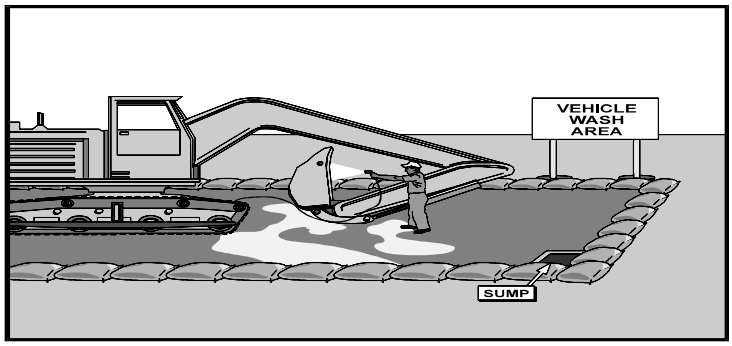
ACTIVITY: Vehicle and Equipment Cleaning

CP – 12



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	○ Construction Wastes

Implementation Requirements				
● High	◗ Medium	○ Low		
◗ Capital Costs	○ O & M Costs	◗ Maintenance	○ Suitability for Slopes >5%	○ Training

Description

Prevent or reduce the discharge of pollutants to stormwater from vehicle and equipment cleaning by using off-site facilities, washing in designated, contained areas only, eliminating discharges to the storm drain by infiltrating or recycling the wash water, and training employees and subcontractors. This management practice is likely to cause a partial reduction in toxic materials and oil and grease.

Approach

- Use off-site commercial washing businesses as much as possible except for removing mud and dirt off equipment while on site. Washing vehicles and equipment outdoors or in areas where wash water flows onto paved surfaces or into drainage pathways can pollute stormwater. If you wash a large number of vehicles or pieces of equipment, consider conducting this work at an off-site commercial business. Nashville and Davidson County are also bound by permits from TDEC to discourage this practice with actions up to fines and other legal action.

- Off-site commercial businesses are better equipped to handle and dispose of the wash waters properly. Performing this work off-site can also be economical by eliminating the need for a separate washing operation at your site.

- If washing must occur on-site, use designated, bermed wash areas to prevent wash water entering stormwater infrastructure, creeks, rivers, and other water bodies. The wash area can be sloped for wash water collection and subsequent infiltration into the ground.

- Use phosphate-free, biodegradable soaps.

- Educate employees and subcontractors on pollution prevention measures about the importance of this practice.

- Do not permit steam cleaning on-site. Steam cleaning can generate significant

pollutant concentrations.

- For a quick reference on disposal alternatives for specific wastes, see Table CP-21-1.
- Clean all vehicles/equipment off-site that regularly enter and leave the construction site.
- When vehicle/equipment washing/cleaning must occur on-site, and the operation cannot be located within a structure or building equipped with sanitary sewer facilities, the outside cleaning area shall have the following characteristics:
  - Located away from storm drain inlets, drainage facilities, or watercourses;
  - Paved with concrete or asphalt, or stabilized with an aggregate base;
  - Configured 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 shall not be discharged to storm drains or watercourses.
- When cleaning vehicles/equipment with water:
  - Use as little water as possible to avoid having to install erosion and sediment controls for the wash area. High-pressure sprayers may use less water than a hose, and should be considered.
  - Use positive shutoff valve to minimize water usage.
- DO NOT use solvents to clean vehicles/equipment on site.

Requirements

- Costs (Capital, O&M)
  - All of the above are low cost measures.

Maintenance

- Minimal, some berm repair may be necessary, inspect weekly.
- Service sump regularly.

Limitations/ Additional Information

- Even phosphate-free, biodegradable soaps have been shown to be toxic to fish before the soap degrades.
- Sending vehicles/equipment off-site should be done in conjunction with a stabilized construction entrance and mud tracking removal.
- The local sewer authority may require pretreatment and monitoring of wash water discharges to the sanitary sewer and should be consulted first.

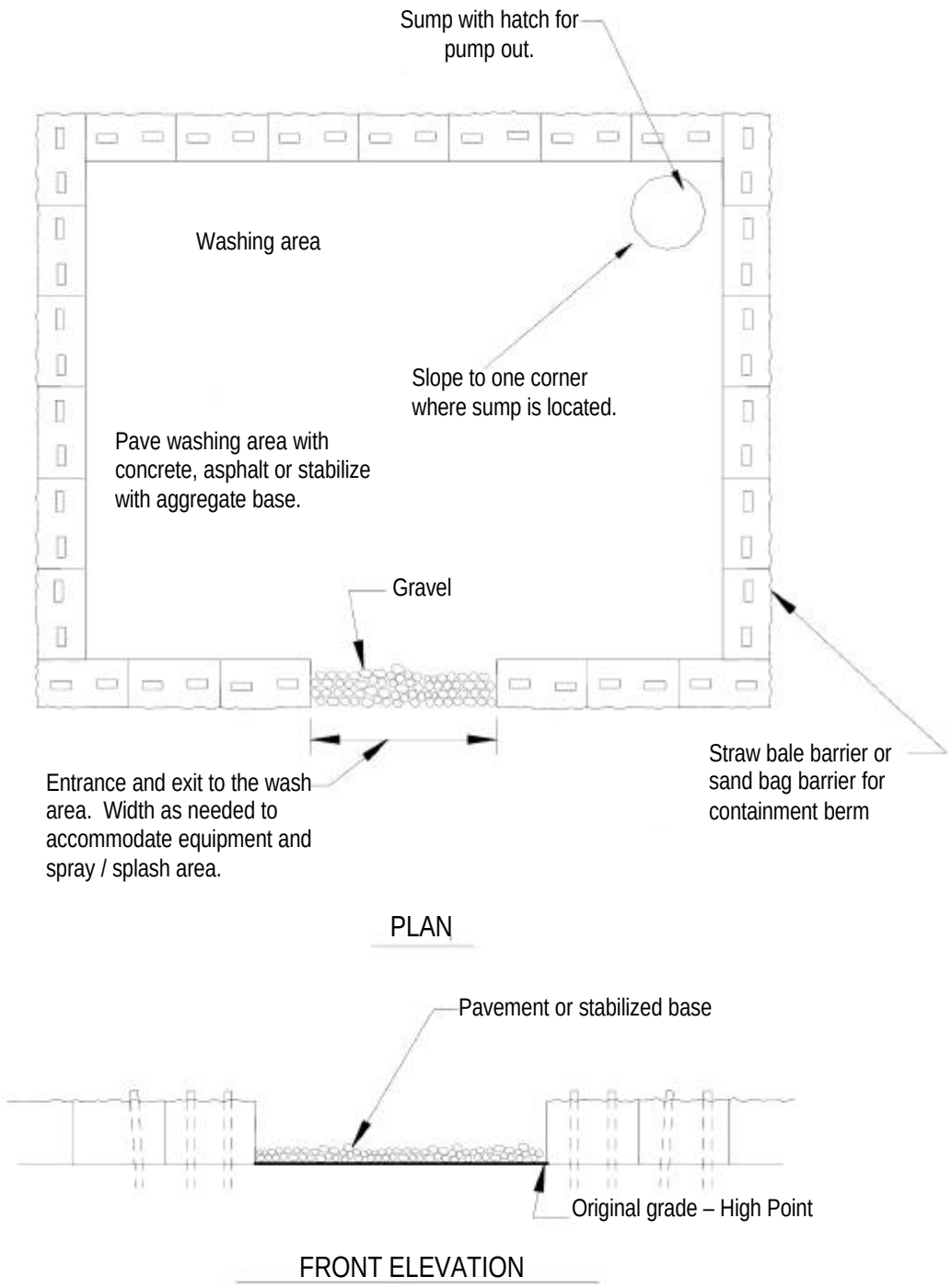
Primary References

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

Caltrans Storm Water Quality Handbooks, CDM et.al. for the California Department of Transportation, 1997.

Subordinate References

Swisher, R.D., 1987, *Surfactant Biodegradation*, Marcel Decker Corporation.



TYPICAL VEHICLE & EQUIPMENT CLEANING AREA

NOT TO SCALE

Figure CP-12-1
Typical Vehicle & Equipment Cleaning Area