

Environmentally Responsible Best Management Practices

9 Vehicle and Equipment Maintenance

Since many industrial facilities maintain vehicles and equipment, stormwater can easily become contaminated with solvents, oil, grease, waste automotive fluids, acids and caustic wastes. These substances are harmful to aquatic life, and measures should be implemented to prevent stormwater contamination. Perform all maintenance activities indoors. If this is not possible, order a covered area.

The following practices are recommended:

- ① Clean vehicles and equipment without using solvents.
 - This will save on disposal costs, since many solvents must be disposed of as hazardous wastes.
 - Parts can be scraped with a wire brush or placed in a bake oven for cleaning.
 - If solvents are used, designate a centralized cleaning station, with secondary containment to keep solvents and residues in one location.
 - Use drip pans, drain boards and drying racks to direct drips and spills into a fluid tank for reuse.
- ② Use non-toxic or less toxic solvents and cleaners.
 - Examples include using non-caustic detergents for parts cleaning and using detergent-based and water-based cleaning systems instead of organic solvent degreasers.
 - Replace chlorinated organic solvents, such as 1,1,1-trichloroethane or methylene chloride, with non-chlorinated solvents, such as kerosene or mineral spirits.
 - Use cleaners that can be recycled.
 - Cleaner and solvent suppliers, and industry trade journals, can provide information regarding waste minimization for these activities.

③ Do not use running water to clean the work area. Contaminated water could enter the storm drain system and, ultimately, surface water bodies.

- Rags or spill pads can be used for cleaning small spills, and a damp mop can be used for general cleaning.
 - Contact the City of Portland's Source Control Division at 503-823-5320 before discharging mop water to the sanitary sewer.
 - Absorbent materials such as kitty litter, sawdust, spill pads, and spill booms may be used for containing spills.
 - Dispose of cleanup materials properly.
- ④ Place a drip pan underneath vehicles and equipment when performing maintenance such as removing parts, unscrewing filters, or unclipping hoses.
 - ⑤ Do not pour used or leftover cleaning solutions, solvents, and automotive fluids into storm drain inlets or ditches, floor drains, sinks or into the sanitary sewer, or to the ground due to the toxicity of these substances.
 - Any floor drains in the maintenance area connected to the storm or sanitary sewer should be plugged.
 - Post signs at sinks and other potential discharge points to either storm or sanitary sewers to educate employees not to dispose of wastes improperly.
 - Contact the distributor of leftover materials to see if unused portions can be returned.



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continued

Contact the Environmental Services Source Control Division 503-823-5320 for more information.

- In the future, purchase only the material needed; do not stockpile.
- ⑥ Place used oil filters in funnels over waste oil recycling or disposal collection tank to drain excess oil. Waste oil recycling containers should be covered and have secondary containment. Crush and recycle oil filters.
- ⑦ When vehicles are driven to the site for repair, examine them for leaks.
 - Place drip pans under vehicles to collect fluids for recycling or proper disposal.
 - Promptly transfer the used fluids to the proper waste or recycling drums.
 - Open containers, including full drip pans, should not be left lying around the site where they could collect stormwater.
 - Designate a central area on the site for draining and replacing motor oil, coolant and other fluids. This area should be easily cleaned of spills and leaks.
 - Stormwater runoff from this area should not be allowed to drain into the storm drainage system. Contact the Source Control Division at 503-823-5320 for discharge to sanitary sewer.
- ⑧ Build a shed or roof over areas used for parking equipment or vehicles that need repair or are retained for parts supply.
- ⑨ Store all **cracked** batteries in a non-leaking secondary container to retain acid leaks.

⑩ Consider recycling used materials.

- Separate wastes to reduce treatment costs and make recycling efforts easier.
- For example, keep chlorinated solvents separate from non-chlorinated solvents, separate hazardous and non-hazardous waste, and do not mix used oil and solvents.
- Contact Metro Recycling Information, 503-234-3000, for recycling locations.

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| recyclable:
✓ degreasers
✓ oil and oil filters
✓ antifreeze
✓ cleaning solutions
✓ vehicle batteries
✓ hydraulic fluid |
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⑪ Discuss pollution prevention measures with employees and seek their suggestions on waste reduction. Consider incentives for employees, such as a reward program, to promote pollution prevention.

⑫ When equipment maintenance activities are performed on site by a contracted mobile service their activities should be supervised to ensure there are no stormwater issues.

⑬ Maintain an Emergency Spill Response and Cleanup Plan. Directions are outlined in BMP 4.