

Hazardous Waste Factsheet

“Any business that discharges oily water or oily sediment-laden wastewater to a storm drain or sewer may be required to install an oil/water separator by Thurston County or Washington State.”

Oil/Water Separator Fact Sheet

Standard oil/water separators are underground vaults installed between a drain and a connection to either a sewer or storm water pipe. These vaults are designed with baffles to trap sediments and retain floating oils. The large capacities of the vaults slow down the wastewater, allowing oil to float to the surface and solid material (sludge) to settle out. There are two main types of oil/water separators: the gravity-drained oil/water separator (Figure 1), and the coalescing plate separator (Figure 2). Each type of separator is designed to allow the trapped oil and sludge to be removed while allowing water containing relatively low concentrations of oil to pass through.

The effectiveness of an oil/water separator depends on capacity, concentration of oil to water, presence of contaminants, and maintenance. If the flow of oily water is more than the system was designed for, there will not be enough time for separation and settling to occur, which may result in a discharge of untreated water. Concentrated amounts of oil in the water can overload the baffles or plates and pass through the system. Contaminants such as soap, solvent, fuel, degreasers, etc. can hinder separation by emulsifying the oil in water (mixing them so that they cannot be separated). In addition, routine cleaning out of the sump area of separators is necessary for proper function.

You can save on maintenance costs by diverting oil and sludge away from your separator. Place absorbent pads or socks that float on the water and attract only oil in the inlet chamber and it will minimize the amount of oil that gets into the vault. These pads can be wrung out and reused if stored properly.

Sludge that builds up in a separator can be difficult and expensive to clean out. Installing a catch basin (Figure 3) before your oil/water separator will trap solids that can be shoveled out before they reach the separator. Often these solids will not designate as dangerous waste and are acceptable for garbage disposal. For information on sludge testing and disposal call the Thurston County Business Pollution Prevention Program at (360) 867-2664 or TDD (360) 867-2603.

Regulatory Requirements

Any business that discharges oily water or oily sediment-laden wastewater to a storm drain or sewer may be required to install an oil/water separator by Thurston County or Washington State.

Oil/water separators need to be sized according to the maximum discharge or peak flow through the system. Typically, design specifications are submitted to the local public works department and the LOTT Alliance for approval prior to installation. The discharge of oil from a facility to a sewer cannot exceed 100 parts per million. For more information on design and installation requirements, call the public works department in your jurisdiction.

Thurston County Public
Health and Social Services
Environmental Health Division

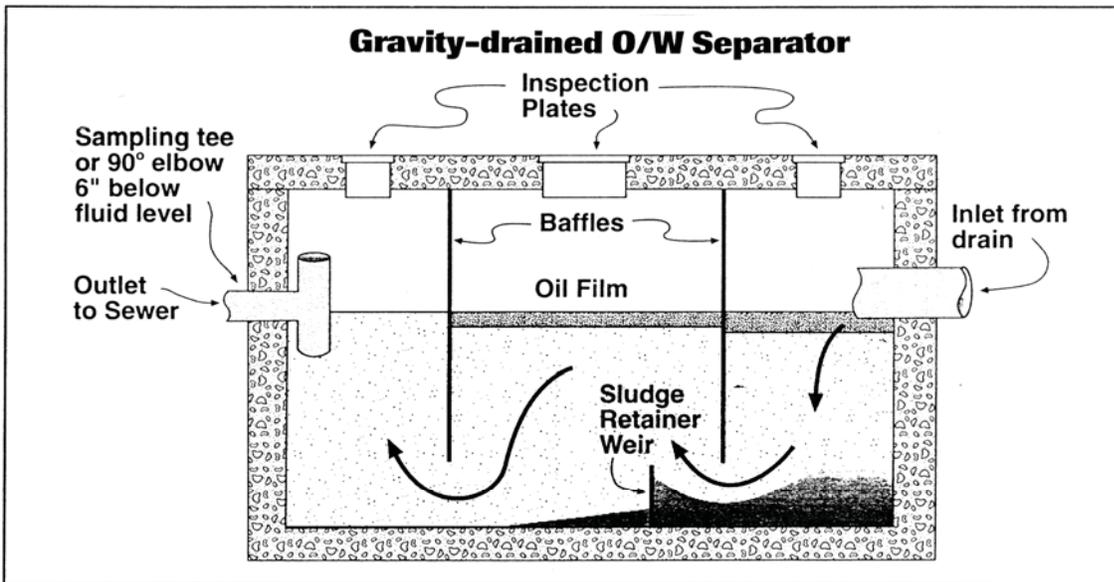
412 Lilly Rd. NE
Olympia, WA 98506-5132
Hazardous Waste Hotline:
360-867-2664

TDD Line: 360-867-2603

<http://www.co.thurston.wa.us/health/ehhw/index.html>

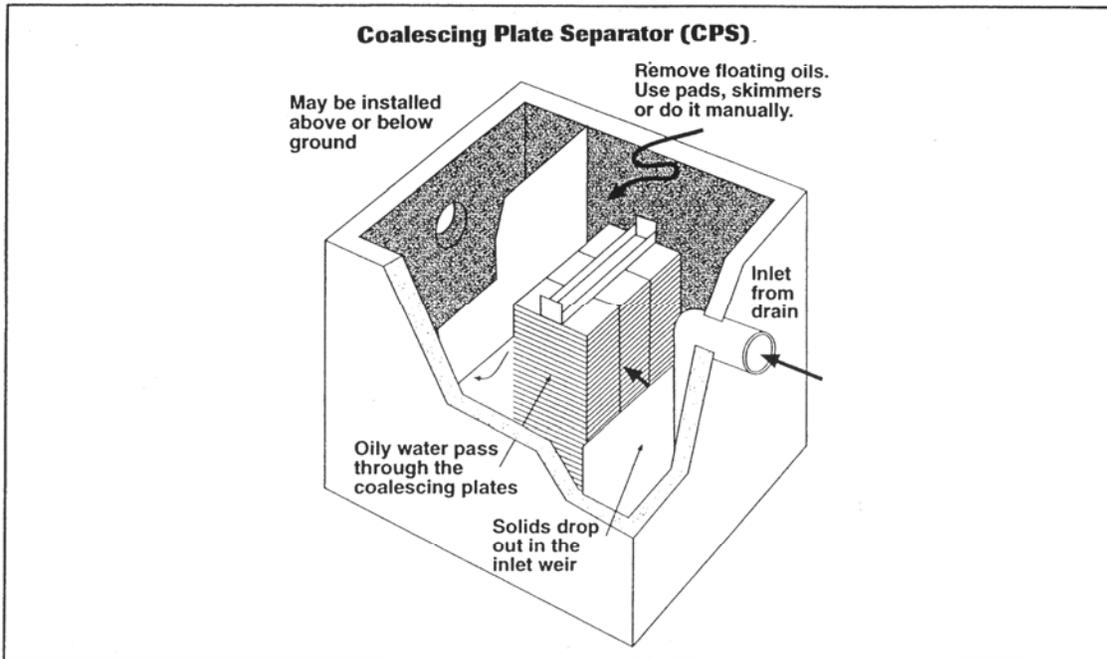


Figure 1



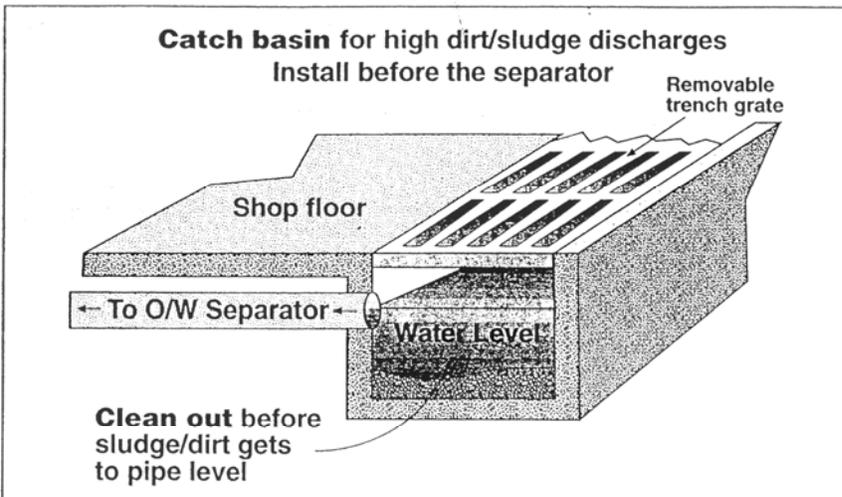
This drawing shows a standard gravity-type oil/water separator. It's important to minimize the amounts of detergents, solvents and other contaminants that enter the separator, thus helping to keep oils separate from water and preventing them from passing through the system.

Figure 2



This drawing shows a coalescing plate separator. It's important to remove and clean the plates before they get coated with silt or solids.

Figure 3



This drawing shows how a typical catch basin is constructed. The catch basin is located before (upstream of) the separator and will trap solids that can be shoveled out before they wash into the separator.

Maintaining Your Oil/Water Separator

A separator's efficiency is reduced most by an accumulation of settled solids, sludge, and oil. Thurston County recommends that you inspect the separator every six months – preferably in October (before the wet season) and again after a significant storm. Here are some steps you can take to maintain your separator:

- Open the inspection plates and look into each chamber and make sure your **outlet** chamber has a sampling "T." It should have at least a six-inch extension below the water surface.
- Use a pole that can reach the bottom of your separator to see if there is any resistance as you push to reach the bottom. Resistance means there is sludge build up. Service the separator when the build up is about eight inches deep in the **inlet** chamber.
- Measure floating oil on top of the water. When there are two inches or more of oil in any chamber, it should be removed. Older oil can become emulsified and pass through the separator with the water.
- For coalescing plate separators, it is critical to remove and clean the plates before they get coated with silt or solids. When this happens, oil may pass through.

Servicing Your Oil/Water Separator

Vendors that clean separators have special vacuum trucks that pump out both the liquid and the sludge wastes. The bulk liquid is shipped to a licensed treatment facility where the oil, solids, and heavy metals are separated from the water. The treated water is then discharged to the sewer. **You should never use a septic tank service to clean your oil/water separator or catch basin.**

Many companies provide oil-water separator management in the Puget Sound region. For an up to date list of these companies and their contact information, please visit the Department of Ecology's Hazardous Waste Management Services Directory at www.ecy.wa.gov/apps/hwtr/hwsd/default.htm. When selecting a vendor, make sure they have the right equipment for your situation by describing your system and what you want accomplished (cleaning and/or pumping). Consider asking these questions to the vendors before selecting one to manage your waste:

1. To what facility or facilities will my waste go?
2. Can you provide the names and phone numbers of current customers as references?
3. What documentation, labeling, and other paperwork are provided? (At a minimum, you should obtain a signed receipt for every visit, which should include a noted quantity of material removed.)
4. Do you test my waste on-site for the presence of hazardous waste contamination? What does this test cost and what do you do if contamination is detected?

Make sure the vendor vacuums all the sludge out of each chamber. Inspect and then **fill up the separator with clean water before you begin discharging** to it again.

Additional Information

Staff from the Business Pollution Prevention Program are available to answer questions about the proper management of oil, oil water separators, hazardous waste, and ways to calculate pollution prevention costs. Please contact the Business Pollution Prevention Program at (360) 867-2664 or TDD (360) 867-2603, Monday through Friday during business hours, or see our website: <http://www.co.thurston.wa.us/health/ehhw/index.html>.