

Description	A typical vehicle/equipment washing and maintenance system is a lined, depressed area that collects the water used in washing off the trucks, cars, or other construction vehicles/equipment, and drains the wastewater into a collection or treatment system.								
Applications	A wash-down area is used on projects where the soil is silty or heavy in clay, and has the likelihood of transporting dirt and mud off site. Projects that will take place over the course of the rainy season and areas where water is expected to be encountered (high ground water table) in the normal course of the project should be considered as candidates.								
Limitations	<table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">Drainage area - N/A</td> <td style="width: 50%;">Maximum slope – 5%</td> </tr> <tr> <td>Minimum bedrock depth – N/A</td> <td>Minimum water table - N/A</td> </tr> <tr> <td>NRCS soil type - N/A</td> <td>Freeze/thaw – N/A</td> </tr> <tr> <td>Drainage/flood control – no</td> <td></td> </tr> </table> <p>Washing vehicles generates liquid, semi-solid, and solid wastes. These wastes should be contained on-site or treated to prevent pollution of surface and ground water.</p> <p><b>Off-site:</b> Treatment is required for all discharges to waters of the state since it could be contaminated with degreasers, hydrofluoric acid, hydrochloric acid, nitric acid, phosphoric acid, oil, hydraulic fluids, lubrication, and engine cleaning solvents. Waters of the state include all surface waters (canals, rivers, ponds, streams and lakes), and all ground water. Contact the local permitting authority to determine proper treatment and disposal methods.</p> <p><b>On-site:</b> If wash-water discharge to a sediment pond is the system of choice, sufficient acreage is required for the operation.</p>	Drainage area - N/A	Maximum slope – 5%	Minimum bedrock depth – N/A	Minimum water table - N/A	NRCS soil type - N/A	Freeze/thaw – N/A	Drainage/flood control – no	
Drainage area - N/A	Maximum slope – 5%								
Minimum bedrock depth – N/A	Minimum water table - N/A								
NRCS soil type - N/A	Freeze/thaw – N/A								
Drainage/flood control – no									
Targeted Pollutants	<p>Sediment Phosphorus Trace Metals Hydrocarbons</p>								
Design Parameters	<ul style="list-style-type: none"> <li>▪ Detergents used on site in Idaho for vehicle washing should not contain phosphates. Phosphates are a plant nutrient that can cause excessive growth of aquatic plants when discharged into a stream or lake.</li> <li>▪ A stabilized construction entrance (BMP 5), used to reduce off-site tracking of mud, dirt and rocks, should be installed at the vehicle wash/maintenance area. Washing and maintenance should be conducted in disturbed areas (staging areas) but should not be conducted in a cut or fill area until grading has been performed or where there will be a high volume of construction traffic. Highly erodible soils or frequently wet areas should be avoided.</li> </ul>								

**Off-site discharge options:**

- Lagoon: Pond-like structure that works on the principle of evaporation is easy to install and requires low maintenance. There is a need to be aware of safety issues (fencing the area from the public).
- Land application system: Large land area is required. This alternative is the lowest in out-of-pocket cost.
- Filtering and recycling of wash water: A good option for conservation measures. Initially, expense would be high. Monitoring of the operation would be more intensive.
- Municipal wastewater treatment plant: This option is available only in areas where a municipal wastewater treatment plant exists and the operation is capable of handling the load. This is the best option for limiting liability for larger construction projects.

**Construction Guidelines**

Designate an area that can be graded and bermed. The design should collect wastewater for evaporation or direct it to an off-site containment or treatment system. A lined pond should be used where pollutants such as oil, grease, fuels, etc., may reach the high-ground water table.

**Maintenance**

Check that the system controls are working as designed. Clean up sediments that have been tracked by vehicles onto nearby roadways.