

# **Stormwater Management Manual for Western Washington**

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## **Volume IV Source Control BMPs**

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## 2.1 Applicable Operational Source Control BMPs

The following operational source control BMPs must be implemented at the commercial and industrial establishments listed in Appendix IV-A, where required by Ecology's Industrial General Permit or by local government ordinances.

*Formation of  
a Pollution  
Prevention  
Team*

- Assign one or more individuals to be responsible for stormwater pollution control. Hold regular meetings to review the overall operation of the BMPs. Establish responsibilities for inspections, operation and maintenance, and availability for emergency situations. Train all team members in the operation, maintenance and inspections of BMPs, and reporting procedures.

*Good  
Housekeeping*

- Promptly contain and clean up solid and liquid pollutant leaks and spills including oils, solvents, fuels, and dust from manufacturing operations on any exposed soil, vegetation, or paved area.
- Sweep paved material handling and storage areas regularly as needed, for the collection and disposal of dust and debris that could contaminate stormwater. Do not hose down pollutants from any area to the ground, storm drain, conveyance ditch, or receiving water unless necessary for dust control purposes to meet air quality regulations and unless the pollutants are conveyed to a treatment system approved by the local jurisdiction.
- Clean oils, debris, sludge, etc. from all BMP systems regularly, including catch basins, settling/detention basins, oil/water separators, boomed areas, and conveyance systems, to prevent the contamination of stormwater. Refer to Appendix IV-D R.3 for references to assist in determining if a waste must be handled as hazardous waste.
- Promptly repair or replace all substantially cracked or otherwise damaged paved secondary containment, high-intensity parking and any other drainage areas, which are subjected to pollutant material leaks or spills.
- Promptly repair or replace all leaking connections, pipes, hoses, valves, etc. which can contaminate stormwater.

### **The following are recommended additional good housekeeping BMPs:**

- Clean up pollutant liquid leaks and spills in impervious uncovered containment areas at the end of each working day.
- Use solid absorbents, e.g., clay and peat absorbents and rags for cleanup of liquid spills/leaks, where practicable.
- Recycle materials, such as oils, solvents, and wood waste, to the maximum extent practicable.

*Preventive  
Maintenance*

- Prevent the discharge of unpermitted liquid or solid wastes, process wastewater, and sewage to ground or surface water, or to storm drains which discharge to surface water, or to the ground.
- Do not connect floor drains in potential pollutant source areas to storm drains, surface water, or to the ground.
- Conduct all oily parts cleaning, steam cleaning, or pressure washing of equipment or containers inside a building, or on an impervious contained area, such as a concrete pad. Direct contaminated stormwater from such an area to a sanitary sewer where allowed by local sewer authority, or to other approved treatment.
- Do not pave over contaminated soil unless it has been determined that ground water has not been and will not be contaminated by the soil. Call Ecology for assistance.
- Construct impervious areas that are compatible with the materials handled. Portland cement concrete, asphalt, or equivalent material may be considered.
- Use drip pans to collect leaks and spills from industrial/ commercial equipment such as cranes at ship/boat building and repair facilities, log stackers, industrial parts, trucks and other vehicles, which are stored outside.
- At industrial and commercial facilities, drain oil and fuel filters before disposal. Discard empty oil and fuel filters, oily rags and other oily solid waste into appropriately closed and properly labeled containers, and in compliance with the Uniform Fire Code.
- For the storage of liquids use containers, such as steel and plastic drums, that are rigid and durable, corrosion resistant to the weather and fluid content, non-absorbent, water tight, rodent-proof, and equipped with a close fitting cover.
- For the temporary storage of solid wastes contaminated with liquids or other potential pollutant materials use dumpsters, garbage cans, drums and comparable containers, which are durable, corrosion resistant, non-absorbent, non-leaking, and equipped with either a solid cover or screen cover to prevent littering. If covered with a screen, the container must be stored under a lean-to or equivalent structure.
- Where exposed to stormwater, use containers, piping, tubing, pumps, fittings, and valves that are appropriate for their intended use and for the contained liquid.

**The following are recommended additional preventive maintenance BMPs:**

- Where feasible, store potential stormwater pollutant materials inside a building or under a cover and/or containment.

- Minimize use of toxic cleaning solvents, such as chlorinated solvents, and other toxic chemicals.
- Use environmentally safer raw materials, products, additives, etc. such as substitutes for zinc used in rubber production.
- Recycle waste materials such as solvents, coolants, oils, degreasers, and batteries to the maximum extent feasible. Refer to Appendix IV-C for recommendations on recycling or disposal of vehicle waste liquids and other waste materials.
- Empty drip pans immediately after a spill or leak is collected in an uncovered area.
- Stencil warning signs at stormwater catch basins and drains, e.g., “Dump no waste.”

Note: Evidence of stormwater contamination can include the presence of visible sheen, color, or turbidity in the runoff, or present or historical operational problems at the facility. Simple pH measurements with litmus or pH paper can be used to test for stormwater contamination in areas subject to acid or alkaline contamination.

*Spill Prevention  
and Cleanup*

- Immediately upon discovery, stop, contain, and clean up all spills.
- If pollutant materials are stored on-site, have spill containment and cleanup kits readily accessible.
- If the spill has reached or may reach a sanitary or a storm sewer, ground water, or surface water notify Ecology and the local sewer authority immediately. Notification must comply with and federal spill reporting requirements. (See also record keeping at the end of this section and BMPs for Spills of Oil and Hazardous Substances)
- Do not flush absorbent materials or other spill cleanup materials to a storm drain. Collect the contaminated absorbent material as a solid and place in appropriate disposal containers.

**The following is a recommended additional BMP:**

Place and maintain emergency spill containment and cleanup kit(s) at outside areas where there is a potential for fluid spills. These kits should be appropriate for the materials being handled and the size of the potential spill.

Note: Ecology recommends that the kit(s) include salvage drums or containers, such as high density polyethylene, polypropylene or polyethylene sheet-lined steel; polyethylene or equivalent disposal bags; an emergency response guidebook; safety gloves/clothes/equipment; shovels or other soil removal equipment; and oil containment booms and absorbent pads; all stored in an impervious container.

*Employee  
Training*

Train all employees that work in pollutant source areas in identifying pollutant sources and in understanding pollutant control measures, spill response procedures, and environmentally acceptable material handling practices - particularly those related to vehicle/equipment liquids such as fuels, and vehicle/equipment cleaning. Use Ecology's "Guidance Manual for Preparing/Updating a Stormwater Pollution Prevention Plan for Industrial Facilities" (Publication Number 04-10-030) as a training reference.

*Inspections*

Conduct visual inspections quarterly during storm events to achieve following:

- Verify that the descriptions of the pollutant sources identified in the stormwater pollution control program are accurate.
- Verify that the stormwater pollutant controls (BMPs) being implemented are adequate.
- Update the site map to reflect current conditions.
- Include observations of the presence of floating materials, suspended solids, oil and grease, discoloration, turbidity and odor in the stormwater discharges; in outside vehicle maintenance/repair; and liquid handling and storage areas. In areas where acid or alkaline materials are handled or stored use a simple litmus or pH paper to identify those types of stormwater contaminants where needed.

In addition, conduct at least one dry season inspection each year.

- Determine whether there is/are unpermitted non-stormwater discharges to storm drains or receiving waters, such as process wastewater and vehicle/equipment washwater, and either eliminate or obtain a permit for such a discharge.

*Record keeping*

Retain the following reports for three years:

- Visual inspection reports which should include: scope of the inspection, the personnel conducting the inspection, the date(s) of the inspection, major observations relating to the implementation of the SWPPP (performance of the BMPs, etc.) and actions taken to correct BMP inadequacies.
- Reports on spills of oil or hazardous substances in greater than Reportable Quantities (Code of Federal Regulations Title 40 Parts 302.4 and 117), including the following: oil, gasoline, or diesel fuel, that causes a violation of the State of Washington's Water Quality Standards, or, that causes a film or sheen upon or discoloration of the waters of the State or adjoining shorelines or causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

- *To report a spill or to determine if a spill is a substance of a Reportable Quantity, call your Ecology regional office and ask for an oil spill operations or a hazardous waste specialist:*

<i>Northwest Region</i>	<i>(425) 649-7000</i>
<i>Southwest Region</i>	<i>(360) 407-6300</i>
<i>Eastern Region</i>	<i>(509) 456-2926</i>
<i>Central Region</i>	<i>(509) 575-2490</i>

*Also refer to Emergency Spill Response in Washington State, Publication # 97-1165-CP.*

**The following is additional recommended record keeping:**

Maintain records of all related pollutant control and pollutant generating activities such as training, materials purchased, material use and disposal, maintenance performed, etc.

## **2.2 Pollutant Source-Specific BMPs**

The source-specific BMPs described in this section, or equivalent BMPs, can be applied to control the sources of pollutants identified in Appendix IV-A.