



**Standard Operating Procedures:  
Concrete, Masonry Materials,  
and  
Sawcutting Pollution Control**

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**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 directly to local streams, rivers and lakes untreated. 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**

This SOP has been written to describe best practices for the storage, handling, use, sawcutting and disposal of concrete and other masonry materials. Improper use and handling of these materials could result in exposure to airborne dust or can cause pollutants to leach into the ground or be transported to a storm drain or creek and result in an illicit discharge. The runoff created by exposing these materials to stormwater is contaminated with potential pollutants and can have a pH of approximately 12. This wastewater is toxic to fish, surface waters and soils<sup>1</sup> and therefore may not be discharged to the storm sewer system or local streams.

**2.0 Scope**

These procedures apply to the storage of concrete and masonry materials, handling concrete and masonry washout and wastewater, and handling wastewater from wet sawcutting operations by all University employees and contractors on UVA property.

**3.0 Responsibility**

**3.1 Facilities Management Environmental Resources**

Environmental Resources (ER) is responsible for working with staff to keep this policy up to date and revised as needed.

**3.2 Managers and Supervisors**

Managers and supervisors of projects using concrete and masonry materials and conducting wet sawing operations must provide training to the employees conducting these operations and/or to those who will be handling and washing tools and disposing of unused masonry

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<sup>1</sup> [U.S. Environmental Protection Agency, Stormwater Best Management Practice: Concrete Washout. 2012.](#)

waste. Managers and supervisors are responsible for ensuring training is conducted with the most recent version of this SOP.

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

Personnel and contractors must follow the correct procedures in accordance with this SOP.

## **4.0 Procedures**

### **4.1 Materials Storage and Use**

**4.1.1** All employees and contractors are responsible for the proper temporary storage, waste containment, and disposal of all concrete and masonry related materials. All projects that have chemical handling or generate wastewater must have a spill kit on site.

**4.1.1.1** All projects that are covered by a Construction General Permit and generate concrete washwater must include a concrete waste handling plan in the site Stormwater Pollution Prevention Plans (SWPPP). Concrete washout requirements are further described in section 4.2.3 of this SOP.

**4.1.2** Bags of concrete, lime, plaster, joint compounds, Portland cement, sand, and other soluble or erodible materials must be stored either indoors or be protected from contact with water if stored outside. If stored outside, materials must be covered by plastic sheet, tarp, or other impermeable liner.

**4.1.3** In the event a bag containing a soluble or erodible material is punctured and/or becomes wet, any loose material must be immediately cleaned up and properly disposed of or covered with plastic sheeting to prevent exposure to rainwater.

### **4.2 Waste Generation and Disposal**

**4.2.1** Concrete washout solids and wastewater, runoff from masonry mixing operations, wastewater generated by wet sawcutting, and any other semi solid or liquid waste generating from construction activities must not be allowed to enter storm drains or watercourses. Discharges to sanitary drains must be pre-approved as discussed in bullet 4.2.7. In addition, sediment from these activities must not be allowed to remain on pavement after the operation has ceased. These wastes may not be disposed onto the ground where they can drain or be flushed by rain to the storm system.

#### **4.2.2 Wet Sawcutting, Grinding, Drilling**

**4.2.2.1** All slurry and sediment from sawcutting operations must be confined to the immediate work area by using sand bags, temporary berms, or other diversion structures. Prior to beginning work for exterior operations, locate all nearby storm drain inlets, culverts, and catch basins. Any drains through which slurry discharges could enter a waterway must be protected. All controls must be in place before the start of cutting operations. Controls must be designed to contain the volume of wastewater that will be generated.

**4.2.2.2** When cutting through a roof system or an above-level floor, a bucket or other containment must be in place to catch sediment and wastewater on the floor level below.

**4.2.2.3** For exterior work, efforts must be made to minimize the potential for tracking of slurry off site by cars and pedestrians.

**4.2.2.4** All slurry and sediment from sawcutting operations must be cleaned up as soon as possible. If the work is not being conducted in a high traffic area, material can be allowed to dry within its containment. Residual sediment trapped within the containment area can be swept up or shoveled and disposed of in general trash.

**4.2.2.5** If a shop vacuum is used because the material cannot dry in place, the liquid can be allowed to evaporate and residual solid material can be disposed of in general trash.

#### **4.2.3 Concrete Washout**

Any semi-solid mixed materials, such as concrete or mortar, that has hardened can be disposed of in the dumpster. If unused mixed materials are still wet, they must be contained and ideally should be allowed to harden in an indoor storage location or a covered outdoor area before being disposed of in general trash. Options for containing wet concrete or other semi-solid materials include, but are not limited to: trash cans, plastic kiddie pools, a pit in the ground lined with plastic, constructed wooden box lined with plastic, and plastic lined dumpsters. Any large construction project that is using concrete should have a concrete washout on site.

**4.2.3.1** For sites with a concrete washout, concrete wastewater must be allowed to evaporate in the washout containment. If there is not adequate time to allow the wastewater to evaporate, the wastewater can be removed quickly by spreading water gelling granules evenly across the water. In about five minutes, the water will turn into a gel that can be disposed with the concrete.

**4.2.3.2** Concrete washout containments should be inspected daily and after heavy rains to check for leaks, damage to the lining or sidewalls, and to ensure the container is less than 75% full to avoid overflows. Washout containments must be on level ground to increase storage capacity and minimize risk of overflowing. Any damages to the container should be repaired promptly. Before heavy rains, the washout container's liquid level should be lowered by properly disposing of wastewater, or the container should be covered to avoid an overflow during the rain event.

**4.2.4** Water used for cleaning tools and other equipment that has been used for sawcutting or mixing operations must also be captured in a container to allow the mixture to harden and the liquid to evaporate.

**4.2.5** All outdoor dumpsters must be covered at the end of each day and during rain events.

**4.2.6** If large volumes of residual waste water remain, the Rivanna Water and Sewer Authority should be contacted about disposal of the residual water directly at the Moores Creek Treatment Plant, as the pH of the water is too high to be put directly into the sanitary sewer.

**4.2.7** No material covered under this SOP may be disposed of by being dumped down any sanitary sewer or storm sewer drain. Contact ER for questions regarding proper handling or disposal of these waste materials. All employees and contractors must

receive approval by ER before dumping any material covered under this SOP down any sanitary sewer or storm sewer drain. ER may be reached at [storm-water@virginia.edu](mailto:storm-water@virginia.edu).

#### **5.0 Review of Procedure/Training**

Managers are responsible for reviewing this procedure with all applicable staff at least once every 24 months.

#### **6.0 Regulatory impacts**

Water containing concrete, cement, lime, plaster, joint compounds or other masonry or building related products is considered an illicit discharge if it is allowed to enter the storm sewer system. Any discharge into UVA's storm system also 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.