

Approved as Functionally Equivalent

The Washington State Department of Ecology (Ecology) has approved products as able to meet the requirements of this BMP. The products did not pass through the Technology Assessment Protocol–Ecology (TAPE) process. Local jurisdictions may choose not to accept these products or may require additional testing prior to consideration for local use. Products that Ecology has approved as functionally equivalent are available for review on Ecology’s Emerging Stormwater Treatment Technologies (TAPE) web page at the following address:

<https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Stormwater-permittee-guidance-resources/Emerging-stormwater-treatment-technologies>

BMP C106E: Wheel Wash

Purpose

Wheel washes reduce the amount of sediment transported onto paved roads by washing dirt from the wheels of motor vehicles prior to the motor vehicles leaving the construction site.

Conditions of Use

- Use a wheel wash when [BMP C105E: Stabilized Construction Access](#) is not preventing sediment from being tracked off-site.
- Wheel washing is generally an effective BMP when installed with careful attention to topography. For example, a wheel wash can be detrimental if installed at the top of a slope abutting a right-of-way where the water from the dripping truck can run unimpeded into the street.
- Pressure washing combined with an adequately sized and surfaced pad with direct drainage to a large 10- by 10-foot sump can be very effective.
- Wheel wash wastewater is process water and must be discharged to a separate on-site treatment system that prevents discharge to a receiving water or to the sanitary sewer with local sewer district approval.
- Wheel washes may use closed-loop recirculation systems to conserve water use.
- Wheel wash wastewater shall not include wastewater from concrete washout areas.
- When practical, the wheel wash should be placed in sequence with [BMP C105E: Stabilized Construction Access](#). Locate the wheel wash such that vehicles exiting the wheel wash will enter directly onto the stabilized construction entrance/exit. To achieve this, the entrance/exit may need to be extended beyond the standard installation to meet the exit of the wheel wash.

Design and Installation Specifications

- Suggested details are shown in [Figure 7.4: Wheel Wash](#). The local permitting authority may allow other designs. A minimum of 6 inches of asphalt treated base (ATB) over crushed base material or 8 inches over a good subgrade is recommended to pave the wheel wash.
- Use a low-clearance truck to test the wheel wash before paving. Either a belly dump or

lowboy will work well to test clearance.

- Keep the water level from 12 to 14 inches deep to avoid damage to truck hubs and filling the truck tongues with water.
- Midpoint spray nozzles are needed only in extremely muddy conditions.
- Wheel wash systems should be designed with a small grade change, 6 to 12 inches for a 10-foot-wide pond, to allow sediment to flow to the low side of the pond to help prevent resuspension of sediment. A drainpipe with a 2- to 3-foot riser should be installed on the low side of the pond to allow easy cleaning and refilling. Polymers may be used to promote coagulation and flocculation in a closed-loop system. Polyacrylamide (PAM) added to the wheel washwater at a rate of 0.25 to 0.5 pounds per 1,000 gallons of water increases effectiveness and reduces cleanup time. If PAM is already being used for dust or erosion control and is being applied by a water truck, the same truck can be used to change the washwater.

Maintenance Standards

- The wheel wash should start out each day with fresh water.
- The washwater for the wheel wash should be changed a minimum of once per day. On large earthwork jobs where more than 10 to 20 trucks per hour are expected, the wheel washwater will need to be changed more often.

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Figure 7.4: Wheel Wash

