3.4.5 Vehicle Maintenance

Source: TDEC

Definition and Purpose

Vehicle maintenance includes procedures and practices to reduce the discharge of pollutants to storm drain systems or to watercourses as a result of vehicle wear and tear. Like other good housekeeping practices, this measure is intended to eliminate non-stormwater discharges and non-sediment pollutants.

Appropriate Applications

Procedures for vehicle maintenance are applicable to projects where heavy equipment and vehicles are maintained on-site.

Limitations and Maintenance

Vehicles and equipment require daily inspections. Leaks should be repaired immediately, and problematic vehicle(s) or equipment should be removed from the project site. Keep ample supplies of spill cleanup materials on-site.

Planning and Design Criteria

Vehicle and equipment maintenance on construction sites can be a significant source of stormwater pollution due to potential spills and leaks of engine fluids, lubricants, and other hazardous materials. While offsite maintenance is preferred (City of Albany, 2024), it is not always practical. When maintenance must occur onsite, proper planning and control measures are necessary to minimize environmental impacts. Confine maintenance activities

to designated areas that are level, located at least 50 feet away from drainage facilities and watercourses, and protected from stormwater run-on and runoff. Additionally, provide cover to maintenance areas where feasible and equip maintenance areas with secondary containment to capture spills and leaks. Use drip pans or absorbent pads under vehicles and equipment during maintenance to catch fluids. For long-term projects, consider constructing permanent or portable covers over maintenance areas. Educate all personnel involved in vehicle and equipment maintenance on proper disposal procedures and spill cleanup protocols.

Develop a comprehensive spill prevention and response plan and provide it to all maintenance personnel. Absorbent spill cleanup materials and spill kits must be readily accessible at maintenance areas, fueling stations, and on fueling trucks. Clean small spills using absorbent materials (i.e., dry methods) instead of hosing down or burying spills. Promptly and properly dispose of all contaminated absorbent materials.

Recycle or properly dispose of all used vehicle fluids, including oil, antifreeze, hydraulic fluids, and cleaning solutions, to prevent contamination of soil and water. Separate waste such as oil filters, batteries, and tires for proper disposal or recycling. Under no circumstances should used oil be placed in dumpsters, poured onto the ground, or into storm drains. Similarly, fuel and lubricant disposal must comply with environmental regulations to prevent contamination.

Signs of leaks, such as soil staining under parked equipment, should be investigated and remediated promptly. Inspect incoming vehicles and equipment, including delivery trucks and subcontractor vehicles, for leaks before being allowed on-site. Vehicles and equipment should be kept clean to prevent excessive buildup of oil and grease, reducing the risk of pollutant runoff.

Example Application

No formal design or quantities are required for this measure and therefore are not presented here.

References

CalTans. (2017). *Construction Site Best Management Practices (BMP) Manual*.
City of Albany. (2024). *Erosion Prevention and Sediment Control Manual.*