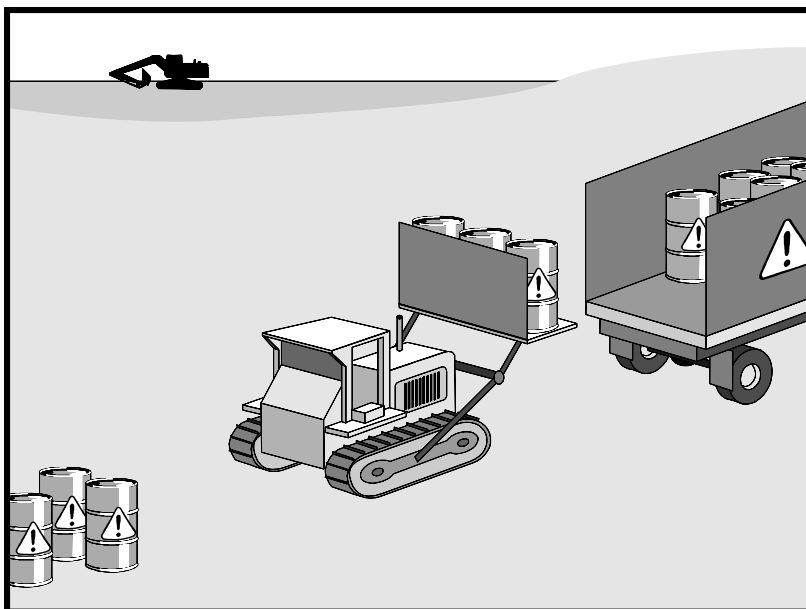




Description and Purpose

Prevent or reduce the discharge of pollutants to stormwater from hazardous waste through proper material use, waste disposal, and training of employees and subcontractors.

Suitable Applications

This best management practice (BMP) applies to all construction projects. Hazardous waste management practices are implemented on construction projects that generate waste from the use of:

- Petroleum Products
- Concrete Curing Compounds
- Palliatives
- Septic Wastes
- Stains
- Wood Preservatives
- Asphalt Products
- Pesticides
- Acids
- Paints
- Solvents
- Roofing Tar
- Any materials deemed a hazardous waste in California, Title 22 Division 4.5, or listed in 40 CFR Parts 110, 117, 261, or 302

Objectives

EC	Erosion Control	
SE	Sediment Control	
TC	Tracking Control	
WE	Wind Erosion Control	
NS	Non-Stormwater Management Control	
WM	Waste Management and Materials Pollution Control	✓

Legend:

- ✓ **Primary Objective**
- ✓ **Secondary Objective**

Targeted Constituents

Sediment	
Nutrients	✓
Trash	✓
Metals	✓
Bacteria	✓
Oil and Grease	✓
Organics	✓

Potential Alternatives

None



In addition, sites with existing structures may contain wastes, which must be disposed of in accordance with federal, state, and local regulations. These wastes include:

- Sandblasting grit mixed with lead-, cadmium-, or chromium-based paints
- Asbestos
- PCBs (particularly in older transformers)

Limitations

- Hazardous waste that cannot be reused or recycled must be disposed of by a licensed hazardous waste hauler.
- Nothing in this BMP relieves the contractor from responsibility for compliance with federal, state, and local laws regarding storage, handling, transportation, and disposal of hazardous wastes.
- This BMP does not cover aerially deposited lead (ADL) soils. For ADL soils refer to WM-7, Contaminated Soil Management.

Implementation

The following steps will help reduce stormwater pollution from hazardous wastes:

Material Use

- Wastes should be stored in sealed containers constructed of a suitable material and should be labeled as required by Title 22 CCR, Division 4.5 and 49 CFR Parts 172, 173, 178, and 179.
- All hazardous waste should be stored, transported, and disposed as required in Title 22 CCR, Division 4.5 and 49 CFR 261-263.
- Waste containers should be stored in temporary containment facilities that should comply with the following requirements:
 - Temporary containment facility should provide for a spill containment volume equal to 1.5 times the volume of all containers able to contain precipitation from a 25 year storm event, plus the greater of 10% of the aggregate volume of all containers or 100% of the capacity of the largest tank within its boundary, whichever is greater.
 - Temporary containment facility should be impervious to the materials stored there for a minimum contact time of 72 hours.
 - Temporary containment facilities should be maintained free of accumulated rainwater and spills. In the event of spills or leaks, accumulated rainwater and spills should be placed into drums after each rainfall. These liquids should be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids should be sent to an approved disposal site.
 - Sufficient separation should be provided between stored containers to allow for spill cleanup and emergency response access.

- Incompatible materials, such as chlorine and ammonia, should not be stored in the same temporary containment facility.
- Throughout the rainy season, temporary containment facilities should be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs.
- Drums should not be overfilled and wastes should not be mixed.
- Unless watertight, containers of dry waste should be stored on pallets.
- Do not over-apply herbicides and pesticides. Prepare only the amount needed. Follow the recommended usage instructions. Over application is expensive and environmentally harmful. Apply surface dressings in several smaller applications, as opposed to one large application. Allow time for infiltration and avoid excess material being carried offsite by runoff. Do not apply these chemicals just before it rains. People applying pesticides must be certified in accordance with federal and state regulations.
- Paint brushes and equipment for water and oil based paints should be cleaned within a contained area and should not be allowed to contaminate site soils, watercourses, or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused should be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths should be disposed of as solid waste.
- Do not clean out brushes or rinse paint containers into the dirt, street, gutter, storm drain, or stream. "Paint out" brushes as much as possible. Rinse water-based paints to the sanitary sewer. Filter and reuse thinners and solvents. Dispose of excess oil-based paints and sludge as hazardous waste.
- The following actions should be taken with respect to temporary contaminant:
 - Ensure that adequate hazardous waste storage volume is available.
 - Ensure that hazardous waste collection containers are conveniently located.
 - Designate hazardous waste storage areas onsite away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.
 - Minimize production or generation of hazardous materials and hazardous waste on the job site.
 - Use containment berms in fueling and maintenance areas and where the potential for spills is high.
 - Segregate potentially hazardous waste from non-hazardous construction site debris.
 - Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.

- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.
- Use all of the product before disposing of the container.
- Do not remove the original product label; it contains important safety and disposal information.

Waste Recycling Disposal

- Select designated hazardous waste collection areas onsite.
- Hazardous materials and wastes should be stored in covered containers and protected from vandalism.
- Place hazardous waste containers in secondary containment.
- Do not mix wastes, this can cause chemical reactions, making recycling impossible and complicating disposal.
- Recycle any useful materials such as used oil or water-based paint.
- Make sure that toxic liquid wastes (used oils, solvents, and paints) and chemicals (acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Arrange for regular waste collection before containers overflow.
- Make sure that hazardous waste (e.g., excess oil-based paint and sludge) is collected, removed, and disposed of only at authorized disposal areas.

Disposal Procedures

- Waste should be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A Department of Health Services certified laboratory should sample waste to determine the appropriate disposal facility.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

Education

- Educate employees and subcontractors on hazardous waste storage and disposal procedures.
- Educate employees and subcontractors on potential dangers to humans and the environment from hazardous wastes.
- Instruct employees and subcontractors on safety procedures for common construction site hazardous wastes.
- Instruct employees and subcontractors in identification of hazardous and solid waste.
- Hold regular meetings to discuss and reinforce hazardous waste management procedures (incorporate into regular safety meetings).
- The contractor's superintendent or representative should oversee and enforce proper hazardous waste management procedures and practices.
- Make sure that hazardous waste is collected, removed, and disposed of only at authorized disposal areas.
- Warning signs should be placed in areas recently treated with chemicals.
- Place a stockpile of spill cleanup materials where it will be readily accessible.
- If a container does spill, clean up immediately.

Costs

All of the above are low cost measures.

Inspection and Maintenance

- Inspect and verify that activity-based BMPs are in place prior to the commencement of associated activities. While activities associated with the BMP are under way, inspect weekly during the rainy season and of two week intervals in the non-rainy season to verify continued BMP implementation.
- Inspect BMPs subject to non-stormwater discharge daily while non-stormwater discharges occur
- Hazardous waste should be regularly collected.
- A foreman or construction supervisor should monitor onsite hazardous waste storage and disposal procedures.
- Waste storage areas should be kept clean, well organized, and equipped with ample cleanup supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners should be repaired or replaced as needed to maintain proper function.
- Hazardous spills should be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.

- The National Response Center, at (800) 424-8802, should be notified of spills of federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302. Also notify the Governors Office of Emergency Services Warning Center at (916) 845-8911.
- A copy of the hazardous waste manifests should be provided.

References

Blueprint for a Clean Bay: Best Management Practices to Prevent Stormwater Pollution from Construction Related Activities; Santa Clara Valley Nonpoint Source Pollution Control Program, 1995.

Processes, Procedures and Methods to Control Pollution Resulting from All Construction Activity, 430/9-73-007, USEPA, 1973.

Stormwater Quality Handbooks - Construction Site Best Management Practices (BMPs) Manual, State of California Department of Transportation (Caltrans), November 2000.

Stormwater Management for Construction Activities; Developing Pollution Prevention Plans and Best Management Practice, EPA 832-R-92005; USEPA, April 1992.