

Hazardous Waste Factsheet

“Liquid hazardous materials such as petroleum products, antifreeze, and solvents can present a threat to soil, ground water, and surface water.”

Thurston County Public
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Environmental Health Division

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[http://www.co.thurston.wa.us.
health/ehhw/index.html](http://www.co.thurston.wa.us.health/ehhw/index.html)



Secondary Containment

The Problem

Liquid hazardous materials such as petroleum products, antifreeze, and solvents can present a threat to soil, ground water, and surface water if accidentally spilled or leaked. These substances must be stored so that if a spill or leak does occur the material remains contained and does not contaminate the environment. A solution to the problem is to use secondary containment when storing hazardous liquids.

The Regulatory Requirements

The Thurston County Nonpoint Source Pollution Ordinance (Article VI of the Sanitary Code) requires that hazardous materials and wastes, including petroleum products, be stored in such a way that if a container leaks or ruptures the contents will not contaminate ground or surface water. The best way to ensure this is to provide secondary containment for all containers of liquid hazardous products and wastes.

The Thurston County Critical Areas Ordinance Chapter 17.15.520 C(2) also requires businesses that are located in aquifer recharge areas to provide secondary containment for hazardous materials that are stored on-site.

The Thurston County Mineral Extraction Code requires that fuel and hazardous materials are stored according to the requirements of the Nonpoint Source Pollution Ordinance. The Department of Ecology requires coverage and containment of hazardous materials through the “National Pollutant Discharge Elimination System and State Waste Discharge General Permit for Process Water and Stormwater Associated with Sand and Gravel Operations and Asphalt Batch Operations” RCW Chapter 90.48.

What is Secondary Containment?

- Secondary containment is a liquid-tight barrier that will adequately contain hazardous materials that are released from a storage container. A simple example of secondary containment is placement of a 5-gallon drum (primary container) inside a 55-gallon drum (secondary containment). Another example is placement of 55-gallon drums or a large fuel tank (primary container) inside a liquid-tight concrete bunker (secondary containment). The outer wall of a double-walled fuel storage tank is also an example of secondary containment.
- The size and design of a secondary containment unit or device depends on the type and amount of material that it holds.

The Options

Four secondary containment method options will satisfy Thurston County regulatory requirements. Liquid hazardous materials, including petroleum products, can be:

1. Stored **indoors** on a liquid-tight concrete floor without secondary containment *if* the storage area is able to contain 100 percent of the largest container in the event of a spill and prevent it from flowing or leaking out of the building. In addition, spilled or leaked materials must be prevented from entering floor drains that are not part of a liquid-tight containment system designed to capture and hold hazardous materials.
2. Stored in outdoor or indoor **covered** secondary containment that can hold 110 percent of the volume of the largest storage container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement volume of any items inside the containment.
3. Stored in **outdoor uncovered** secondary containment that can hold 120 percent of the volume of the largest storage container *or* 10 percent of the total volume stored, whichever is greatest, plus the displacement volume of any items inside the containment. Uncovered containment is not generally recommended (see below).
4. Stored in UL-certified double-walled storage tanks. The volume requirements that are listed in options 1, 2, and 3 do not apply to these storage tanks, because they do not require additional containment provisions.

Secondary Containment Criteria

Chemical Compatibility and Structural Integrity

- The structural materials used in secondary containment units, including expansion joints and seals (if applicable) must be chemically compatible with the substance(s) that will be contained.
- Secondary containment must be maintained liquid-tight at all times.
- Secondary containment must be physically adequate to hold a release and remain liquid-tight.

Stormwater Accumulation and Discharge

All stormwater that accumulates in outdoor uncovered secondary containment must be managed in accordance with the Thurston County Drainage Design and Erosion Control Manual.

- Outdoor uncovered containments must be maintained free of stormwater accumulation.
- An operator must be present during stormwater discharge from secondary containment.
- All discharge valves must be closed and locked after a supervised discharge is completed.
- Stormwater that accumulates in secondary containment units must be treated through an oil/water separator (if appropriate) or handled as hazardous waste. (See the hazardous waste fact sheet “Oil/Water Separators.”)

Spills

Keep secondary containment areas free of small spills and drips. Drip pans that can be conveniently cleaned are helpful in preventing contamination of the secondary containment area. Hazardous materials, liquid hazardous waste and petroleum product spills must be cleaned up immediately. Remember that even a small spill, drip, or leak must be cleaned up and disposed of as a hazardous waste. Absorbents and other cleanup materials that are contaminated with the spilled hazardous materials must also be disposed as a hazardous waste. Absorbent materials that are lightly contaminated with petroleum products, such as grease or oil, may be disposed of solid waste at the Thurston County Waste and Recovery Center, on a case-by-case basis. Cleanup materials that are saturated with petroleum materials may not be disposed of in the solid waste system.

Additional Information

Please call the Thurston County Business Pollution Prevention Program at (360) 867-2664 or TDD 867-2603 or see our website at www.co.thurston.wa.us/health/ehhw/index.html

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