BMPs for Washing and Steam Cleaning Vehicles/ Equipment/ Building Structures **Description of Pollutant Sources:** Vehicles, aircraft, vessels, and transportation, restaurant cooking, carpet cleaning, and industrial equipment, and large buildings may be commercially cleaned with low or high pressure water or steam. This includes frequent "charity" car washes at gas stations and commercial parking lots. The cleaning can include hand washing, scrubbing, sanding, etc. Washwater from cleaning activities can contain oil and grease, suspended solids, heavy metals, soluble organics, soaps, and detergents that can contaminate stormwater.

Pollutant Control Approach: The preferred approach is to cover and/or contain the cleaning activity, or conduct the activity inside a building, to separate the uncontaminated stormwater from the pollutant sources. Washwater must be conveyed to a sanitary sewer after approval by the local sewer authority, temporarily stored before proper disposal, or recycled, with no discharge to the ground, to a storm drain, or to surface water. Washwater may be discharged to the ground after proper treatment in accordance with *Ecology guidance WQ-95-056*, "Vehicle and Equipment Washwater Discharges," June 1995. The quality of any discharge to the ground after proper treatment must comply with Ecology's Ground Water Quality Standards, Chapter 173-200 WAC. Contact the local Ecology Regional Office for an NPDES Permit application for discharge of washwater to surface water or to a storm drain after on-site treatment.

Applicable Structural Source Control BMPs: Conduct vehicle/ equipment washing in one of the following locations:

- At a commercial washing facility in which the washing occurs in an enclosure and drains to the sanitary sewer, or
- In a building constructed specifically for washing of vehicles and equipment, which drains to a sanitary sewer.

Conduct outside washing operation in a designated wash area with the following features:

- In a paved area, constructed as a spill containment pad to prevent the
 run-on of stormwater from adjacent areas. Slope the spill containment
 area so that washwater is collected in a containment pad drain system
 with perimeter drains, trench drains or catchment drains. Size the
 containment pad to extend out a minimum of four feet on all sides of
 the vehicles and/or equipment being washed.
- Convey the washwater to a sump (like a grit separator) and then to a sanitary sewer (if allowed by the local Sewer Authority), or other appropriate wastewater treatment or recycle system. An NPDES permit may be required for any washwater discharge to a storm drain or receiving water after treatment. Contact the Ecology regional office for NPDES Permit requirements.

• The containment sump must have a positive control outlet valve for spill control with live containment volume, and oil/water separation. Size the minimum live storage volume to contain the maximum expected daily washwater flow plus the sludge storage volume below the outlet pipe. The outlet valve will be shut during the washing cycle to collect the washwater in the sump. The valve should remain shut for at least two hours following the washing operation to allow the oil and solids to separate before discharge to a sanitary sewer. (See Ecology Publication WQ-95-056)

Note that the purpose of the valve is to convey only washwater and contaminated stormwater to a treatment system.

- The inlet valve in the discharge pipe should be closed when washing is not occurring, thereby preventing the entry of uncontaminated stormwater into the pretreatment/ treatment system. The stormwater can then drain into the conveyance/discharge system outside of the wash pad (essentially bypasses the washwater treatment/conveyance system). Post signs to inform people of the operation and purpose of the valve. Clean the concrete pad thoroughly until there is no foam or visible sheen in the washwater prior to closing the inlet valve and allowing uncontaminated stormwater to overflow and drain off the pad. (See Figure 2.15)
- Collect the washwater from building structures and convey it to appropriate treatment such as a sanitary sewer system if it contains oils, soaps, or detergents, where feasible. If the washwater does not contain oils, soaps, or detergents then it could drain to soils that have sufficient natural attenuation capacity for dust and sediment.

Recommended Additional BMPs:

- The wash area should be well marked at gas stations, multi-family residences and any other business where non-employees wash vehicles.
- For uncovered wash pads, the positive control outlet valve may be manually operated, but a pneumatic or electric valve system is preferable. The valve may be on a timer circuit where it is opened upon completion of a wash cycle. The timer would then close the valve after the sump or separator is drained (Figure 2.15).
- Use phosphate-free biodegradable detergents when practicable.
- Consider recycling the washwater.

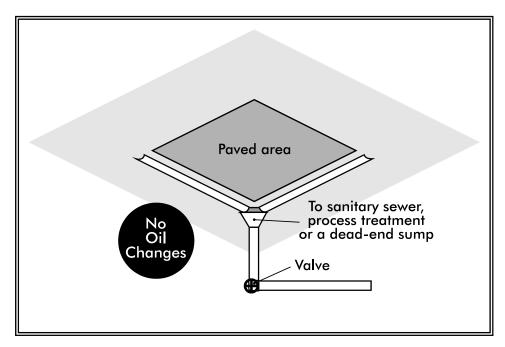


Figure 2.15 - Uncovered Wash Area

 Because soluble/emulsifiable detergents can be used in the wash medium, the selection of soaps and detergents and treatment BMPs should be considered carefully. Oil/water separators are ineffective in removing emulsified or water soluble detergents.

Exceptions

- At gas stations (for charity car washes) or commercial parking lots, where it is not possible to discharge the washwater to a sanitary sewer, a temporary plug or a temporary sump pump can be used at the storm drain to collect the washwater for off-site disposal such as to a nearby sanitary sewer.
- New and used car dealerships may wash vehicles in the parking stalls
 as long as a temporary plug system is used to collect the washwater for
 disposal as stated above, or an approved treatment system for the
 washwater is in place.

At industrial sites contact the local Ecology Regional Office for NPDES Permit requirements even if soaps, detergents, and/or other chemical cleaners are not used in washing trucks.