Standard Operating Procedure:
Vehicle and Equipment Washing

Date: 1/30/2023* Version: 4 Review Frequency: Annual

Reasons for Procedure

The University of Virginia (UVA) has a permit to operate a Municipal Separate Storm Sewer System (MS4) issued by the Virginia Department of Environmental Quality. This permit authorizes UVA to discharge stormwater pursuant to the Virginia Stormwater Management Program and the Virginia Stormwater Management Act.

Since storm drain systems are not connected to a sanitary sewer treatment plant, water traveling through the storm drain system flows untreated directly to local streams, rivers and lakes. An illicit discharge to the storm system is generally defined as any discharge that is not composed entirely of stormwater. UVA's MS4 Program "shall include all procedures developed by the operator to detect, identify, and address nonstormwater discharges to the MS4."

1.0 Purpose

The purpose of this procedure is to describe the proper means for washing UVA vehicles and other items such as landscaping equipment and recycling containers. Vehicle and equipment washing can generate runoff contaminated with detergents, oils, litter, grease and heavy metals. Even if detergents or solvents will not be used, the resulting wastewater run-off may contain pollutants which must not enter the storm sewer system. Anyone conducting vehicle or equipment washing in the FM Yard should follow the FM Yard Vehicle and Equipment Wash Locations SOP.

2.0 Scope

This procedure applies to those departments at UVA that have fleet vehicles, mechanized equipment, and other motorized implements that need periodic or routine washing. Also included are non-motorized equipment such as nutrient spreaders, sprayers, bulk containers, carts, wheelbarrows, recycling equipment, and other items which are to be washed outside. It also applies to individuals and independent contractors who may engage in vehicle or equipment washing activities on UVA property.

Designated outdoor wash areas with drains directed to the sanitary sewer include the wash area next to the trash compactor at the John Paul Jones Arena Loading Dock, rooms 138 and 148 inside the tunnel at Scott Stadium, the vehicle wash bay at Facilities Management, and the bus wash bay at Parking and Transportation. Washing operations at these areas are excluded from the procedures below provided that all wash water is directed to the sanitary drain and the pH of the wash water is between 6 – 9 when chemicals are used. If the pH of the wash water is

outside of the listed range, these designated wash areas may not be used and the water must be collected as describe in section 4.2.3.

3.0 Responsibility

3.1 Environmental Resources

Environmental Resources (ER) is available to consult on any washing operations to provide guidance to ways to avoid causing an illicit discharge and may conduct spot inspections for compliance.

3.2 Managers

Managers are expected to convey the requirements of this procedure to their staff and contractors if non-UVA personnel are used for fleet or equipment washing. Managers and supervisors are responsible for ensuring training is conducted with the most recent version of the SOP.

3.3 Personnel Performing the Job

Personnel or individuals performing this work on UVA property, including independent contractors, must follow the correct procedures depending on whether clear water or water including detergents/chemicals will be used. The approved cleaning procedure may vary depending on the substances to be removed, the location of the operation, and the availability of a sanitary sewer in the area of the procedure to be done. Personnel must locate and place all necessary precautionary equipment (drain covers, absorbent mats or pads, wet-dry vacuums, etc.) prior to the start of the washing operation.

4.0 Procedures

At no time will vehicle or equipment washing operations be conducted where it is possible for wash water to enter storm drains. All wash water shall be managed as described in this section.

4.1 Clear tap water – Preferred Option

When clear water will be used and the resulting wastewater is not expected to contain a substance other than water and dirt generated from the item being cleaned, there are two choices for the proper disposal for the wastewater:

4.1.1 The water can be directed onto a grass or vegetated area where it can be absorbed into the soil. No runoff from the area should occur and no runoff should at any time enter a storm drain inlet unless filtered by erosion and sediment controls first.

4.1.2 Follow the procedures described in section 4.2 for containment of wash water with cleaning chemicals.

4.2 Cleaning Chemicals – Secondary Option

4.2.1 The use of cleaning chemicals is strongly discouraged. When chemicals or detergents must be used, a containment area must be set up that captures 100% of the wastewater generated from the site for proper disposal in the sanitary sewer. This wastewater cannot be allowed to drain into stormwater drainage systems or into adjacent soils. SDS's of the cleaning products should be reviewed prior to use.

4.2.2 If washing must occur outside of a designated wash area listed in section 2.0, the resultant wash water must be captured to prevent stormwater pollution. Examples of containment options include but are not limited to using tarps or heavy-duty plastic, storm drain covers, wet-dry vacuums, and absorbent material. Contact ER at storm-water@virginia.edu to discuss these alternative washing options.

4.2.3 Resultant wash water must have a pH between 6-9 to be allowed to be disposed of in the sanitary sewer. In the event a chemical is used with pH outside of this range, one of the following procedures must be followed:

4.2.3.1 Arrangements must be made to collect the wash water to send off site for proper disposal, or

4.2.3.2 The wash water must be collected for on-site adjustment of the pH to approved sanitary discharge range. The following requirements apply for on site adjustment:

4.2.3.2.1 Personnel must have pH test strips or a pH sensor available.

4.2.3.2.2 Common pool chemicals, or common household items such as baking soda or vinegar could also be used to modify the pH range.

4.2.3.2.3 The wash water must be thoroughly mixed throughout the containment to ensure the pH of the entire container is brought within the acceptable range.

4.2.3.2.4 The water should also be filtered, as appropriate, if solids are present.

4.2.3.2.5 The pH of the water must be reviewed by ER prior to each sanitary sewer discharge.

4.3 Individuals Performing Washing on UVA Property

Students and community members are discouraged from performing vehicle or equipment washing on UVA property, including in parking garages and parking lots. In the event these activities take place, proper precautions to prevent stormwater contamination shall be utilized as described in 4.1 and 4.2.

4.4 Independent Contractors Performing Washing on UVA Property

Independent contractors desiring to perform vehicle detailing or other washing related activities on privately owned vehicles located on UVA property must contact Environmental Resources before proceeding with operations. Contractors must demonstrate their

operations will comply with this policy and that they will not cause an illicit discharge. This will include taking proper precautions to prevent stormwater contamination as described in 4.1 and 4.2 and having spill cleanup materials on-hand.

5.0 Review of Procedure/Training

All location and project managers who perform and/or request that these washing operations be performed are responsible for reviewing this procedure with all employees who have these job duties at least once every 24 months. Any project managers who hire contractors to perform these job duties are required to convey the requirements of this procedure to the contractors.

6.0 Regulatory impacts

Illicit discharges such as wash water are prohibited by the University's MS4 permit. This offense is punishable by civil and criminal penalties as illicit discharges constitute a threat to the public health, safety, and welfare, and are deemed public nuisances.

*Printed versions of SOPs with previous review dates are considered current as long as the version number is the same as the current version. Current versions of all SOPs are maintained on the UVA Environmental Resources website.