



IC10. OUTDOOR LOADING/UNLOADING OF MATERIALS

BEST MANAGEMENT PRACTICES (BMP)

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.

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

TARGETED CONSTITUENTS	
<input checked="" type="checkbox"/>	Sediment
<input checked="" type="checkbox"/>	Nutrients
	Floatable Materials
<input checked="" type="checkbox"/>	Metals
	Bacteria
<input checked="" type="checkbox"/>	Oil and Grease
<input checked="" type="checkbox"/>	Organics and Toxicants
<input checked="" type="checkbox"/>	Pesticides
	Oxygen Demanding

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. **Properly design loading/unloading areas to prevent stormwater run-on, runoff of spills, etc.**
 - Grade and/or berm the area to prevent run-on.
 - Position roof downspouts to direct stormwater away from the area.
 - Grade and/or berm the loading/unloading area to a drain that is connected to a dead-end.
 - The area where truck transfers take place should be paved. If the liquid is reactive with the asphalt, Portland cement should be used to pave the area.
 - Avoid placing loading/unloading areas near storm drains.
2. **Park vehicles and conduct loading/unloading only in designated loading/unloading areas so that spills or leaks can be contained.**

MINIMUM BEST MANAGEMENT PRACTICES

Pollution Prevention/Good Housekeeping

- Park vehicles and conduct loading/unloading only in designated loading/unloading areas so that spills or leaks can be contained.
- Clean loading/unloading areas regularly to remove potential sources of pollutants.
- Reduce exposure of materials to rain.
- Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations and when making and breaking connections.
- Inspect equipment regularly.
- If possible, conduct loading and unloading in dry weather.
- Stencil storm drains.

Training

- Train employees on these BMPs, stormwater discharge prohibitions, and wastewater discharge requirements.
- Provide ongoing employee training in pollution prevention.

¹ EPA Preliminary Data Summary of Urban Stormwater Best Management Practices

- 3. Clean loading/unloading areas regularly to remove potential sources of pollutants.**
This includes outside areas that are regularly covered by containers or other materials.
- 4. Reduce exposure of materials to rain.**
 - Cover the loading/unloading areas.
 - If a cover is unfeasible, use overhangs or seals or door skirts to enclose areas.
- 5. Use drip pans underneath hose and pipe connections and other leak-prone spots during liquid transfer operations and when making and breaking connections.**
- 6. Inspect equipment regularly.**
 - Designate a responsible party to check under delivery vehicles for leaking fluids, spilled materials, debris, or other foreign materials.
 - Check loading/unloading equipment regularly for leaks.
- 7. If possible, conduct loading and unloading in dry weather.**

TRAINING

- 1. Train employees on these BMPs, stormwater discharge prohibitions, and wastewater discharge requirements.**
- 2. 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.
- 3. Train employees on the proper techniques used during liquid transfers to avoid leaks and spills.**
- 4. Train forklift operators on the proper loading and unloading procedures.**
- 5. Establish a regular training schedule, train all new employees, and conduct annual refresher training.**
- 6. 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

- California Storm Water Best Management Practice Handbook*. Industrial and Commercial. 2003.
www.cabmphandbooks.com
- California Storm Water Best Management Practice Handbooks*. Industrial/Commercial Best Management Practice Handbook. Prepared by Camp Dresser & McKee, Larry Walker Associates, Uribe and Associates, and Resources Planning Associates for Stormwater Quality Task Force. March 1993.
- 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, and Central Coast Regional Water Quality Control Board. July 1998 (Revised February 2002 by the California Coastal Commission).
- Stormwater Management Manual for Western Washington*. Volume IV Source Control BMPs. Prepared by Washington State Department of Ecology Water Quality Program. Publication No. 99-14. August 2001.

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