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

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October 1, 2019

Re: MS4 General Permit Annual Report  
Old Dominion University  
General Permit Registration Number VAR 040078

**A. Background Information**

1. Old Dominion University, General Permit Registration Number VAR 040078
2. Permit Year 2019
3. Annual Standards and Specifications were revised (not yet approved)
4. No new MS4 outfalls were added during the permit year
5. Signed certification attached (Attachment G)

**B. MCM 1 - Public Education and Outreach**

ODU's Public Education and Outreach efforts related to the high-priority water quality issues take the following forms: Adopt-A-Stream clean-ups; Environmental Awareness Training; Storm Drain Marking; and Public Service Announcements. The following describes ODU's ability to educate affected community members with regard to the stated High-Priority Water Quality Issues.

- Nutrient Management - nutrient management affects two departments on campus: University Grounds and Athletic Grounds. There are eight individuals who are qualified as Certified Fertilizer Applicators to apply fertilizers to University and Athletic grounds who follow guidelines set forth in our current Nutrient Management Plan, revised 2018. Each member of Grounds attends an annual spill prevention control and countermeasure training offered by the Environmental Health and Safety Office. The training is required to be attended by all affected employees a minimum of once every two years. ODU plans to utilize the same means of education for the coming year. Classes were again held in June of this year where all members of the Grounds Division were in attendance.
- Petroleum Releases - the potential for petroleum releases within the confines of the MS4 permitted areas is great due to the amount of automobile traffic that the campus sees each year from faculty, staff and students. ODU uses several methods for informing the affected population of this potential and the importance

of reporting any illicit discharges. Transportation and Parking Services distribute informational fliers with each mailing for Parking Pass Applications and hand deliver them to those who purchase the passes in person. This year Transportation and Parking Services distributed approximately 24,000 fliers. The Department of Human Resources also puts informational pamphlets in each New Employee Packet given to new hires. This year ODU hired approximately 350 new employees during the 2018/2019 reporting year. All fliers have information regarding what constitutes an illicit discharge and how to notify the Environmental Health and Safety office in the event that they witness a release. The Environmental Health and Safety Office also places markers at each storm drain inlet that state "Only Rain Down the Storm Drain". ODU recruited a student intern to place markers on all new storm drain inlets and replace damaged or missing markers within the MS4 permit area. We have recently purchased new drain markers with a phone number to report releases that will be placed in the coming permit year. ODU also displays public service announcements over the information screens of Webb Student Center that are viewed by all visitors in several locations within the facility. The flier, pamphlet and community education contacts provide information on how to identify and report illicit discharges

- Litter and Debris – litter and debris control is an ongoing high priority issue for the campus from a pollution prevention standpoint. ODU utilizes the same efforts mentioned above in the Petroleum Releases section for informing the community about how to identify and report releases of this kind. Fliers, pamphlets, and public service announcements identify various types of illicit discharges that should be reported to the Environmental Health and Safety Office.
- Sediment Deposition - erosion and sediment control is maintained by contractors who perform work involving regulated land disturbing activities. Inspections of permitted sites were performed, as noted in our Annual Standards and Specification, by DEQ Certified third party contractors. ODU's Department of Design and Construction has 2 full time site inspectors who visit active sites daily and ensure that any findings of transgression to the erosion and sediment controls are corrected right away. Reports of erosion and sediment control inspections are forwarded to the Environmental Health and Safety Office for review and record keeping. The site inspectors are trained to identify any problems related to erosion and sediment control of land disturbing activities.

In the coming year, ODU will use the same outreach efforts and explore other opportunities to reach students, faculty, and staff. Currently we are waiting for pricing for 1,500 informational door hangers and refrigerator magnets. Annually, ODU distributes approximately 24,000 parking passes and hires approximately 400 new employees. Due to continued outreach and education efforts within the campus community, ODU expects an overall increase in the number of people who are reached each year. Additionally, ODU's MS4 Program Plan is available to the public at <https://www.odu.edu/life/sustainable/stormwater-management>. There were no comments received from the public concerning the program plan nor any complaints.

### **C. MCM 2 - Public Involvement**

- Stormwater Pollution Prevention Plan (SWPPP) – a copy of the plan is maintained on the Environmental Health and Safety Office website at <http://www.odu.edu/life/sustainable/stormwater-management>
- MS4 Program Plan – a copy of the Program Plan is maintained on the

Environmental Health and Safety Office website at <http://www.odu.edu/life/sustainable/stormwater-management>

- Annual Reports – copies of the previous three annual reports are maintained on the Environmental Health and Safety Office website at <http://www.odu.edu/life/sustainable/stormwater-management>
- Public Participation – this metric is met by several different means. ODU holds a minimum of four Adopt-A-Stream events annually. This year ODU held a total of five events, all five were held during the spring semester on shorelines that are adjacent to the Elizabeth and Lafayette Rivers. Attached (Attachment A) are copies of the sign-in sheets for each of the events.

**D. MCM 3 - Illicit Discharge Detection and Elimination**

Attached (Attachment B) is a table of our three outfalls that includes the HUC Code, a description of the outfall, the receiving waters, predominant land use of the areas drained, Latitude and Longitude, and associated TMDLs. There were no changes to the map of coverage area or outfalls. Below the table is a map of the MS4 coverage area. Also attached (Attachment C) is a map of the stormwater management facilities owned by ODU.

ODU notified the City of Norfolk Environmental Programs coordinator in 2015 acknowledging that ODU’s storm sewer system is interconnected with the city’s storm sewer system. Attached (Attachment D) is a copy of the letter. ODU also maintains regular contact with the City of Norfolk to exchange pertinent information related to respective MS4 service areas and any potential illicit discharges.

The Environmental Health and Safety Office performed an annual screening of three outfalls and five nodes during dry weather conditions. The parameters used to screen each of the outfalls and nodes were, wet/dry, general condition, odor present, sheen present, debris present, and general condition comments. There were no significant findings. Attached (Attachment E) is a copy of the Dry Weather Inspection.

ODU did not perform any sampling or monitoring beyond the Dry Weather Inspection of outfalls and nodes. ODU’s lack of potential for harmful/illicit discharges due to limiting bulk storage of materials that have a potential for releases as well as the monitoring that occurs with relation to fuel storage and dispensing has rendered sampling of outfalls unwarranted. This will remain open to modification should any of ODU’s processes change such that sampling of outfalls becomes necessary.

ODU did receive some reports of spills, but we did not experience suspected illicit discharge during this reporting period. The following table notes all reported spills and actions taken to resolve.

Date	Location	Spill	Action Taken
10/24/18	Lot 42 Powhatan Ave	Oil release from contractor’s vehicle	Contained spill and cleaned up using absorbent material (oil dry) No material entered the storm sewer system
11/12/18	Sidewalk between	Hydraulic fluid from	EHSO staff contained the

	Constant Hall and VAB	contractor's truck	spill a, supervised contractor cleanup of the spill No material entered the storm sewer system
5/14/19	Next to dumpster on southside of Powhatan dorms	Household chemicals	EHSO staff contained and cleaned up the spill with absorbent pads No material entered the storm sewer system

**E. MCM 4 - Construction Site Stormwater Runoff Control**

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 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. During this permit year ODU had three regulated land-disturbing activities take place on the campus. Following are the metrics related to the regulated land disturbance including total acreage and total number of inspections conducted by the City of Norfolk.

- Hugo Owens Residence Hall
  - 3.13 Acres
  - 14 inspections
- New Chemistry
  - 3.46 Acres
  - 18 inspections
- Foreman Field
  - 5.7 Acres
  - 15 inspections

All three sites were inspected for erosion and sediment control by the DEQ. There were some findings needing corrective actions at the Owens site, but all corrections were made in timely order. The Environmental Health and Safety Office receives copies of all inspection records for review. While there were some minor infractions noted in various inspections, corrections were promptly made in each case and no enforcement actions were taken.

**F. MCM 5 - Post-construction Stormwater Management**

1. ODU added one new stormwater management facility during this permit year. The Child Study Center was completed which added a dry retention basin to our list of best management practices employed as well as the DEQ BMP Warehouse. There were no offset credits purchased during the permit year. ..

Name	Type	TP Removal	TN Removal	TSS Removal
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		(lbs/yr)	(lbs/yr)	(lbs/yr)
Child Studies	Bioretention Dry	0.36	1.87	151.52

ODU performed a visual inspection of physical BMPs on 6/7/19 after a significant rain event that occurred on 6/6/19. The parameters that are checked include,

- Inlet/Outlet clearance
- Sign of erosion/stability of turf
- General debris
- Comments/Other observations

Attached (Attachment F) is a copy of ODU's visual inspection report.

## 2. Summary of Offsets Provided by Existing BMPs

Name/Description	Reduction Means/Methods	TP Removal Required (lb/yr)	TSS Removal Efficiency	TP	TN	TSS
Lot 23	Dry Detention Basin	0.67	0.1	0.17	0.04	5.77
Computational Sciences Building	Bioretention Basin	0.21	0.55	0.05	0.14	9.82
Lot 42	Hydrodynamic Separator	0.68	0.1	0.18	0.04	5.90
43rd Street Parking Garage	Hydrodynamic Separator	0.56	0.1	0.14	0.03	4.81
Oceanography and Physical Sciences Building	Wet Pond	6.08	0.6	1.57	1.30	315.07
Wresting Addition	Infiltration Basin	0.00	0.95	0.00	0.00	0.00
Tennis Center	Bioretention Basin	1.76	0.55	0.46	1.20	83.81
Physical Sciences Building	Filtterra System	0.19	0.8	0.05	0.13	13.18
Student Recreation Center	Bioretention Basin	0.64	0.55	0.17	0.44	30.58
Student Recreation Center	Filtterra System	0.25	0.8	0.07	0.17	17.57
Student Recreation Center	Hydrodynamic Separator	0.31	0.1	0.08	0.02	2.68
Quad Student Housing	Cistern	0.00	0	0.00	0.00	0.00
Gornito Teletechne Building	Wet Pond	1.24	0.6	0.32	0.26	64.25
Constant Hall	Hydrodynamic Separator	0.30	0.1	0.08	0.02	2.61
Garage E	Cistern	0.00	0	0.00	0.00	0.00
Student Success Center	Bioretention Basin	0.25	0.55	0.07	0.17	12.08
Dragas Hall	Bioretention Basin	0.68	0.55	0.18	0.47	32.47
Diehn Fine and Performing Arts	Bioretention Planter	0.50	0.55	0.13	0.34	23.78
New Art Building	Filtterra System	0.11	0.8	0.03	0.08	7.69
Systems Research and Academics Building	Bioretention Basin	0.86	0.55	0.22	0.59	40.77
New Art Studio Building	Filtterra System	0.17	0.8	0.05	0.12	12.08

College of Education	Bioretention Basin	1.07	0.55	0.27	0.73	50.59
College of Education	Pervious Pavers	0.30	0.59	0.08	0.19	15.39
	<b>SUM</b>	16.85	16.85	4.35	6.47	750.90
	<b>Permit Cycle POC Required Reduction</b>			<b>1.59</b>	<b>5.85</b>	<b>735.38</b>
	<b>Surplus POC Reduction</b>			<b>2.76</b>	<b>0.62</b>	<b>15.52</b>

- There are three projects slated to be completed during the upcoming reporting year and associated management facilities will be added to the inventory as each comes online.

Name/Description	Reduction Means/Methods	TP Removal Achieved (lb/yr)	TN Removal Efficiency	TSS Removal Efficiency
Foreman Field	Pervious Pavers	0.76	0.59	0.59
New Chemistry	Pervious Pavers	1.28	0.59	0.59
Hugo Owens Residence	Bioretention	0.13	0.64	0.55

## G. MCM 6 - Pollution Prevention/Good Housekeeping

### Stormwater Pollution Prevention Plans (SWPPP)

After reviewing the campus activities and storage areas for potential major releases ODU did not note any particular areas that might be considered a “High Risk” for release to the storm sewer system. As a result of this assessment it was decided that a Stormwater Pollution Prevention Plan (SWPPP) that addressed the campus as a whole, with specific attention to ODU’s High-Priority Water Quality Issues, would be the most comprehensive tactic. ODU has taken the approach of considering the campus as one High Risk area and have developed a SWPPP for the entire campus focusing on vehicular pollutants, nutrient pollutants, litter and debris, and sediment deposition. The SWPPP was completed in August of 2016 and can be found at <http://www.odu.edu/life/sustainable/stormwater-management>. [Annual review of Daily Activities is performed to ensure specific departmental activities are still proceeding.](#) After our most recent MS4 Inspection performed by the DEQ in November of 2018, it was suggested that we add an inspection protocol for the Fleet Maintenance/Car Washing area.

The Daily Activities noted by ODU that require operational summaries are as follows:

- 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.
- Nutrient Application  
Nutrient Management (fertilizing) is dictated by ODU’s Nutrient Management Plan. A link to the Plan (revised 2018) can be found at

<http://www.odu.edu/content/dam/odu/offices/environmental-health-safety/docs/nutrient-management-plan.pdf>. Activities that contribute to the prevention of illicit discharges are the covering of any grated storm drain inlets in the fertilizing areas and blowing any residual fertilizer off of impervious surfaces back on to the intended target lawn or bed.

- Old Dominion University is required to have a Nutrient Management Plan in place to cover all 173.5 acres, of which approximately 19.65 acres are managed with nutrients.
- All personnel who apply nutrients have passed the Virginia Certified Fertilizer Applicator Exam.
- Nutrient Application Locations:

<b>Location</b>	<b>Latitude</b>	<b>Longitude</b>
Soccer Field	36.883975	-76.310912
Soccer Practice Field	36.883603	-76.311987
Whitehurst Field	36.885539	-76.315139
Baseball Field	36.883919	-76.308999
Kaufman Mall	36.886539	-76.304909
Williamsburg Lawn	36.88992	-76.303745
Runte Quad	36.886007	-76.310011
Rec Sports Field	36.88592	-76.312205
VMASC	36.869353	-76.418136
Tri-Cities	36.869109	-76.417063

- **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. During this reporting year, there were three reports of spilled hydrocarbon products from contractor vehicles. Each reported spill was contained and cleaned up without reaching any storm drain inlet.
  - Motor Pool personnel have attended Spill Prevention Control and Countermeasure training as well as Storage Tank Operator training.
- **Car Washing**  
Washing of most university vehicles is done in a closed wash bay that has a drain connected to the sanitary sewer. Public Safety Vehicles are driven on to an impervious membrane for washing and the wastewater is collected for disposal by a contractor. No vehicles are washed on impervious surfaces that may lead to the ODU storm sewer system.
- **Litter Control**  
Litter control is an ongoing, daily battle. The Grounds Division and Housing and Resident Life collect waste from all campus areas on a daily basis. Grounds has four full-time dedicated employees who collect debris from all areas around campus and Housing Housekeeping personnel focus on areas surrounding the dormitories daily.
- **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.

- **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.
- **Training**  
Stormwater Pollution and Prevention (SPP) training has been incorporated in with the training that the Environmental Health and Safety Office provide to all Facilities Management employees who receive Hazard Communication Training. These employees are reasonably expected to work with or come in contact with hazardous materials through the course of their work assignments. The SPP training consists of topics related to the regulatory history of stormwater laws, point source and non-point source pollution, current Virginia regulations on stormwater pollution prevention, pollution prevention control measures, structural and non-structural best management practices that ODU employs, litter control, spill control techniques, and who to notify if they are involved in or witness an illicit discharge. Sessions were held in June 2019 where 77 affected employees attended. Future training sessions will be made available online for affected personnel as well as those with general interest in pollution prevention. The overall objective of the training is to impress the importance of preventing illicit discharges to the storm sewer system and to promote reporting of any noted discharges. The training is held at a minimum of every two years.
- **Illicit Discharge Detection and Elimination (IDDE)**  
ODU developed an IDDE as a requirement of the National Pollutant Discharge Elimination System (NPDES) the most recent revision of the IDDE was performed in August of 2016 to reflect changes in our infrastructure that have occurred. The revised IDDE Plan can be found at <http://www.odu.edu/life/sustainable/stormwater-management>. The purpose of this program is to implement a campus wide strategy to find, fix, and prevent illicit discharges.

All affected department managers were briefed on their responsibilities with regard to pollution prevention activities and signed off on respective activities with the plan.

## **H. MS4 Program Plan**

ODU will continue to undertake the same activities stated above for MCM1 through MCM 6 during the next reporting cycle, while exploring other activities that may make the control measures more robust. Changes that have occurred to our program over the past year was the acceptance of renewed Annual Standards and Specifications, and the continued revision and implementation of our Stormwater Pollution Prevention Plan.

## **I. BMP Assessment**

Old Dominion University has assessed the appropriateness of efforts related to each of the minimum control measures listed in the General Permit. Reports of spills and potential illicit discharges from faculty, staff and city officials supports that ODU' s efforts

detailed in MCMs 1 through 6 are suitable and effective means of identifying and preventing illicit discharges to the storm sewer system.

**J. Program Plan Modifications**

Old Dominion University’s program plan has been modified by the revision of our IDDE Plan and the addition of our Annual Standards and Specifications which are currently awaiting approval. ODU also developed and implemented a Stormwater Pollution Prevention Plan to target the prevention of illicit discharges from the four identified high priority water quality issues. Each plan can be found for review at a <http://www.odu.edu/life/sustainable/stormwater-management>

**K. Expected Control Measures**

<b>Building</b>	<b>BMP</b>
Hugo Owens	Dry retention basin Filterra
New Chemistry	Permeable Pavers
Foreman Football Field	Permeable Pavers

**Attachments enclosed:**

- A – Volunteer Sign-up sheets for Litter Collection and Adopt-A-Stream Events
- B – Map of Coverage Area and Outfalls
- C – Stormwater BMP Map
- D – Storm Sewer Interconnectivity Letter
- E – Dry Weather Inspection
- F – Physical BMP Inspection
- G – Certification Statement