



CITY OF TACOMA
Environmental Services Source Control
Oil Water Separator Policy for Discharges to the Wastewater Sewer System

SECTION 1.1 PURPOSE:

Oil water separators are installed to remove oils from discharges that enter the municipal wastewater sewer system.

SECTION 1.2 APPLICABILITY:

This policy applies to discharges to the City of Tacoma wastewater sewer system. Guidance on oil water separators that discharge to the City of Tacoma stormwater system can be found in the City of Tacoma Stormwater Management Manual (SWMM). Additional guidance on source control measures to reduce the potential for oil contamination of stormwater can be found in Volume 4 of the Stormwater Management Manual.

This policy shall apply to:

- All new construction in which the parcel owner is proposing or required to be connected to the City of Tacoma's wastewater sewer system;
- All parcels that undergo substantial renovation or construction that requires a Side Sewer Connection Permit. Substantial renovation or construction includes remodeling, alteration or reconstruction of and/or addition to, an existing building within a two-year period, the cost of which exceeds 50% of the value of the building as calculated using the latest Building Valuation Date published by the International Code Council (TMC 2.02.770).
- Replacing fuel island canopies or relocating or adding one or more fuel dispensers.
- Any parcel that undergoes an operational change that would require additional oil protection.

SECTION 1.3 GENERAL REQUIREMENTS

- An oil water separator is typically required for wastewater discharges to the wastewater sewer system from the following activities:
 - Industrial manufacturing;
 - Fueling stations;
 - Vehicle washing facilities;
 - Equipment washing facilities;
 - Vehicle and equipment repair and maintenance facilities;
 - Covered parking facilities;
 - As required by Environmental Services

Specific requirements for fueling stations and covered parking areas can be found in Section 1.8 and 1.9 below.

- Discharges from the above activities shall not be directed to the City of Tacoma's storm drainage system.
- Areas that require oil treatment shall be paved with concrete. For purposes of this guidance document, these areas are referred to as the pad. The pad must be of sufficient size to encompass the proposed activity. If hose bibs are needed for the activity, the pad must be of sufficient size to encompass the hose length.
- Areas that require oil treatment shall be graded and sized to minimize the area which drains to the wastewater sewer.
- Areas outside the pad shall be sloped to prevent stormwater run-on. The pad shall be sloped to direct all water needing treatment to the oil water separator.
- A 6-inch sampling and inspection tee must be installed on the discharge piping of the separator. Existing oil water separators shall be required to be retrofitted regardless of the age of the separator.
- Pretreatment devices to remove solids may be required before discharge to the oil water separator.

Contact City of Tacoma Source Control at (253) 591-5588 for any questions.

SECTION 1.4 SIZING CRITERIA:

Design of oil water separators shall be based upon the guidance in this section and varies based upon if the area requiring oil treatment is covered or uncovered. A Professional Engineer licensed in the state of Washington shall complete all engineering calculations as outlined in Chapter 12.08.130(C) of the Tacoma Municipal Code. If the oil water separator is sized using Tables 1.1 and 1.2 below, a Professional Engineer is not required. For areas larger than those provided in Table 1.1, a Professional Engineer shall design the facility.

Table 1.1 below provides typical flowrates that can be used when determining the appropriate oil water separator to be used at the project site.

Section 1.4.1 Covered Oil Water Separator Sizing Criteria

Oil water separators that serve covered areas shall be designed to properly treat the flow and volume of wastewater produced from the process. The applicant shall submit sufficient information to determine the volume of wastewater produced. This may include:

- Number of hose bibs;
- Frequency of washing (if covered area is used for washing);
- Volume of wastewater produced during activity;
- Spill Volume.

See Sections 1.8 and 1.9 for specific sizing information for covered parking areas and fuel islands.

Section 1.4.2 Uncovered Oil Water Separator Sizing Criteria

Uncovered facilities shall be designed to properly treat the flow and volume of wastewater produced from the process plus the additional stormwater runoff. The volume and flowrate for stormwater contributions shall be based upon the 25 year, 24 hour storm event, and shall be determined using a single event model. The 25 year, 24 hour storm precipitation in the City of Tacoma shall be as noted in Appendix A of Volume 3 of the SWMM, 3.50 inches. Alternatively, the guidance in Volume 5 of the SWMM may be used to determine the size of facility needed for the stormwater contribution. This size shall be added to the flow and volume of wastewater produced from the process, hose bibs, wash water and spill volume to determine the size of the overall facility. See Table 1.1 for 25-year, 24 hour flowrates based upon impervious surface.

Table 1.1 - Typical Flowrates

Item	Flowrate (gallons per minute)
100 Square Feet of Impervious Surface	1
500 Square Feet of Impervious Surface	5
1000 Square Feet of Impervious Surface	10
1500 Square Feet of Impervious Surface	15
2000 Square Feet of Impervious Surface	20
2500 Square Feet of Impervious Surface	25
3000 Square Feet of Impervious Surface	25
3500 Square Feet of Impervious Surface	30
4000 Square Feet of Impervious Surface	35
4500 Square Feet of Impervious Surface	40
Typical ¾" Garden Hose	10

Section 1.4.3 Sizing Table

The following table provides the appropriately sized API oil water separator based upon flowrate. For coalescing plate (CP) separators refer to manufacturer's recommendations in order to achieve the required discharge requirements of TMC 12.08 or size the CP separator per the SWMM, Volume 5.

Calculated Flow, gpm	Separator Size Requirement (gallon capacity)
18	530
30	900
72	2160
108	3230
126	3770
182	5450
215	6460

SECTION 1.5 INSTALLATION GUIDELINES:

Prior to the installation of any oil water separator that discharges to the City of Tacoma's wastewater sewer system or the modification of any current oil water separator that discharges to the municipal wastewater sewer system, plans must be approved by the City of Tacoma.

Contact Building and Land Use Services at 253.591.5030 to determine permitting requirements. The submittal must include the following items:

1. The name, address and type of business where the separator will be installed.
2. The design calculations for the separator sizing.
3. Detailed drawings of the oil water separator. These drawings shall include such items as pad sizing, plumbing details, catch basins and separator location, grading and elevations.
4. All technical data concerning the specific type of separator to be used.
5. A signed **detailed** statement describing the process or type of activity that the separator will be used for.
6. Other information as deemed necessary by Environmental Services Science & Engineering.

Oil water separators shall be installed in an accessible location for maintenance and for inspection by the City of Tacoma Source Control personnel. Access covers shall be readily removable and in good working condition. The individual businesses shall be responsible to maintain and provide on-site any equipment necessary to access the separator for maintenance and inspection. Oil water separators should be installed outside of traffic lanes whenever possible to accommodate maintenance and inspection.

SECTION 1.6 MAINTENANCE REQUIREMENTS:

An Operation and Maintenance (O&M) Manual shall be provided. Oil water separators shall be maintained in accordance with the manufacturer's recommendations and industry standards for a particular application. Maintenance requirements may vary depending on the type of separator being used and the process for which it is used. At a minimum, the following maintenance practices shall be performed on all oil water separators that discharge to the City of Tacoma's wastewater sewer system.

- All separators shall be inspected by the operator/parcel owner on a monthly basis at minimum. The inspection shall include checking sludge and oil accumulations in the separator as well as for any abnormal conditions. The business shall maintain a log sheet indicating the date and findings of the monthly inspection.
- The operator/parcel owner shall be required to clean the separator on a regular basis as needed and maintain documentation of the cleaning and waste disposal for the separator. The separator shall be cleaned if **any** of the following conditions are present.
 - a. Sludge accumulations in excess of 20% of the vertical hydraulic capacity in any compartment of the separator.
 - b. Oil accumulations in excess of two inches in any compartment of the separator. This requirement may not apply to large industrial type oil water separators such as refineries and fuel depots.

- c. The coalescing media is plugged with sludge and/or oils.
 - d. Sheen is visible on the discharge of the separator.
 - e. The effluent of the separator is sampled and analyzed to be in excess of limits set forth in Tacoma Municipal Code 12.08.040.
- The business shall repair, replace or install any necessary or missing components such as access covers, piping, pumps, valves, baffles, weirs and coalescing media.
 - Access to the separator shall be maintained at all times. Covers shall be in operational order and no obstacles shall be stored on or around the separator. The operator/parcel owner shall be responsible to have and maintain all necessary equipment on site for accessing a separator for maintenance and inspection.

The Operation and Maintenance manual shall include the name and contact information for the party responsible for maintaining the oil water separator. The O&M manual shall be kept onsite and made available to City of Tacoma staff.

A parcel requiring an oil water separator may be leased to a tenant. However, the ultimate responsibility for complying with the requirements of this policy shall remain with the parcel owner.

SECTION 1.7 OPERATION:

All oil water separators that discharge to the City of Tacoma's wastewater sewer system are to be operated within the intended and designed usage of the individual separator. Separators are not to be used as waste oil storage. Separators are not intended to remove chemical solvents or other cleaners. At no time shall any hazardous waste be allowed to discharge to the separator. Businesses should implement Best Management Practices such as dry floor cleaning or mechanical floor cleaning to ensure that separator does not accept materials not intended for the separator. The operator/parcel owner shall follow manufacturer recommended operation practices.

SECTION 1.8 ADDITIONAL REQUIREMENTS FOR FUEL ISLANDS

The following requirements apply to fuel islands in addition to those requirements in Sections 1.1 to 1.7.

- Uncovered fuel islands shall be sized in accordance with Section 1.4.2 Uncovered Oil Water Separator Sizing Criteria above.
- Covered fuel islands may provide a blind sump for spill containment or they may drain into the wastewater sewer through an oil water separator.
- For covered fuel islands, the blind sump shall be sized for: 15-minute retention at the greater flowrate of the highest fuel dispenser nozzle or the 6-month storm over the containment pad, whichever is greater, with a minimum of 50 gallons.

Oil water separators for covered fuel islands with incidental run-on and no more than four (4) hose bibs shall be rated at a minimum of 18 gallon per minute and have a minimum 530 gallon capacity when proposing API separators. For coalescing plate separators refer to manufacturer's recommendations in order to achieve the required discharge requirements of TMC 12.08 or size the CP separator per the SWMM, Volume 5.

- The fuel island pad must encompass the reach of the longest fueling hose.
- The fuel island roof or canopy shall, at a minimum, cover the spill pad (within the grade break or fill dispensing area) and preferably extend several additional feet to reduce the introduction of windblown rain. All roof drains shall be conveyed away from the fueling area.
- The fuel island pad shall be designed to meet any applicable International Fire Code requirements.
- Employees shall be trained on the proper use of fuel dispensers.
- Post signs in accordance with the International Fire Code (IFC).
- Post "No Topping Off" signs.
- Ensure that the automatic shutoff on the fuel nozzle is functioning properly.
- Separators shall have an emergency shut-off valve installed on the discharge line. A valve key shall be provided and be prominently displayed near the shut-off valve.
- An Accidental Spill Prevention Plan developed by the parcel owner and approved by the Environmental Services Science and Engineering shall be available for inspection. Volume 4, BMP A714 Spills of Oil and Hazardous Materials provides guidance for the elements of a spill plan. Have designated trained person(s) available either onsite or on call at all times to promptly and properly implement the plan and immediately cleanup all spills.
- A person shall be present at the pump during fueling.
- Suitable containers for waste materials such as oil filters, oil cans, and garbage shall be provided.

SECTION 1.9 ADDITIONAL REQUIREMENTS FOR COVERED PARKING

Covered parking areas with drains or hose bibs shall discharge to the wastewater sewer system through an oil water separator. The oil water separator shall be minimum 18 gpm rated and have 530 gallon capacity when proposing an API separator. For coalescing plate separators refer to manufacturer's recommendations in order to achieve the required discharge requirements of TMC 12.08 or size the CP separator per the SWMM, Volume 5.

For areas without hose bibs or drains, incidental runoff may drain to a blind sump sized to handle accidental spills.