Standard Operating Procedure (SOP)

Vehicle and Equipment Washing



Date: 01/20/2023 Version: 1 Review Frequency: Annual

# Reasons for Procedure

Radford University (RU) has a permit to operate a Municipal Separate Storm Sewer System (MS4) issued by the Virginia Department of Environmental Quality. This permit authorizes RU 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. RU’s MS4 Program “shall include procedures developed by the operator to detect, identify, and address non-stormwater discharges to the MS4.”[1](#_bookmark0)

# Purpose

The purpose of this procedure is to describe the proper means for washing Radford University’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 using 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.

# Scope

This procedure applies to those departments at Radford University 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.

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

# Procedures

# Vehicle and Equipment Wash Location

# The primary wash area is located beside the main garage bay. See mechanic personnel for use of the drive up car wash.

# One secondary wash area is located inside the garage bay at the NW wing of the Armstrong Complex Maintenance Building. The garage is approximately 40 feet by 35 feet with two garage doors (12’X12’ and 12’X10’) at the front of the garage and a 12’X12’ garage door at the rear of the garage. There are two, 20’ long trench drains in the floor that drain into a catch basin. The catch basin is pumped and hauled away by a 3rd party contractor annually or as necessary. This area is used for regular vehicle and equipment washing.

# Another secondary wash area is located to the rear of the grounds building. This area is mostly gravel with a border of sparse grass. The area is mostly used for lawn equipment and any vehicles that are too large to fit into the primary garage bay.

* 1. **Other Cleaning Plans**

For other cleaning or wash projects, such as window cleaning or building exterior pressure washing, a plan should be submitted to the Facilities Department and approved prior to the start of the project. Safety Data Sheets of the cleaning products should be provided to the Facilities Department prior to use and maintained on site during washing operations. Whether chemicals and detergents are used or not, wastewater that is produced as a result of a cleaning or a wash project cannot be pumped or drained into the stormwater system at Radford University.

# Clear tap water – Primary 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 waste water:

* + 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.

# 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 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 systems or into adjacent soils.

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 containment using tarps or heavy-duty plastic, storm drain covers, wet-dry vacuums, and absorbent material. 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 Radford University EHS at 540-831-6696 for proper disposal of such material.

# Documentation

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

# Review of Procedure/Training

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