Center and the target audience is most often reached during the fall and spring. The university also uses storm drain markers on all storm drain inlets that display contact information for the EHSO to report any illicit discharges and the target audience is most often reached during the spring and fall.

1.1 High Priority Water Quality Issues

Old Dominion University's high priority water quality issues include nutrient management; runoff from vehicles that visit campus; litter debris; and sediment deposition. The audience for these issues includes faculty, staff, students, and visitors to the campus.

1.1.1 Nutrient Management

Nutrient Management at Old Dominion University follows the guidelines established in the Nutrient Management Plan for application of fertilizers to university lands. ODU manages 16 acres of athletic fields and university grounds with nutrients that could have a detrimental effect to local waters if not managed in a well thought out, deliberate manner. All land applications are performed by Certified Fertilizer Applicators, but all Grounds personnel are trained to identify any type of illicit discharge as they are about the university grounds daily. All practices incorporated in The Plan, 2024 revision, are designed to prevent nutrients from entering the storm sewer system while providing for the appropriate levels of nutrients for each turf type and functional use. Storm drain markers that read "Only Rain Down the Storm Drain" are placed on all inlets around campus as a means of educating our campus community. Preventing nutrients from entering the storm drain is key to maintaining safe levels of phosphorus and nitrogen in our neighboring waters which in turn prevents oxygen choking algal blooms from developing.

1.1.2 Petroleum Releases

Approximately 21,000 parking passes are issued to faculty, staff, and students annually. Because of this large number of vehicles traveling to campus the potential for illicit discharges of automotive fluids is significant. As a means of educating our faculty, staff and students, we distribute a brochure with each parking permit that outlines the many ways in which pollutants enter the storm drain and how to report spills. Petroleum spills that enter the storm sewer system will eventually reach our neighboring waters and have a negative impact on the natural flora and fauna.

1.1.3 Litter and Debris Discharges

Litter and debris are an issue with any community. ODU's population of students, faculty, and staff is at or near 27,000 people and the addition of visitors to campus for extracurricular activities makes the potential for litter and debris discharges a major concern for the campus. We will employ several educational outreach efforts to inform as many as possible. Currently we use pamphlets, storm drain markers, a Stormwater Website and public outreach efforts to get the word out regarding illicit discharges. Preventing litter and debris from entering the storm sewer system ultimately protects our neighboring water systems and the wildlife that lives in them.

1.1.4 Sediment Deposition

The ODU campus falls within the boundaries of the Chesapeake Bay Watershed and is therefore subject to permit requirements regarding the Chesapeake Bay Total Maximum Daily Loads (TMDLs) for pollutants such as nitrogen, phosphorus, and sediments.

Erosion and sediment control is maintained by contractors who perform work involving land disturbing activities. Inspections of permitted sites are performed, as required by our Annual Standards and Specifications, by DEQ certified third party contractors. ODU's Department of Design and Construction has two full time site inspectors who visit active sites daily and report any findings of transgression to the site superintendents for immediate action. Preventing sediment from entering the storm sewer system allows for clean channels and normal flow of water in our neighboring water systems.

1.2 Educational and Outreach Efforts

Old Dominion University's population is near 27,000 people and so we will employ various methods of outreach to inform as much of the campus community as possible about the importance of preventing and reporting illicit discharges. We will also promote awareness and general understanding of the impact that stormwater has on our surrounding navigable waters and the Chesapeake Bay.

1.2.1 Educational Pamphlets

To educate our campus community we have developed pamphlets to be added to the sale of each parking pass and each new employee package that will inform the community of how to identify, prevent, and report illicit discharges. These pamphlets will also be distributed at various university events.

1.2.2 Public Service Announcements

ODU performs public service announcements through various outlets in an effort

to reach the broadest base of the community as possible. These outlets include announcements that run on the informational screens of the student center (Webb Center), door hangers/refrigerator magnets delivered to dorm rooms that include a number for reporting illicit discharges, and information posted to the University Announcements/Student Announcements posting system to remind the community about the importance of reducing the amount of runoff that we contribute through everyday activities such as car washing. The system is mainly used for general announcements to the community regarding university events and educational points that are pertinent to a broad base of the university community.

1.2.3 Stormwater Website - < https://www.odu.edu/life/sustainable/stormwater-management >

Old Dominion University's Stormwater Pollution Prevention Website includes information pertaining to how ODU implements activities that reduce the amount of runoff and pollutants that may affect our local waters. Specifically, there is information about what stormwater runoff is and how it can negatively impact local waters, our MS4 General Permit, ODU's Stormwater Master Plan, ODU's MS4 Annual Report, and activities our community can engage in to prevent illicit discharges of any kind.

1.1.4 Storm drain Marking

All ODU storm drain inlets are marked with manufactured markers that display the ODU logo and the phrase "only rain down the storm drain". These markers have been put in place by student volunteers, and an annual sweep of campus is performed to replace damaged or missing markers, and to place markers in any areas where construction has created new inlets.

2 Public Involvement/Participation

Actively engaging the public in university activities to support the campus initiatives for pollution prevention is also the responsibility of the Director of Environmental Health and Safety. Currently the actions taken to implement this measure include Public Participation events such as Adopt-A-Stream events and storm drain marker placement or replacement. As a goal, the Department of Environmental Health and Safety will hold two Adopt-A-Stream events per semester and at least one storm drain marker event with volunteers. Volunteers for the Adopt-A-Stream event average between 10-20 volunteers. Debris collections vary during each Adopt-A-Stream event. Campus recycling activities take place year-round with most activity being taken during the fall and spring semesters. The Support Services and Recycling division also competes in a recycling event called Campus Race to Zero Waste which takes place from January to March each year where approximately 300,000 pounds of recyclable materials are diverted from the landfill.

2.1 Adopt-A-Stream

ODU engages in several Adopt-A-Stream events each year. Volunteers are provided with information on how materials end up in our neighboring waters and why it is important to remove/prevent litter and debris from entering our storm sewer system. All litter and debris are collected with volunteer assistance and disposed of in ODU dumpsters. Prior to the disposal of the debris into the dumpsters, the waste will be weighed to determine how much litter and debris was collected and prevented from entering our storm system. ODU will keep this information on file to track the collection amounts.

2.2 Recycling Activities

The Recoverable Resources Division strives to remove as much recyclable material from the university waste stream as possible and is always looking for opportunities to increase the volume, diversity, and quality of recyclables. All members of the campus community are provided with recycling opportunities and are encouraged to participate. Annually, the division removes in excess of 1.5 million pounds of recyclable materials. Prior to the disposal of the recycled materials, the items will be weighed to determine how many recyclables were collected and prevented from entering our storm system. ODU will keep this information on file to track the collection amounts.

2.3 Public Engagement

The Public is encouraged to utilize the Stormwater Website for directions on how to report illicit discharges, improper disposal, spills, complaints, and other pollution concerns. The Environmental Health and Safety phone number is 757-683-4495. The webpage also provides the email address to provide input on the MS4 program. Public comments on this MS4 Program Plan are to be reported to the Department of Environmental Health and Safety. Comments are to be emailed to ehsdept@odu.edu as posted on the ODU Stormwater Management web page. All comments will be responded to within 24 hours of receipt.

3 Illicit Discharge Detection and Elimination

Old Dominion University is comprised of approximately 168 acres of land situated on the east and west side of Hampton Boulevard in Norfolk, Virginia. The Campus has three major outfalls draining to the Elizabeth River and two draining to the Lafayette River. Due to the broad expanse of ODU's footprint on the City of Norfolk it is important that ODU has an IDDE plan to address potential releases to adjacent navigable waters impacted by regulations of the Chesapeake Bay Preservation Act.

3.1 Map of Coverage Area and Outfalls – Appendix B

3.2 Map of BMPs – Appendix C

3.3 IDDE Plan - Appendix D

3.4 Illicit Discharge Inspection Protocol

With the exception of the Field Screening and Data Analysis section of the IDDE Plan, all other sections will remain applicable. Inspections will be performed at least annually during periods of dry weather, at a minimum of 48 hours after a rain event. Inspections will take place at the 9 outfalls and 5 nodes of the campus storm sewer system. Parameters for inspection will include Wet or Dry, General Condition, Noted Odor, Sheen Present, Debris Present, and Comments regarding any other noted conditions. Should any parameters fall outside of noted good conditions, the actions specified in the IDDE Plan shall be put in motion.

The efforts related to preventing or addressing illicit discharges are the responsibility of the Director of Environmental Health and Safety. As a goal, each of the nine campus outfalls will be inspected annually, screening of each of the five storm sewer system nodes will be inspected annually, and the Director will respond to all reports of spills and/or illicit discharges within an hour of being reported.

4 Construction Site Stormwater and Runoff Control

The control of our regulated land disturbing activities including the development of a stormwater plan, site plan and an erosions and sediment control plan, and adherence to ODU's Annual Standards and Specifications is the responsibility of the Senior Director of Capital Design and Construction. As a goal, the Director of Health and Safety will review all Erosion and Sediment Control Inspection Reports and respond to any needed action items within three days of initial receipt.

4.1 Plan Review

ODU's Department of Design and Construction hires a design team including civil engineers who develop the site plan, Stormwater Plan, and Erosion and Sediment (E&S) Control Plan. Both the Stormwater Plan and E&S Control Plan are submitted for review and approval. All plans are also submitted to the Department of General Services Division of Engineering and Building (DEB) for review. Acting for the state Building Official, DEB reviews and approves all construction documents for state agencies and issues building permits. All land disturbing activities great than 2,500 square feet are required to follow the instructions listed in ODU's Annual Standards and Specifications and be approved by a DEQ Certified third party. Land disturbances greater than one acre require a DEQ issued General Virginia Pollution Discharge Elimination Systems Permit. Assuming the E&S controls are satisfactorily installed, a land disturbance permit for the project is issued; from that point on the contractor is responsible for maintaining copies of the approved plans on-site along with the project's stormwater pollution prevention plan (SWPPP).

4.2 Inspection and Compliance/Enforcement Activities

A DEQ Certified third party contractor is responsible for conducting compliance inspections at the required frequency. Ultimate compliance oversight is by ODU as the MS4 operator. The Department of Design and Construction has two FTEs dedicated to construction inspections, and those inspectors are at the construction projects on a daily basis. The ODU has enforcement capability as the VESCP Authority. ODU also has the ability to enforce through its contract language with the operator of the project.

5 Post-construction Stormwater Management

ODU maintains a list of all stormwater management facilities in its inventory (See 5.1 below). All of the established facilities are maintained by ODU departmental staff and/or contractors based on the required maintenance. These areas are managed by the Director of Environmental Health and Safety, the Assistant Director of Grounds/Landscapes, Assistant Director of Equipment and Vehicle Maintenance, and the Assistant Director of Housing Maintenance. General upkeep and litter/debris removal is done by ODU, and more extensive maintenance and inspections are performed by contractors. As a state agency, ODU must follow the State review process for development and/or redevelopment. All submissions are subject to review by the Department of Engineering and Buildings (DEB) and the Department of Environmental Quality (DEQ). This review process ensures that the required approvals and permits are obtained prior to construction and are done so in accordance with the Virginia Erosion and Stormwater Management Act (VESMA). As a goal, the Director of Environmental Health and Safety will maintain record of all BMPs added during each permit year and add them to the DEQ BMP Warehouse, provide training to members of the Grounds division at least once every 24 months and contract for services to revise the University Nutrient Management Plan at least once every three years.

5.1 Database of BMPs and Inspection Logs

Date Installed	BMP Name	Practice Description	Total Acres Treated	Measurement Unit	Amount Applied	Latitude	Longitude	HUC 12	Inspect Date	Impaired Waters
2006	Oceanography Wet Retention Basin	Wet Pond	6.71	lbs/yr	7.65	36.88501	-76.3072	JL-56	6/3/2014	Elizabeth River
1996	Elkhorn Lot 23Dry Detention Basin	Grassed Swale	1.66	lbs/yr	0.84	36.88433	-76.3084	JL-56	6/16/2014	Elizabeth River
2002	Lot 42 Hydrodynamic Separator	Inlet Protection Device	2.1	lbs/yr	0.86	36.88494	-76.3167	JL-56	6/16/2014	Elizabeth River
2000	Constant Hall Hydrodynamic Separator	Inlet Protection Device	1.27	lbs/yr	0.38	36.8872	-76.3047	JL-56	6/3/2014	Lafayette River
1995	Gornto Teletechnet Wet Retention Basin III	Wet Pond	2.96	lbs/yr	1.55	36.88443	-76.304	JL-56	6/3/2014	Elizabeth River
2002	Computational Sciences Bio-Retention Basin	Grassed Swale	0.31	lbs/yr	0.26	36.88548	-76.3075	JL-56	6/3/2014	Elizabeth River
2004	43rd Street Parking Garage Hydrodynamic Separator	Inlet Protection Device	2.2	lbs/yr	0.7	36.88342	-76.3065	JL-56	6/16/2014	Elizabeth River
2006	Wrestling Addition Infiltration Trench	Infiltration trench	0.43	lbs/yr	0	36.88523	-76.3088	JL-56	6/3/2014	Elizabeth River
2006	Indoor Tennis Facility Bio-Retention Basin	Grassed Swale	2.23	lbs/yr	2.22	36.88447	-76.3118	JL-56	6/3/2014	Elizabeth River
2007	Physical Sciences Water Quality Inlet (Filterra ©)	Inlet Protection Device	0.25	lbs/yr	0.24	36.88414	-76.307	JL-56	6/15/2014	Elizabeth River
2007	Student Recreation Bio-Retention Basin	Dry Basin	3.57	lbs/yr	0.81	36.88654	-76.3122	JL-56	6/3/2014	Elizabeth River
2007	Student Recreation Water Quality Inlet (Filterra ©)	Inlet Protection Device	0.25	lbs/yr	0.32	36.88661	-76.3111	JL-56	6/15/2014	Elizabeth River
2008	Gameday Building Cistern	Cistern	0.99	lbs/yr	0	36.88823	-76.3052	JL-56		Lafayette River
2010	Runte Quad Cistern	Cistern	0.19	lbs/yr	0	36.88618	-76.3093	JL-56		Elizabeth River
2011	Student Success Dry Detention Basin	Grassed Swale	0.3	lbs/yr	0.32	36.88353	-76.3056	JL-56	6/3/2014	Elizabeth River
2011	Dragas Hall Bio-retention Basin	Bioretention cell	0.77	lbs/yr	0.86	36.88751	-76.3035	JL-56	6/3/2014	Lafayette River
2013	Diehn Fine Arts Bio-Retention Basin	Bioretention cell	0.57	lbs/yr	0.63	36.88741	-76.3076	JL-56	6/3/2014	Elizabeth River
2014	New Art Building Water Quality Inlet (Filterra ©)	Inlet Protection Device	0.17	lbs/yr	0.24	36.88611	-76.2999	JL-56	Just installed	Lafayette River
2015	New Art Studio Filterra	Inlet Protection Device	0.21	lbs/yr	0.21	36°53'10.45 "N	76°17'59.19 "W	JL-56		Elizabeth River
2016	Broderick Dining	Bioretention	0.28	lbs/yr	0.22					
				lbs/yr						

5.2 Inspection and Maintenance

All BMPS will be inspected at least annually to ensure their proper operation and function as originally designed. Maintenance will be performed as necessary based on data gathered from inspections performed by ODU staff and/or licensed contractors.

6 Pollution Prevention/Good Housekeeping

ODU has several activities to maintain good housekeeping protocols throughout campus. These activities consist of lawn maintenance, nutrient management plan, fleet maintenance, car washing, litter collection and street sweeping, bulk storage, stormwater management pollution prevention plans, and spill prevention control and countermeasure training. Activities regarding this control measure are mainly associated with the implementation of ODU's Stormwater Pollution Prevention Plan and maintenance of our physical best management practices. Responsible Persons include the Director of Environmental Health and Safety, the Assistant Director of Grounds/Landscapes, Assistant Director of Equipment and Vehicle Maintenance, and the Assistant Director of Housing Maintenance. As a goal the Director of Environmental Health and Safety will perform inspections of storage areas annually and perform inspections of all physical BMPs annually.

6.1 Lawn Maintenance

Lawn maintenance (cutting/trimming) activities are controlled by the Grounds Divisions of Facilities Management. All clippings and trimmings are collected and stored for composting. All materials gathered are put in a designated dumpster and the dumpster is taken by a contractor to be composted.

6.2 Nutrient Management Plan - Appendix D

The Nutrient Management Plan is prepared by a consultant hired by the University specializing in Nutrient Management. The plan is available on ODU's website and is approved on June 1, 2022. The plan expires on June 1, 2025. The Nutrient Management Plan encompasses approximately 16.65 acres of ODU's Norfolk campus. The document is also stored and maintained at the Director of Environmental Health and Safety's office. This is the location where the plan is readily available and updated as campus changes or issues are reported and addressed.

6.3 Fleet Maintenance

University vehicles are maintained twice annually by the Motor Pool Department, and they are checked for any leaking fluids. ODU has a work order system in place so that operators or individual departments can request service if any leaks develop in the interim. Any spills of automobile fluids are reported to the Environmental Health and Safety Office and cleaned up immediately. Motor Pool personnel are required to attend Spill Prevention Control and Countermeasure training, and Storage Tank Operator Training.

6.4 Car Washing

All washing of university vehicles is done in a closed wash bay that has a drain connected to the sanitary sewer. No vehicles are permitted to be washed on impervious surfaces that may lead to the ODU storm sewer system.

6.5 Litter Collection/Street Sweeping

Litter collection at ODU is a daily occurrence. Members of the Grounds division collect litter from all campus areas 7 days a week during the month of May, and 5 days a week during all other times. There are 3 staff member dedicated to this activity. Additionally, members of the Housing

division collect litter from areas adjacent to dormitories 5 days a week. Sweeping of parking lots occurs at least 12 times annually.

6.6 Parking Lot Maintenance/Street Sweeping

Street and lot sweeping is done on a weekly basis and after significantly attended campus events such as football games. Refuse collected is sent to the landfill unless it is leaves, which are added to the green waste recycling program as compostable material.

6.7 Bulk Storage

Bulk storage of materials such as salt, pesticides and fertilizers are done at indoor or covered facilities to prevent the potential for runoff. Materials such as topsoil, sand, or mulch are only ordered on an as-needed basis and covered with tarps to prevent runoff during storage.

6.8 Stormwater Pollution Prevention Plan (SWPPP) – October 1, 2024

ODU is considered a "non-traditional" MS4 that does not have typical municipal high-priority facilities that have a high potential for discharging pollutants. It is required that we develop a SWPPP for the entire campus. ODU has developed three campus wide SWPPPs, Vehicular Pollutants, Nutrient Management, and Litter and Debris. Each SWPPP contains site maps with outfall locations and drainage divides, control measures, maintenance requirements, and site inspection logs. The SWPPPs are dated October 2024 and are located digitally on ODU's Stormwater Management website. The documents are also stored and maintained at the Director of Environmental Health and Safety's office. This is the location where the SWPPPs are readily available and updated as campus changes or issues are reported and addressed.

6.9 Spill Prevention Control and Countermeasure Training

Facilities Management personnel receive training on spill prevention, spill control, and countermeasures that are to be taken in the event of an identified illicit discharge or potential for an illicit discharge. All affected staff will attend training at least every 2 years.

The University ensures that its Contractors are implementing the necessary good housekeeping and pollution prevention measures by including environmental liability requirements within its solicitations for goods and services. The liability requirements state that it is the Contractor's responsibility to pay for any remediation necessary to mitigate environmental violations caused by their work. A second requirement is that hazardous substances are to be properly labeled per United States Code.

6.10 Anti-icing / Deicing Agents

The use of anti-icing/deicing agents that contain urea or other forms of nitrogen or phosphorous are strictly prohibited on campus.

6.11 Stormwater Discharge from Construction and Maintenance Activities

The discharge from campus construction and maintenance activities not covered under a project specific SWPPP must still adhere to campus protocols for stormwater discharges. Stormwater discharged from a site either from construction related or dewatering activities shall be directed to a filter bag prior to being discharged to the downstream stormwater system.

Training Plan:

Per Part I.E.6.d.(1)-(6) of the Permit, ODU has an online training platform provided to employees. The platform includes

training on the campus wide SWPPPs, Vehicular Pollutants, Nutrient Management, and Litter and Debris that includes the locations on campus that are priorities within each SWPPP and how to recognize and report illicit discharges.

The employees are required to complete the training every 24-months and within the first two months of being hired at the University.

The ODU Environmental Health and Safety Officer keeps record of employees completing the training and coordinates the refresher courses each 24-month period. These records are kept for the minimum of three years.

Appendices

A. Stormwater Management Master Plan -
B. Illicit Discharge Detection and Elimination Program -
C. IDDE Dry Weather Inspection Log
D. Nutrient Management Plan -
E. Spill Prevention Control and Countermeasure Plan -
F. Chesapeake Bay TMDL Action Plan –
G. Annual Standards and Specifications

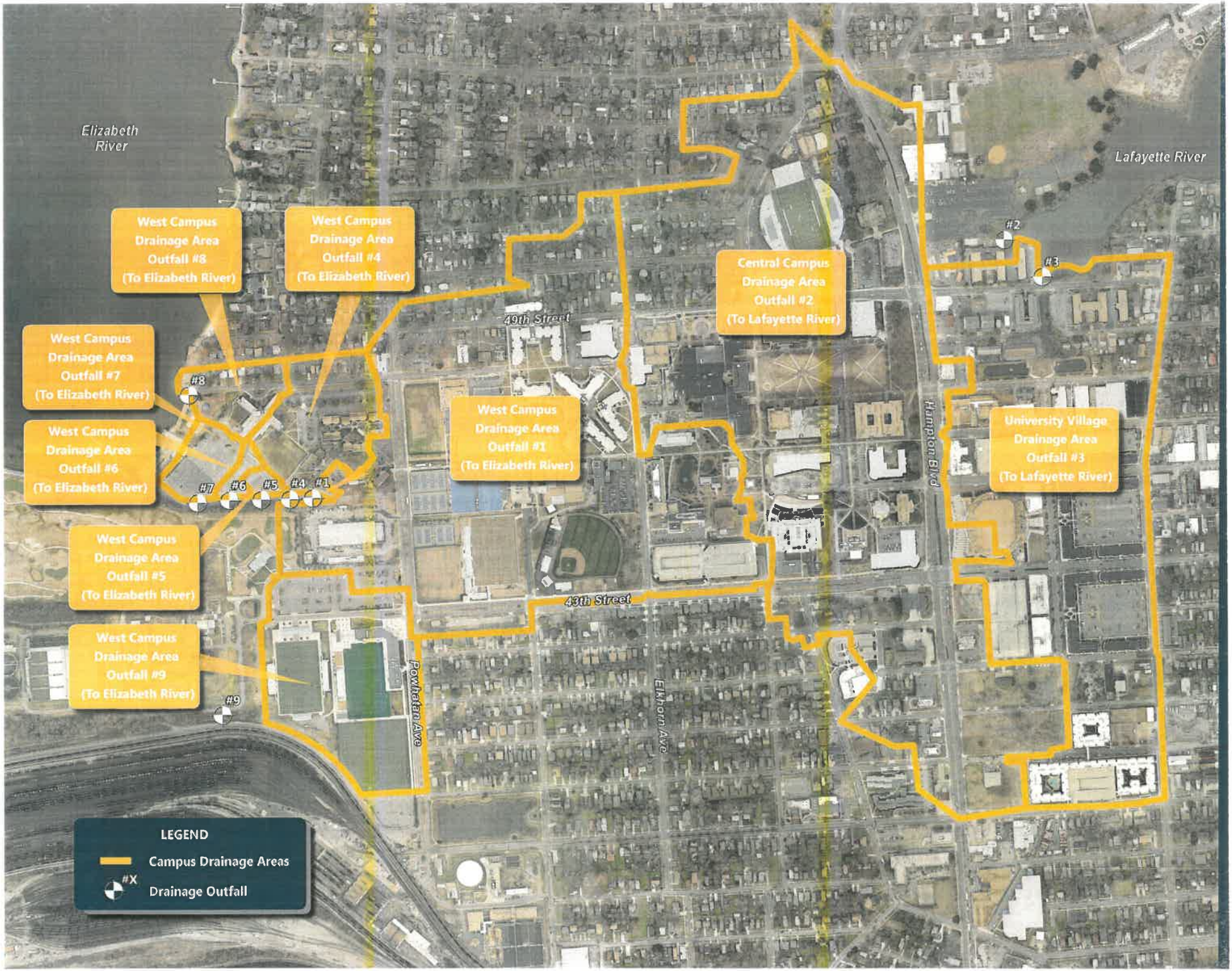
Attachment A

Table 1: *Campus Outfall Summary*

Outfall Number	Location	Latitude	Longitude	Description	Outfall Waterbody	Impaired Waterbody?	HUC	Outfall Drainage Area (ac)
1	West Campus, South of Whitehurst Hall	36.88475	-76.31429	78" CMP culvert to tidal canal to Elizabeth River	Elizabeth River	Yes	JL56	81.95
2	East Campus, North of Rogers Hall	36.88847	-76.30111	Double 42"x60" RCP box culvert to tidal canal to Lafayette River	Lafayette River	Yes	JL56	128.86
3	East Campus, East of Rogers Hall	36.88791	-76.30031	Double 48" RCP culvert to tidal canal to Lafayette River	Lafayette River	Yes	JL56	66.66
4	West Campus, South of Whitehurst Hall	36.88477	-76.31475	36" RCP culvert to tidal canal to Lafayette River	Lafayette River	Yes	JL56	8.01
5	West Campus, South of Whitehurst Hall	36.88478	-76.31530	18" RCP culvert to tidal canal to Lafayette River	Lafayette River	Yes	JL56	0.61
6	West Campus, South of Whitehurst Hall	36.88478	-76.31592	15" RCP culvert to tidal canal to Lafayette River	Lafayette River	Yes	JL56	0.84
7	West Campus, South of Whitehurst Hall	36.88473	-76.31651	24" RCP culvert to tidal canal to Lafayette River	Lafayette River	Yes	JL56	2.90
8	West Campus, Northwest of Whitehurst Hall	36.88643	-76.31663	18" RCP culvert to Elizabeth River	Elizabeth River	Yes	JL56	3.14
9	West Campus, South of L.R. Hill Sports Complex	36.88151	-76.31533	42" RCP culvert to Elizabeth River	Elizabeth River	Yes	JL56	17.38

Note: Outfall Drainage Areas include area outside the ODU campus limits. The outfall map includes the overall drainage areas that discharge to each of the campus outfalls. These discharge points include areas from outside the campus regulated MS4 area. These areas are monitored and regulated by the City of Norfolk. A separate map has been included which highlights the ODU MS4 regulated area. This area encompasses the state-owned property for which ODU has maintained coverage for in their campus wide MS4 permit and TMDL Action Plan.

ODU's campus outfalls are subject to the Chesapeake Bay TMDL. The Lafayette River outfalls to the Elizabeth River, which ultimately outfalls to the Chesapeake Bay. The Elizabeth River Mainstem – Middle is listed in the 2022 Impaired Waters – 303(d) List under Cause Category 5A for enterococcus. The Lafayette River – Upper Segment is listed in the 2022 Impaired Waters – 303(d) List under Cause Category 4A for enterococcus. The hydrologic unit code for the Elizabeth and Lafayette Rivers is **JL56**.


Elizabeth River
Lafayette River
West Campus Drainage Area Outfall #8 (To Elizabeth River)
West Campus Drainage Area Outfall #4 (To Elizabeth River)
West Campus Drainage Area Outfall #7 (To Elizabeth River)
West Campus Drainage Area Outfall #6 (To Elizabeth River)
West Campus Drainage Area Outfall #5 (To Elizabeth River)
West Campus Drainage Area Outfall #9 (To Elizabeth River)
West Campus Drainage Area Outfall #1 (To Elizabeth River)
Central Campus Drainage Area Outfall #2 (To Lafayette River)
University Village Drainage Area Outfall #3 (To Lafayette River)
#1
#2
#3
#4
#5
#6
#7
#8
#9
49th Street
43rd Street
Hampton Blvd
Powhatan Ave
Elkhorn Ave
LEGEND
Campus Drainage Areas
#X
Drainage Outfall

SOURCE: Nearmap.

Campus Study Area = ±177.90 AC

Stormwater Management Master Plan

Figure 1 Applicable Area

OLD DOMINION UNIVERSITY

0 125 250 Feet

Existing BMP (Elizabeth River Discharge)

- E-1 - Lot 23 - Dry Detention Basin (Removed)
- E-2 - Engineering & Computational Sciences - Bioretention
- E-3 - Lot 42 - Hydrodynamic Separator
- E-4 - 43rd Street Parking Garage - Hydrodynamic Separator
- E-5 - Oceanography and Physical Sciences - Wet Retention Basin
- E-6 - Wrestling Addition - Infiltration Trench (Removed)
- E-7 - Indoor Tennis Center - Bioretention
- E-8 - Physical Sciences Building - Water Quality Inlet
- E-9 - Student Recreation Center - Bioretention (Removed)
- E-10 - Student Recreation Center - Water Quality Inlet (Removed)
- E-11 - Quad Student Housing - Cistern
- E-12 - Broderick Dining Commons - Bioretention
- E-13 - Broderick Dining Commons - Permeable Pavers
- E-14 - Chemistry Building - Permeable Pavers
- E-15 - Owens House - Bioretention
- E-17 - Ireland House - Permeable Pavers
- E-18 - Student Recreation Center Field - Bioretention

Existing BMP (Lafayette River Discharge)

- L-1 - Gornto Hall - Wet Retention Basin
- L-2 - Constant Hall - Hydrodynamic Separator
- L-3 - Batten Arts and Letters - Green Roof (Removed)
- L-4 - 49th Street Stadium Garage - Cistern
- L-5 - Student Success Center - Bioretention
- L-6 - Dragas Hall - Bioretention
- L-7 - Diehn Fine and Performing Arts Center - Bioretention
- L-8 - Barry Arts Building - Water Quality Inlet
- L-9 - Engineering Systems Building - Bioretention
- L-10 - Hixon Art Studio Building - Water Quality Inlet
- L-11 - Education Building - Bioretention
- L-12 - Education Building - Permeable Pavers
- L-13 - S.B. Ballard Stadium - Permeable Pavers
- L-14 - Children's Learning Center - Bioretention

Under Construction

- E-16 - 48th Street - Permeable Pavers
- L-15 - Health Sciences Building - Bioretention
- L-16 - Health Sciences Building - Permeable Pavers

Stormwater Management Master Plan

Figure 4 Existing Conditions

OLD DOMINION UNIVERSITY

Dry Weather Inspection List

Appendix C

Date:

General Information:

Date of last precipitation event _____

Rainfall +/- (in.) _____

List of Known Storm Water Outfalls/Nodes										
Descriptions	**Location**	**Type**	**Discharge observed (Y/N)?**	**Estimated Discharge Rate (cfs)**	**Wet/dry**	**Condition**	**Odor**	**Sheen**	**Debris**	**Comments**
78" ERPC	Powhatan Ave	Outfall								
60"x 42"	Behind Rogers Hall	Outfall								
(2)48" RCP	Crossing 49th Street beside Rogers Hall	Outfall								
Grate	Out front of Webb stairs, Facing Lions den at corner of Constant hall. 10 ft from Webb	Node								
Manhole cover	49th Street in between Dragas Hall and Visual Art Center on side walk next to road	Node								
Manhole cover	Corner of Kaufman Hall adjacent to Greek rock and 3ft from side walk facing open field.	Node								
Grate	Road side entering child study parking lot	Node								
Manhole Cover	Outside of Oceanography bldg on Elkhorn Ave. where bldg sidewalk meets road	Node								