

Application and Description

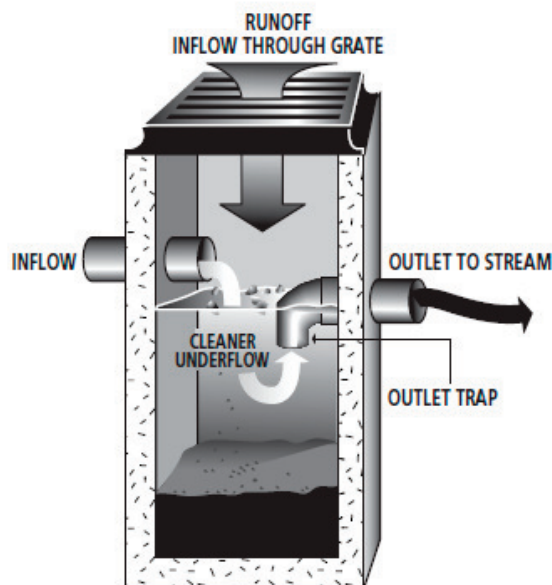
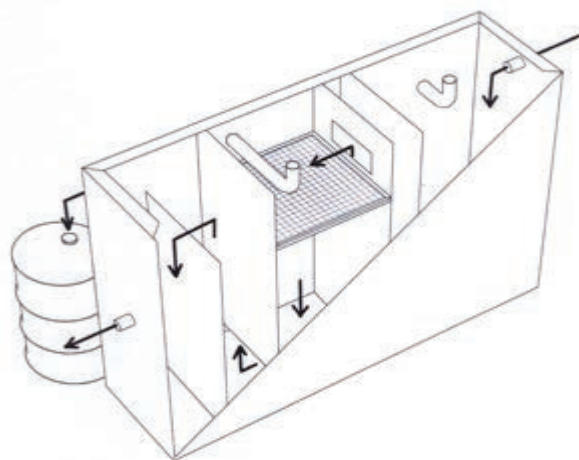
An oil/water separator is a device designed to remove oil, grease, and similar floatable pollutants from stormwater runoff. The name commonly refers to an underground structure; however, more simple designs exist.

Oil/water separators are appropriate at locations where petroleum products may be difficult to control with source-control BMPs. An oil/water separator can be a tee section in a catch basin that contains spills on an emergency basis, or a complex unit that is designed to treat runoff from sites.

For many sites, such as small parking lots, a simple down-turned elbow in a catch basin will temporarily contain pollutants, so they can be cleaned up a before leaving the site. If tee sections are used or installed in catch basins, other measures must be used such as oil absorbent pads or booms. On sites with greater potential for oil spills and high concentrations of oil and grease in runoff, such as fleet vehicle lots, auto repair shops, or fueling stations, a more complex oil/water separator is needed. Spills must always be cleaned up immediately to avoid downstream contamination. There are two types of complex oil/water separators commonly used in situations where oily runoff is a concern: the American Petroleum Institute (API) separator and the coalescing plate interceptor (CPI). The API separator has the appearance of a long septic tank and must be sized relative to the area it is treating. By placing coalescing plates in the separator, its size can be significantly reduced while retaining the efficiency needed. Consequently, the CPI separator is more commonly used. The savings from reducing the cost of vault construction offset the relatively high cost of the plates.

These oil/water separators should be used for targeted pollutant removal in high traffic areas where oil or petroleum products are a significant problem rather than as an all-purpose stormwater treatment facility. The separator will function more efficiently and require less maintenance if the amount of stormwater passing through is limited. Only runoff that has been exposed to high oil activity areas should be directed through the oil/water separator. Avoid directing stormwater (from other areas on your site) through the separator.

For information on oil/water separators that will be used as pretreatment prior to discharge to the sanitary sewer, contact your local sewer agency or King County's Industrial Waste Program within the Wastewater Treatment Division.



Design and Maintenance

API and CPI oil/water separators must be designed and sized in accordance with the King County Surface Water Design Manual.

Oil/water separators must be checked frequently during the wet season. These inspections must occur often enough to prevent BMP failure that allows waste products to exit the oil/water separators. Violations can be cited under King County Code 9.12. How often material should be removed depends on the amount of petroleum in the influent, but the separator should be cleaned at least quarterly, and particularly in the fall before the first storm of the wet season. In addition, the following maintenance requirements apply:

- Remove all sediments from the unit or catch basin if greater than six inches in depth, or if within six inches of the outlet pipe. Sediments should be tested and disposed of properly.
- Oil absorbent pads should be replaced as needed, but should always be replaced in the fall prior to the wet season, and in the spring. Collect used pads in a covered container for oil recovery and recycling by a vendor.
- Use a vendor to clean out the oil/water separator and take any oil and residuals to an approved offsite location for disposal and/or recycling.
- The outlet pipe of the separator must be blocked during cleaning operations.
- Any standing water removed during the maintenance operation must be disposed to a sanitary sewer at a discharge location approved by the local jurisdiction.

Local Sewer Agency

The name and phone number is identified on your water and sewer bill.

King County Wastewater Division – Industrial Waste Program

(206) 263-3000

www.kingcounty.gov/environment/wastewater/IndustrialWaste

King County Business Waste Line

(206) 263-8899

www.govlink.org/hazwaste/

King County Surface Water Design Manual

<http://www.kingcounty.gov/environment/waterandland/stormwater>