



**Standard Operating Procedure:  
Vehicle and Equipment Washing**

Date: 12/17/2018\*      Version: 2      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.”<sup>1</sup>

**1.0 Purpose**

The purpose of this procedure is to describe the proper means for washing UVA’s 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. Best Management Practices (BMPs) such as installing wash racks, using commercial car washes which have permits to discharge to sanitary sewers, and using containment devices, can eliminate contaminated wash water discharges to the storm sewer system. Discharge of these contaminants into a storm drain is considered an “Illicit Discharge.” Illicit discharges can result in significant fines from regulatory agencies.

**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. At no time will these items be washed where it is possible for wash water to enter storm drains. All wash water discharge must be directed to the sanitary sewer.

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<sup>1</sup> General Permit No: VAR040073, General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer Systems.

### **3.0 Responsibility**

#### **3.1 Facilities Management Environmental Resources**

Prior to start of the operation, the job must first be reviewed by Environmental Resources (ER) personnel in Facilities Management. ER staff will work with the manager with the goal of finding a reasonable means to keep the project within regulatory requirements. Once ER has reviewed a job, the job may be repeated without additional ER review as long as there are no substantial changes to the job.

#### **3.2 Managers**

Managers must provide ER with a copy of the proposed cleaning plan for review and approval. Include SDS's of the cleaning products proposed. All chemicals or detergents used must be suitable for disposal in the sanitary sewer. Even if detergents or solvents will not be used, the resulting waste water run-off may contain pollutants which must not enter the storm system. Therefore, the project manager or supervisor must contact Environmental Resources for consultation before proceeding with the job. Managers are expected to convey the requirements of this procedure to 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.

For routine operations, once the procedure has been reviewed by ER for its effectiveness and a plan has been agreed upon, building or project managers will be responsible for compliance with that plan for future washing activities. The plan only needs to be brought to ER for additional review if a substantial change to the plan is required. Managers are responsible for ensuring that that future actions by departmental employees or outside contractors will comply with the accepted methods.

#### **3.3 Personnel Performing the Job**

Personnel must follow the correct procedures according to the approved plan, 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**

Designated wash areas must be paved and bermed, sloped, or otherwise contained to direct wash water to the sanitary sewer or to a holding tank. If the area lacks the capability to drain wash water to a sanitary wastewater system, other practices may be effective for the prevention of storm water pollution. Such permissible practices may include portable

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containment using tarps or heavy duty plastic, storm drain covers, wet-dry vacuums, and absorbent material.

### **4.1 Cleaning Plan Approval**

Contact ER to review and approve washing plans before any outdoor washing takes place.

### **4.2 Clear tap water – Primary Option**

When clear water will be used and the resulting waste water is not expected to contain a substance other than water and dirt generated from the item being cleaned, the employee can proceed with washing the item taking the required environmental precautions. An example of this would be washing landscaping carts with leaf debris in them. The resulting waste water cannot be allowed to enter any storm drain inlet. There are two choices for the proper disposal for the waste water:

- 4.2.1 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.
- 4.2.2 Contain the resulting waste water on an impermeable surface or within the existing infrastructure where it can be picked up for proper disposal into the sanitary sewer. A containment pad, berms, and pump system can be used to capture wastewater and divert it to a holding tank for proper disposal. Wet-dry vacuums can also be used for smaller jobs.

### **4.3 Cleaning Chemicals – Secondary Option**

The use of cleaning chemicals is strongly discouraged. When chemicals/detergents must be used, a containment area must be set up that fully encloses the work site and keeps 100% of the waste water within the site for retrieval and proper disposal in the sanitary sewer. These effluents cannot be allowed to drain into stormwater systems or into adjacent soils. An example of this type of job would be the removal of grease from the undercarriage of a vehicle with detergents resulting in waste water containing solvents and greases.

A containment pad, berms, and pump system can be used to capture wastewater and divert it to a holding tank for proper disposal. Wet-dry vacuums can also be used for smaller jobs.

When washing may result in effluents containing heavy metals (such as lead, chromium, cadmium, or mercury), and may need to be disposed of as hazardous waste, contact UVA EHS at 982-4911 for proper disposal of such material.

### **4.4 Documentation**

Staff from ER may conduct spot inspections for compliance with the washing plan.

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### **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 exterior surface wash water are prohibited by the University's MS4 permit and by the City of Charlottesville's Water Protection Ordinance. The University's storm sewer system is directly connected to the City's; therefore, any discharge into UVA's storm system impacts the City's storm sewer system. 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.