

If you have any questions, please call:

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VEHICLE WASHWATER: KEEPING IT OUT OF OUR WATERS

MD Department of the Environment
A Publication of the MDE Groundwater Permits Division
September 2004

Martin O'Malley
Governor



Anthony G. Brown
Lt. Governor



No engine washing!

Best Management Practices

- ❖ Label storm drains on your property, **"Storm Drain-No Dumping"**.
- ❖ Operators whose vehicles accumulate high concentrations of road salt are encouraged to discharge washwater to a POTW (Publicly Owned Treatment Works). Contact the local municipality for permission before discharging washwater. If the local municipality does not allow this, reduce the amount of chloride in this washwater by limiting the number of vehicles and frequency of washing at your site.
- ❖ Employee training can be vital in prevention of vehicle washwater discharge to stormwater drains and carwash wells.
- ❖ Mobile washers must use an impervious surface and use a portable wash pit, vacuum recovery unit, or similar device for washwater collection. **The washwater should leave with them.**

"How could the use of hot or soapy water to wash our vehicles really do anything bad to our groundwater? "Is this just another regulation being handed down from yet another government agency?"

Vehicle washwater can impact surface waters and underground sources of drinking water, and can even destroy organisms necessary for proper functioning of septic systems. This washwater can also percolate through the soil and enter an aquifer, which supplies drinking water to half of Maryland's residents.

Washwater management by sanitary sewer treatment, storage in a holding tank for later offsite treatment, or onsite discharge under the requirements and guidance of a discharge permit, all prevent contaminated vehicle wastewater from entering stormwater drains, ditches, creeks or the ground **untreated**. These small water inlets eventually empty into our bays and oceans.





Best Management Practices

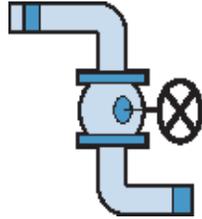
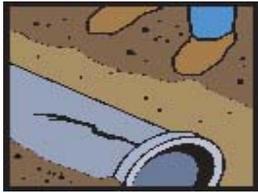
- ❖ Wash vehicles in a dedicated wash bay on an impermeable surface, (concrete or plastic). The washwater must be collected, treated, and recycled, **away from any storm drains**.
- ❖ A floor drain in a dedicated wash bay may need treatment, such as an oil/water separator, in which oil and grease float to the tank top. Petroleum can then be skimmed off, collected and disposed of properly. Absorbent socks or pads can be used to absorb petroleum from water. Both of these devices need to be serviced or replaced periodically.
- ❖ If detergents are absolutely necessary for successful operation of your facility, use only phosphate-free detergents.
- ❖ Wash vehicle/equipment **exteriors only**. Washing engines or undercarriages may release harmful degreasers or solvents. Use water-based degreasers, only if necessary, that can biodegrade in the sewer system.
- ❖ Use "dry" washing and detailing techniques and kitty litter to absorb oil spills.
- ❖ If unable to dry-clean, use mop & bucket or high pressure, low-flow nozzle on wash bay floor.



What Comes Off Our Vehicles?

Vehicle wash water contains oil, grease, metal (paint chips), brake dust, rust, detergents, cleaners, road salts and other chemicals that can contaminate underground sources of drinking water. Soaps can add ammonia, phenols, dyes and acids to the mix. **All soaps, even those labeled "Biodegradable", contain surfactants, which enable the cleaner to rinse off easily with water.** Surfactants can be detrimental to surface waters because even biodegradable surfactants reduce the dissolved oxygen concentration in the surface water. These surfactants can also destroy the external mucous layers of fish. In addition, soaps can lower the surface tension of the water, allowing pesticides and phenols to be more easily absorbed by fish. As a result, aquatic species cannot reproduce and populations die even at extremely low concentrations of detergent. A major reason for washing vehicles/equipment in the winter is to remove road salt. Besides being harsh on cars, road salt can run off to streams and lakes and, in some cases, contaminate wells. A mixture of sand and salt can clog stormwater inlets. Chloride from road salt can also be toxic to aquatic life.





Treatment & Disposal Options

1. If possible, discharge vehicle wastewater through a floor drain connected to the sanitary sewer. First, verify that the floor drain is not a storm drain and check with your local municipality to see if pretreatment, such as an oil/water separator, is required.
2. Discharge the wastewater to a holding tank. Periodic removal by a certified hauler is required.
3. Permanently close any floor drains and practice pollution prevention practices that will result in zero discharge to groundwater. Wash vehicles off-site at a commercial car wash with an approved disposal system.
4. Some large facilities are investing in car wash closed-loop recycling systems. Recycling rates of 75-80% of washwater can be achieved.
5. If the discharge is to an on-site disposal system, such as a seepage pit or drainfield, onto the ground, or to surface waters, you must apply to MDE for a Ground or Surface Water Discharge Permit. Permits involve periodic sampling and analysis.

The Maryland Department of the Environment regulates vehicle washing done by industrial and commercial facilities. We do not currently regulate residential car washing. Discharge permits are issued if business operations or processes introduce pollutants into state waters. A discharge permit has requirements, including wastewater testing, to ensure that what is discharged does not contaminate state waters.

