OLD DOMINION UNIVERSITY
IDEA FUSION

OFFICE OF ENVIRONMENTAL HEALTH AND SAFETY
5255 Hampton Blvd. ◆ Spong Hall, suite 2501 ◆ Norfolk, Virginia 23529
Phone: (757) 683-4495 ◆ Fax: (757) 683-6025

Occupational Safety & Health ◆ Environmental Health ◆ Laboratory Safety◆ Industrial Hygiene ◆ Radiation Safety ◆ Hazardous Waste ◆ Pollution Prevention

Old Dominion University
MS4 Program Plan

Administered by
Environmental Health and Safety Office

Revised October 2019

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.

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, 2019 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 (https://www.odu.edu/life/sustainable/stormwater-management) , 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 th 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 Stormdrain 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

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 is collected with volunteer assistance and disposed of in ODU dumpsters..

2.2 Blue Goes Green Week

Members of the Sustainability Committee along with other university organizations combine forces to produce the activities that take place during ODU's Blue Goes Green Week. Examples of activities that take place include volunteer opportunities for shoreline cleanups, tree or wetland plantings, trash audits, and storm drain marker (re)placement. There is also a vendor fair for local businesses and poster presentations promoting research and operational green initiatives that occur on campus. This takes place during the week that includes Earth Day.

2.3 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.

2.4 Reporting Illicit Discharges

Illicit discharges, improper disposal, or spills should be reported to the Environmental Health and Safety Office immediately via phone (683-4495) or email (ehsdept@odu.edu). General comments regarding this plan or other stormwater concerns can be emailed for consideration.

2.5 Stormwater Webpage

Information regarding ODU's MS4 Permit and associated stormwater management programs can be found a the following URL https://www.odu.edu/life/sustainable/stormwater-management , or by simply searching "stormwater" at ODU's main webpage.

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 Are 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 three outfalls and five 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.

4 Construction Site Stormwater and Runoff Control

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 greater 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. 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. 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 Bureau of Capital Outlay Management (BCOM) 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 Stormwater Management Act (VSMA).

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 Facilty 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	Barry Art Building Water Quality Inlet (Filterra ©)	Inlet Protection Device	0.17	lbs/yr	0.24	36.88611	-76.2999	JL-56	8/15/2018	Lafayette River
2014	Engineering System	Dry Basin	0.61	lbs/yr	1.08	36°53'6.20"N	76°18'20.13"W	JL 56	4/11/28	Lafayette River
2015	Hixon Art Studio	Filterra	0.21	lbs/yr	0.22	36°53'10.40"N	76°17'57.84"W	JL 56	8/15/2018	Lafayette River
2018	New Education	Dry Basin	1.33	lbs/yr		36°53'2.24"N	76°18'11.38"W	JL 56		Lafayette River

2018	New Education Building	Permeable Pavers	0.43	lbs/yr		36°53'1.01"N	76°18'12.40"W	JL 56		Lafayette River
2018	Child Study	Dry Basin	0.65	lbs/yr		36°53'11.63"N	76°17'55.00"W	JL 56		Lafayette River

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

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

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. Any vehicles washed in other locations shall use a water collection device or be washed on a pervious surface that does not drain to the 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 members 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 is 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) –

ODU is considered a "non-traditional" MS4 that does not have typical municipal high-priority facilities that have a high potential for discharging pollutants. ODU's Stormwater Pollution Prevention Plan can be found at the following link. https://www.odu.edu/life/sustainable/stormwater-management

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.

Appendices

A. Stormwater Management Master Plan -
B. Illicit Discharge Detection and Elimination Program - https://www.odu.edu/content/dam/odu/offices/environmental-health-safety/docs/illicit-discharge-detection-and-elimination-program.pdf
C. IDDE Dry Weather Inspection Log
D. Nutrient Management Plan - https://www.odu.edu/content/dam/odu/offices/environmental-health-safety/docs/nutrient-management-plan.pdf
E. Spill Prevention Control and Countermeasure Plan - https://www.odu.edu/content/dam/odu/offices/environmental-health-safety/docs/spill-prevention-control-and-countermeasures-plan.pdf
F. Chesapeake Bay TMDL Action Plan - https://www.odu.edu/content/dam/odu/offices/environmental-health-safety/docs/chesapeake-bay-tmdl-action-plan-2018.pdf
G. Stormwater Pollution Prevent Plan - https://www.odu.edu/life/sustainable/stormwater-management