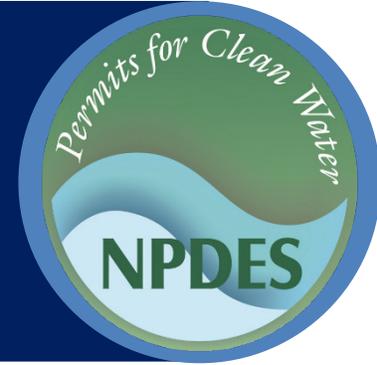




Stormwater Best Management Practice

Vehicle Maintenance and Washing Areas at Construction Sites



Minimum Measure: Construction Site Stormwater Runoff Control
Subcategory: Good Housekeeping/Materials Management

Description

Ideally, vehicle maintenance and washing should occur in garages and wash facilities, not on active construction sites. However, if these activities must occur on-site, operators should follow appropriate best practices to prevent untreated wash water containing soaps, solvents, detergents, nutrients, sediment, grease or hazardous wastes from discharging into storm drains, surface waters or groundwater. For information on washing down truck tires, see the [Construction Entrances](#) fact sheet.

Applicability

Vehicle maintenance and washing best practices apply to all construction sites where these activities occur. For municipal separate storm sewer system permittees, municipalities consider untreated wash water to be an illicit discharge. Construction staff should therefore direct the wash water to a sanitary sewer or treat it on-site before discharge.

Implementation

Construction site operators should prevent vehicle and equipment wash water and water from maintenance activities from commingling with stormwater or discharging to the stormwater system. Fuels, oils or other pollutants from vehicle and equipment operation and maintenance, as well as soaps, solvents or detergents from vehicle and equipment washing, are all prohibited discharges from construction sites (40 CFR 450). Helpful practices include (U.S. EPA, 2007; MPCA, 2019):

- *Inspecting construction vehicles daily and repairing any leaks immediately.* The most effective method for reducing costs and environmental concerns associated with vehicle maintenance is to prevent leaks and spills from occurring. Regularly maintain and inspect vehicles to remedy issues with leaking vehicle fluids. Place drip pans and spill pads beneath stored vehicles/equipment as a



A truck having its tires washed before leaving a construction site.

preventative containment practice in the event that a leak occurs. Perform vehicle maintenance activities in a covered, designated area with impervious surfaces.

- *Disposing of all used oil, antifreeze, solvents and other automotive-related chemicals and materials (e.g., oily rags) according to manufacturer instructions.* These wastes require special handling and disposal. Designated facilities can recycle used oil, antifreeze and some solvents, but construction staff should dispose of other chemicals at a hazardous waste disposal site. Local government agencies can help identify such facilities. Store raw and used hazardous chemicals, oils, and other products in a covered area with secondary containment. Should any material spills occur, sites should implement the procedures outlined in their [site-specific spill prevention and spill cleanup plans](#). Make spill kits readily available and strategically place them throughout the site.
- *Designating special paved areas for vehicle and equipment washing.* Vehicle and equipment washing should occur in designated areas with overhead coverage and containment. Clearly mark all washing

areas and inform workers that all washing should occur in this area. Do not perform other activities, such as vehicle repairs, in the wash area. Because water alone can adequately remove most dirt, use high-pressure water spray without detergents at vehicle washing areas. If you need to use detergents, avoid phosphate- or organic-based cleaners to reduce nutrient enrichment and biological oxygen demand in wash water. Use only biodegradable products that are free of halogenated solvents. Direct wash water from washing activities to treatment facilities, haul the wash water off-site for proper disposal or direct the water to the sanitary sewer (if applicable). Use blowers or vacuums instead of water to remove dry materials from vehicles, if possible.

Limitations

The techniques and practices mentioned above effectively reduce discharges of untreated automotive wastes and wash water to receiving waters. Their effectiveness highly depends on personnel training and level of commitment to following procedures. Limitations for these practices primarily pertain to cost, as maintenance of vehicle wash areas is minimal and may involve repairing berms and disposing of collected vehicle wash water. Vehicle maintenance and washing area limitations can include disposal costs for wash water (fees that hazardous waste disposal facilities charge); construction costs for an enclosed maintenance area; connection to a sanitary sewer (if applicable); and labor costs for hazardous waste storage, handling, and disposal. Depending on the volume of wash water construction staff generated and the type of detergents they use, vehicle wash areas may also require permits.

Additional Information

Additional information on related practices and the Phase II MS4 program can be found at EPA's National Menu of Best Management Practices (BMPs) for Stormwater website

References

Minnesota Pollution Control Agency (MPCA). (2019). MS4 fact sheet—Vehicle washing.

U.S. Environmental Protection Agency (U.S. EPA). (2007). *Developing your stormwater pollution prevention plan: A guide for construction sites* (EPA 833-R-06-004).

Disclaimer

This fact sheet is intended to be used for informational purposes only. These examples and references are not intended to be comprehensive and do not preclude the use of other technically sound practices. State or local requirements may apply.