

# Concrete, paint, stucco and other washout guidance

## Utah Pollutant Discharge Elimination System/Department of Environmental Quality Construction Stormwater Permit requirements

Use this guidance for managing all liquid and solid wastes generated by washout operations (concrete, stucco, paint, form release oils, curing compounds, and other construction materials) related to construction activity on Utah Pollutant Discharge Elimination System/Department of Environmental Quality (UPDES/DEQ) construction stormwater permitted sites. To protect water quality, the UPDES Construction Stormwater Permit requires best management practices (BMPs) for concrete and other washout wastes on construction sites.

### Background

The chutes of concrete mixers and hoppers of concrete pumps are typically rinsed out after delivery of concrete. Tools, hand mixers and wheelbarrows are also washed to prevent hardening. Hardened concrete is relatively benign. However, liquid concrete wash water is a caustic material due to a high pH and it contains hazardous metals such as chromium. These materials can leach into the ground and contaminate groundwater. The high pH can inhibit plant growth and harm aquatic life if the runoff migrates to a lake or stream. Solids from liquid waste that are improperly disposed of can clog storm drainpipes and cause flooding. To comply with the prohibition of discharging any materials other than treated stormwater, there must be a means to prevent the discharge of washout water from the cleanup of stucco, paint, form release oils, curing compounds, and other construction materials.

North Ogden City believes that groundwater and surface water can be protected from liquid concrete and other washout wastes through proper use of BMPs at UPDES/DEQ construction stormwater permitted sites. Installing washout facilities not only prevents pollution but also is a matter of good housekeeping at a construction site.

### Washout at construction sites

Washout facilities are used to contain all concrete and liquid wash water generated by the construction activity. Liquid and solid washout wastes must be contained in a leak-proof container and cannot contact the ground. The washout containers should be covered to prevent exposure to rainfall and potential overflow.

Washout facilities should also be used for cleaning other cementitious (cement-like) construction materials from tools and equipment such as stucco, mortar, plaster, and grout. Depositing the wash water into a container allows evaporation and hardening to occur for easier disposal and to prevent runoff of liquids.

While the Construction Stormwater Permit does not allow concrete chute rinse water to meet the ground, the permit does allow the wasting, the end of the load of plastic structural concrete to meet the ground. After drying,

#### Recover and recycle wash water back into the truck



the remaining solids may be used as a fill material, a component in recycled aggregate or any other commercially useful application.

A concrete washout sign must be installed at each temporary washout facility to inform the site personnel to use the designated facilities. The facility should be located close to the concrete pouring or mixing operation and be easily accessible by concrete mix trucks. It is also important to locate the facility so that spills or overflows will be directed away from storm drain inlets, curb and gutters, water conveyances or surface waters. The facility will need to be inspected regularly for leaks, damage, or potential overflow and receive regular maintenance.

## Washing of applicators and containers used for paint, concrete, or other materials

The permittee must comply with the prohibition of discharges other than stormwater that includes the washout and cleanout of stucco, paint, concrete, form release oils, curing compounds, and other construction materials. The permittee must provide effective containment for all liquid and solid wastes generated by washout operations and provide an effective means to eliminate the discharge of these wastes to the site or receiving waters. To comply, the permittee should evaluate and incorporate methods in the Stormwater Pollution Prevention Plan to prevent these discharges such as:

1. Direct all wash water into a leak-proof container or leak-proof pit. The container or pit must be designed so that no overflows can occur due to inadequate sizing or precipitation
2. Handle washout or cleanout wastes as follows:
  - Do not dump liquid wastes in storm sewers
  - Dispose of liquid wastes properly
  - Remove and dispose of hardened concrete waste consistent with the handling of other construction wastes
3. Locate any washout or cleanout activities as far away as possible from surface waters and stormwater inlets or conveyances, and, to the extent practicable, designate areas to be used for these activities and conduct such activities only in these areas.

Self-contained washout facility



## Best management practices

There are many BMP options for disposal of liquid and solid wastes from washout activities. Many ready mix trucks are now equipped with the ability to collect chute wash water and solids and return them to the concrete plant for recycling or re-use.



Services are also available for hire that deliver a prefabricated washout container to collect concrete chute rinse water as well as wash water from tools and equipment generated on-site. Some services provide the containers

#### Concrete washout service



alone without providing maintenance and disposal of materials, while other companies offer complete service that includes delivery of containers and regular pickups of solid and liquid waste materials. If these options are not available, the site owner and contractor can install a washout containment facility. A leak-proof container can be purchased or constructed onsite using an impermeable plastic or vinyl liner. The operators at the site will need to ensure no rips or tears develop in the liners or the liner will need to be replaced.

Washout facilities should be designed to promote evaporation where feasible to harden the concrete or other washout wastes for disposal as a solid waste. Hardened concrete can also be crushed for reuse as a construction material. However, if stored liquids have not evaporated and the washout is nearing capacity, vacuum and dispose of the waste in an approved manner. The local municipal wastewater treatment plant may be contacted to determine if there are special disposal requirements for concrete or other washout waters at their facility.

If the waste is stored onsite, remove the liquids or cover the washout facility before predicted rainstorms to prevent overflows. Companies that offer prefabricated and watertight washout containers generally offer a vacuum service to remove the liquid material. In case of a spill, immediately contain the spread of the spill, recover spilled materials, clean up the area and properly dispose of materials.

Hardened concrete solids can be removed whole or broken up first depending on the type of equipment available on-site.

## Local requirements

In addition to state requirements, please note that there may be city, county or watershed management organization requirements that may be more stringent than those found in the UPDES/DEQ Construction Stormwater Permit.

## Definitions

**Concrete-chute rinse-off water:** Liquid wastes generated when a ready mix truck operator washes non-structural concrete materials off the chutes used to deliver concrete to a project.

**Concrete equipment and tools rinse-off water:** Liquid wastes generated when a concrete contractor or finisher washes non-structural concrete materials off tools or equipment used to place or finish concrete.

Plastic concrete is that freshly mixed structural concrete which is pliable and capable of being molded or shaped like a lump of modeling clay.

Hardened structural concrete is a strong, non-combustible, durable, abrasion-resistant and practically impermeable material.

## **Additional information**

United States Environmental Protection Agency Concrete Washout Guidelines:

<http://www.epa.gov/npdes/pubs/concretewashout.pdf>.

North Ogden City Storm Water Management Plan

[https://www.northogdencity.com/sites/default/files/fileattachments/utilities/\\_public\\_works/page/1751/noc\\_storm\\_water\\_management\\_plan\\_2021.pdf](https://www.northogdencity.com/sites/default/files/fileattachments/utilities/_public_works/page/1751/noc_storm_water_management_plan_2021.pdf)

