IC20. VEHICLE AND EQUIPMENT WASHING AND STEAM CLEANING

Best Management Practices (BMPs)

A BMP is a technique, measure or structural control that is used for a given set of conditions to improve the quality of the stormwater runoff in a cost effective manner[1]. The minimum required BMPs for this activity are outlined in the box to the right. Implementation of pollution prevention/good housekeeping measures may reduce or eliminate the need to implement other more costly or complicated procedures. Proper employee training is key to the success of BMP implementation.

MINIMUM BEST MANAGEMENT PRACTICES

Pollution Prevention/Good Housekeeping

- Consider using off-site commercial washing and/or steam cleaning businesses, if feasible.
- Use on-site commercial washing and/or steam cleaning businesses capable of disposing of wastewater off-site.
- Designate an impervious indoor or outdoor area to be used solely for vehicle and equipment washing/steam cleaning.
- Clearly mark the vehicle and equipment washing/steam cleaning area.
- If the area is outdoors, cover the wash area when not in use to prevent contact with rainwater.
- Provide trash containers in wash area and empty on a regular basis.
- Use hoses with nozzles that automatically turn off when left unattended.

Stencil storm drains

Training

- Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.
- Provide on-going employee training in pollution prevention.

The BMPs outlined in this fact sheet target the following pollutants:

Targeted Constituents	
Sediment	x
Nutrients	x
Floatable Materials	
Metals	x
Bacteria	
Oil & Grease	x
Organics & Toxicants	
Pesticides	
Oxygen Demanding	x

Provided below are specific procedures associated with each of the minimum BMPs along with procedures for additional BMPs that should be considered if this activity takes place at a facility located near a sensitive waterbody. In order to meet the requirements for medium and high priority facilities, the owners/operators must select, install and maintain appropriate BMPs on site. Since the selection of the appropriate BMPs is a site-specific process, the types and numbers of additional BMPs will vary for each facility.

1. **Use off-site commercial washing and/or steam cleaning businesses.** These businesses are better equipped to handle and properly dispose of the wash waters.
2. **Use on-site commercial washing and/or steam cleaning businesses capable of disposing of wastewater off-site.** Mobile cleaning businesses must use a leak proof cover device that will catch and contain all contaminated (i.e. chemical additives such as soaps, solvents, or degreasers are used) wastewater runoff for later disposal in a manner that complies with all city, county, state, and federal codes.

If washing must occur on-site:

3. **Designate an impervious indoor or outdoor area to be used solely for vehicle and equipment washing/steam cleaning.** Do not conduct oil changes and other engine maintenance in the designated washing area.
4. **Clearly mark the vehicle and equipment washing/steam cleaning area. Design wash area to properly collect and dispose of wash water and/or effluent generated.**

[1] EPA " *Preliminary Data Summary of Urban Stormwater Best Management Practices"*

- Install sumps or drain lines to collect wash water.
- Construct a berm around the designated area and grade to collect wash water as well as to prevent storm water runon.
- Use portable containment (such as ground cover devices) and vacuum collection of wastewater.
- Inspect and maintain equipment (such as ground cover devices) regularly to ensure proper and effective functioning.

5. **If the area is outdoors, cover the wash area when not in use to prevent contact with rainwater.**
6. **Provide trash containers in wash area and empty on a regular basis.**
7. **Use hoses with nozzles that automatically turn off when left unattended.**
8. **Use biodegradable, phosphate-free detergents if possible.**
9. **Recycle waste materials, whenever possible**
    - Recycling is always preferable to disposal of unwanted materials.
    - Separate wastes for easier recycling. Keep hazardous and non-hazardous wastes separate, do not mix used oil and solvents, and keep chlorinated solvents separate from non-chlorinated solvents.
    - Label and track the recycling of waste material (e.g. used oil, spent solvents, batteries).
    - Purchase recycled products to support the market for recycled materials.
12. **If possible, eliminate or reduce the amount of hazardous materials and waste by substituting non-hazardous or less hazardous material:**
    - Use non-caustic detergents instead of caustic cleaning for parts cleaning.
    - Use a water-based cleaning service and have tank cleaned. Use detergent-based or water-based cleaning systems in place of organic solvent degreasers.
    - Replace chlorinated organic solvents with non-chlorinated solvents. Non-chlorinated solvents like kerosene or mineral spirits are less toxic and less expensive to dispose of properly. Check list of active ingredients to see whether it contains chlorinated solvents.
    - Choose cleaning agents that can be recycled.

Training

1. **Train employees on these BMPs, storm water discharge prohibitions, and wastewater discharge requirements.**
2. **Train staff on the proper maintenance of the wash area.**
3. **Train employees on proper spill containment and cleanup.**
    - Establish training that provides employees with the proper tools and knowledge to immediately begin cleaning up a spill.
    - Ensure that employees are familiar with the site's spill control plan and/or proper spill cleanup procedures.
    - BMP IC17 discusses Spill Prevention and Control in detail.
4. **Establish a regular training schedule, train all new employees, and conduct annual refresher training.**
5. **Use a training log or similar method to document training.**

Stencil storm drains

Storm drain system signs act as highly visible source controls that are typically stenciled directly adjacent to storm drain inlets. Stencils should read "No Dumping Drains to Ocean".

References

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King County Stormwater Pollution Control Manual. Best Management Practices for Businesses. King County Surface Water Management. July 1995. On-line: http://dnr.metrokc.gov/wlr/dss/spcm.htm

Model Urban Runoff Program: A How-To Guide for Developing Urban Runoff Programs for Small Municipalities. Prepared by City of Monterey, City of Santa Cruz, California Coastal Commission, Monterey Bay National Marine Sanctuary, Association of Monterey Bay Area Governments, Woodward-Clyde, Central Coast Regional Water Quality Control Board. July 1998 (Revised February 2002 by the California Coastal Commission).

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