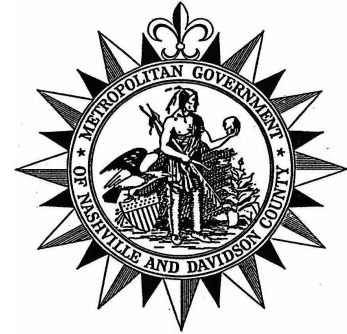
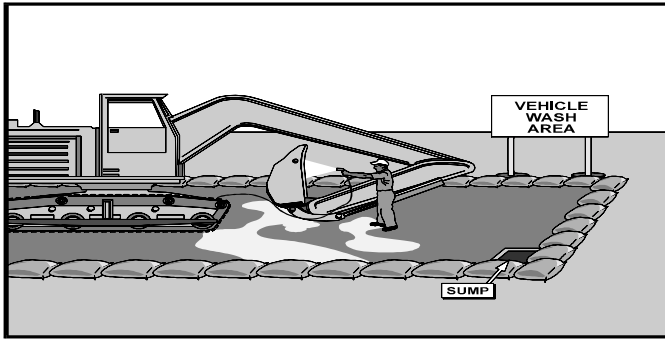


ACTIVITY: Vehicle and Equipment Washing and Cleaning

ICP – 03



Targeted Constituents

● Significant Benefit ▸ Partial Benefit ○ Low or Unknown Benefit

● Sediment	● Heavy Metals	○ Floatable Materials	● Oxygen Demanding Substances
● Nutrients	● Toxic Materials	● Oil & Grease	○ Bacteria & Viruses
		○ Maintenance	○ Construction Wastes

Implementation Requirements

● High ▸ Medium ○ Low

▸ Capital Costs	○ O & M Costs	○ Maintenance	▸ Training
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Description

Prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment washing and steam cleaning. This practice is designed to address permanent washing and cleaning operations. This management practice is likely to create a significant reduction in sediment, nutrients, heavy metals, toxic materials, and oil and grease. For discussion of on-site or temporary washing and cleaning, see CP-12.

Approach

- Use designated wash areas, preferably covered to prevent contact with stormwater and bermed with a continuous berm, double layered straw or sand bag barrier, or diversion swale to contain wash water.
- Discharge wash water to sanitary sewer, after contacting local sewer authority to find out if pretreatment (oil/water separators or other means) is required.
- Educate employees on pollution prevention measures including review of the Spill Prevention Control and Countermeasures (SPCC) plan.
- When cleaning vehicles/equipment with water:
 - Use as little water as possible. High pressure sprayers may use less water than a hose, and should be considered.
 - Use positive shutoff valve to minimize water usage.
- Consider filtering and recycling wash water.
- For a quick reference on disposal alternatives for specific wastes see Table CP-15-1 in the Employee/Subcontractor Training BMP fact sheet.
- When the vehicle/equipment washing/cleaning operation cannot be located within a structure or building equipped with sanitary sewer facilities, the outside cleaning area should have the following characteristics:

- Perimeter diversion swale or containment berm or barrier.
- Located away from storm drain inlets, drainage facilities, or watercourses,
- Paved with concrete or asphalt, or stabilized with an aggregate base,
- Bermed to contain wash waters and to prevent run-on and runoff,
- Configure wash area with a sump to allow collection and disposal of wash water,
- Discharge wash water to a sanitary or process waste sewer (where permitted), or to a dead end sump. Wash waters should not be discharged to storm drains or watercourses,
- Sloped for wash water collection to swale and/or diverted to sump.
- Discharge pipe should have a positive control valve that allows switching between the storm drain and sanitary or process sewer,
- Clearly designated, and
- Equipped with media infiltration or oil/water separator (see PTP-06 Media Filtration or PTP-07 Oil/Water Separators and Water Quality Inlets).

Maintenance

- Inspect berms for necessary repair and patching weekly.
- Inspection and maintenance of sumps, oil/water separators, and on-site treatment/recycling units.

Limitations

- Steam cleaning can generate significant pollutant concentrations requiring permitting, monitoring, pretreatment, and inspections. The measures outlined in this fact sheet are insufficient to address all the environmental impacts and compliance issues related to steam cleaning.
- Do not use solvents to clean vehicles/equipment on site.
- Do not permit steam cleaning on site.

Additional Information

Washing vehicles and equipment outdoors or in areas where wash water flows onto the ground can pollute stormwater. If your facility washes or steam cleans a large number of vehicles or pieces of equipment in an outdoor or uncovered facility, consider contracting out this work to a commercial business. These businesses are better equipped to handle and dispose of the wash waters properly. Contracting out this work can also be economical by eliminating the need for a separate washing/cleaning operation at your facility.

Primary References

California Storm Water Best Management Practice Handbooks, Industrial Handbook, CDM et.al. for the California SWQTF, 1993.

Subordinate References

- Best Management Practices for Automotive-Related Industries*, Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.
- Best Management Practices for Industrial Storm Water Pollution Control*, Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.
- Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans, and Best Management Practices*, EPA 832OR-92-006, USEPA, 1992.
- Water Quality Best Management Practices Manual*, City of Seattle, 1989.