



IC17. SPILL PREVENTION AND CONTROL

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
<input checked="" type="checkbox"/>	Floatable Materials
<input checked="" type="checkbox"/>	Metals
<input checked="" type="checkbox"/>	Bacteria
<input checked="" type="checkbox"/>	Oil and Grease
<input checked="" type="checkbox"/>	Organics and Toxicants
<input checked="" type="checkbox"/>	Pesticides
<input checked="" type="checkbox"/>	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.

SPILL PREVENTION

1. Develop procedures to prevent/mitigate spills to storm drain systems.

Standardize reporting procedures, containment, storage, and disposal activities, documentation, and follow-up procedures.

2. Post NO DUMPING signs with a phone number for reporting illegal dumping and disposal.

MINIMUM BEST MANAGEMENT PRACTICES

Pollution Prevention/Good Housekeeping

- Develop procedures to prevent/mitigate spills to storm drain systems.
- Post NO DUMPING signs with a phone number for reporting illegal dumping and disposal.
- Conduct routine cleaning, inspections, and maintenance.
- Properly store and handle chemical materials.
- Protect materials stored outside from stormwater run-on.
- Secure drums stored in an area where unauthorized persons may gain access to prevent accidental spillage, pilferage, or any unauthorized use.
- Identify key spill response personnel.
- Clean up leaks and spills immediately.
- Report and track spills.
- 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. Conduct routine cleaning, inspections, and maintenance.

- Sweep and clean storage areas consistently at a designated frequency (e.g., weekly, monthly). **DO NOT** hose down areas to storm drains.
- Place drip pans or absorbent materials beneath all mounted taps and at all potential drip and spill locations during filling and unloading of tanks. Reuse, recycle, or properly dispose of any collected liquids or soiled absorbent materials.
- Check tanks (and any containment sums) frequently for leaks and spills. Replace tanks that are leaking, corroded, or otherwise deteriorating with tanks in good condition. Collect all spilled liquids and properly dispose of them.
- Check for external corrosion of material containers, structural failures, spills and overfills due to operator error, failure of piping system, etc.
- Inspect tank foundations, connections, coatings, and tank walls and piping system.

4. Properly store and handle chemical materials.

- Designate a secure material storage area that is paved with Portland cement concrete, free of cracks and gaps, and impervious in order to contain leaks and spills.
- Do not store chemicals, drums, or bagged materials directly on the ground. Place these items in secondary containers.
- Keep chemicals in their original containers, if feasible.
- Keep containers well-labeled according to their contents (e.g., solvent, gasoline).
- Label hazardous substances regarding the potential hazard (corrosive, radioactive, flammable, explosive, poisonous).
- Prominently display required labels on transported hazardous and toxic materials (per US DOT regulations).

5. Utilize secondary containment systems for liquid materials.

- Surround storage tanks with a berm or other secondary containment system.
- Slope the area inside the berm to a drain.
- Drain liquids to the sanitary sewer, if available. **DO NOT** discharge wash water to sanitary sewer until contacting the local sewer authority to find out if pretreatment is required.
- Pass accumulated stormwater in petroleum storage areas through an oil/water separator.
- Use catch basin filtration inserts.

6. Protect materials stored outside from stormwater run-on.

Construct a berm around the perimeter of the material storage area to prevent the run-on of uncontaminated stormwater from adjacent areas, as well as runoff of stormwater from the material.

7. Secure drums stored in an area where unauthorized persons may gain access to prevent accidental spillage, pilferage, or any unauthorized use.

SPILL CONTROL AND CLEAN-UP ACTIVITIES

- 1. Identify key spill response personnel.**
- 2. Adopt the Orange County Hazardous Materials Area Plan or an equivalent plan, which includes a set of planned responses to hazardous materials emergencies. The plan should include:**
 - Description of the facility, owner and address, activities and chemicals present
 - Facility map
 - Notification and evacuation procedures
 - Clean-up instructions
 - Identification of responsible departments

3. Clean up leaks and spills immediately.

- Place a stockpile of spill clean-up materials where they will be readily accessible (e.g., near storage and maintenance areas).
- Utilize dry cleaning methods to clean up spills to minimize the use of water. Use a rag for small spills, a damp mop for general clean-up, and absorbent material for larger spills. If the spilled material is hazardous, then used clean-up materials are also hazardous and must be sent to a certified laundry (rags) or disposed of as hazardous waste. Physical methods for the clean-up of dry chemicals include the use of brooms, shovels, sweepers, or plows.
- Never hose down or bury dry material spills. Sweep up the material and dispose of properly.
- Clean up chemical materials with absorbents, gels, and foams. Use adsorbent materials on small spills rather than hosing down the spill. Remove the adsorbent materials promptly and dispose of properly.
- For larger spills, a private spill clean-up company or Hazmat team may be necessary.

REPORTING

1. Report spills that pose an immediate threat to human health or the environment to local agencies, such as the fire department, and the Regional Water Quality Control Board.
2. Establish a system for tracking incidents. The system should be designed to identify the following:
 - Types and quantities (in some cases) of wastes
 - Patterns in time of occurrence (time of day/night, month, or year)
 - Mode of dumping (abandoned containers, "midnight dumping" from moving vehicles, direct dumping of materials, accidents/spills)
 - Responsible parties
3. Federal regulations require that any oil spill into a water body or onto an adjoining shoreline be reported to the National Response Center (NRC) at 800-424-8802 (24-hour).

TRAINING

1. Educate employees about spill prevention and clean-up.
 - Establish training that provides employees with the proper tools and knowledge to immediately begin cleaning up a spill.
 - Educate employees on above-ground storage tank requirements.
 - Train all employees upon hiring and conduct annual refresher training.
2. Train employees responsible for above-ground storage tanks and liquid transfers on the Spill Prevention Control and Countermeasure Plan.

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.
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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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