



SAND AND OIL INTERCEPTORS (SOI)



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CONSTRUCTION STANDARDS

Pages 380.20, 380.30, 380.50 STD NO. D-171, and 380.60 STD NO. D-172

REQUIREMENT:

Sand and oil interceptors are required for industrial and commercial establishments where pretreatment of wastewater effluent is indicated as necessary to capture solids (sand, silt, etc.) or floatables (oil, etc).

This standard applies to all new construction, tenant improvements, remodels, and existing systems which are in need of upgrading.

SOI's will be sized from industry submitted, certified Industrial Waste Survey information, or by City field inspection data. The sizing criteria will follow the Uniform Plumbing Code (UPC), Appendix I-9. The UPC does not specify requirements for all specific applications; however, the basic formula may be easily adapted to differing applications or parameters.

SIZING CRITERIA:

- (a) Parameters: the parameters for sizing SOI units are hydraulic loading, retention time, and storage factor for one or more fixtures or industrial applications.
- (b) Sizing Formula: the size of the SOI will be determined by use of the following formula:

Number of Units Washed per Hour *	X	Waste Flow Rate**	X	Retention Time #	X	Storage Factor ##	=	Interceptor Size (Liquid Capacity)
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* Number of units washed per hour (i.e., auto's, engines, parts, etc.)

** Waste Flow Rate:

Gallons per unit cleaned (for intermittent use), or gallons per hour (for constant use)

Retention Time: 2.0 hours

Storage Factors (vehicle/equipment/parts, etc. washing):

- a. Self service/public 1.5 hours
- b. Employee operated automated/commercial 2.0 hours
- c. Other industrial/commercial applications 2.0 hours

The minimum size SOI allowed by the City is 100 gallons. Adjustments for extenuating circumstances will include establishment of an agreed upon SOI maintenance (pumping) schedule, between the facility owner/operator and the City.

DESIGN:

All new construction and upgrades having an SOI requirement shall be constructed to include a sample monitoring station.

Facilities required to install an SOI and/or sample monitoring stations shall install units of approved designs on file with the City's *Construction Standards*. The use of auxiliary or alternate pretreatment systems in conjunction with or in lieu of an SOI unit must be approved by the City's Industrial Waste Analyst office prior to installation.

If an existing undersized unit is structurally sound and installed properly, then, in lieu of replacing it with a larger unit, the owner may choose to install an additional unit in series with the existing unit to satisfy the total size capacity required.

The attached standard SOI drawing applies to units of 100 through 1500 gallon capacity. Units over 1500 gallon capacity must have at least 3 compartments.

All required SOIs shall be installed and properly maintained with all internal required plumbing of proper design and length in place at all times.

Revised 08-20-2002