

**SOUTHWEST METROPOLITAN
WATER AND SANITATION DISTRICT**

Petroleum, Oil, Grease and Sand (POGS) Policy
(adopted September 17, 2010)

1.0 Purpose

The purpose of this policy is to minimize the loading of petroleum oil, grease, and sand (POGS) entering Southwest Metropolitan Water and Sanitation District's (District) wastewater collection system and the Littleton/Englewood Wastewater Treatment Plant (L/E WWTP). POGS can contribute to pass-through of pollutants into the South Platte River and municipal sewage sludge and a volatile atmosphere within the District's collection system. Additionally, sand can cause sewer blockages in low flow lines and damage pumping equipment.

2.0 Scope and Applicability

2.1 Scope

This policy encompasses the entire service area of Southwest Metropolitan Water and Sanitation District including those areas that are located outside the District's legal boundaries but discharge wastewater into the District's wastewater collection system by agreement and/or permit.

2.2 Applicability

2.2.2 Non-domestic Users

This policy applies to any non-domestic user in the District's service area that has the potential to discharge wastes containing sand, grit, and/or petroleum by-products into the wastewater system. Examples of such facilities include but are not limited to: automobile or recreational vehicle service stations, fleet maintenance stations, mechanical repair shops, car or truck washes, machine shops, garden nurseries, warehouses, and parking garages. These users shall install and maintain a sand/oil interceptor (SOI) as directed by the District. Users with an elevator pit must either install a SOI or implement one of the other options outlined in Section 5.5.

2.2.3 Domestic Users

This policy does not apply to domestic users. However, the best management practices (BMPs), set forth in this policy, are recommended for domestic users to assist in preventing pollutants from entering the collection system.

3.0 Definitions and Acronyms

3.1 Definitions

Best Management Practices - Schedules of activities, prohibitions or practices, maintenance procedures, and other management practices; it also includes treatment

requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.

Control Authority – Southwest Metropolitan Water and Sanitation District, the Cities of Littleton and Englewood or their designee, including the Division.

District – Southwest Metropolitan Water and Sanitation District.

Division – The Industrial Pretreatment Division of the Littleton/Englewood Wastewater Treatment Plant.

Domestic User – Any private residential user that discharges wastes derived from ordinary living processes excluding any commercial or industrial wastes.

Inactive SOI – An existing SOI that is no longer in use

Non-domestic User – Any user that does not meet the criteria for categorization as a domestic user shall be considered a non-domestic user

Notice of Violation (NOV) – Notice given to a user who in violation of this policy

Publicly Owned Treatment Works (POTW) – A publicly owned treatment works includes any devices or systems used in the collection, storage, treatment, recycling, and reclamation of sewage and any conveyances, which convey wastewater to a treatment plant.

Petroleum Oil, Grease, and Sand (POGS) – Any hydrocarbon or petroleum product including oils and greases, and/or sand, grit, gravel or any other aggregate.

Sand/Oil Interceptor (SOI) – A plumbing appurtenance or appliance that is installed in a sanitary drainage system to intercept POGS from a wastewater discharge and is identified by volume, baffle(s), not less than two (2) compartments, a total volume of not less than five-hundred (500) gallons, and gravity separation. Sand/oil interceptors are generally installed outside.

User – Any person who contributes, causes, or permits the contribution of wastewater into the POTW

3.2 Acronyms

BMP – Best Management Practices

L/E WWTP – Littleton/Englewood Wastewater Treatment Plant

POTW – public owned treatment works

NOV – notice of violation

POGS – petroleum oil, grease, and sand

SOI – sand/oil interceptor

4.0 Roles and Responsibilities

4.1 District

The District is responsible for implementing this policy. Duties include but are not limited to reviewing building plans, inspecting applicable users for compliance, and enforcing policy requirements. The District may delegate these responsibilities to outside contractors who represent the District.

4.2 Division

The Division has oversight authority over the District's adoption and implementation of this policy.

4.3 Contractors

Contractors may be delegated to perform the roles and responsibilities of the District.

4.4 Users

Users to whom this policy applies, as identified in Section 2.2, shall comply with all requirements listed in Section 5.0. The user shall permit inspections by the District with or without notice for the purpose of determining applicability and/or compliance with this policy.

5.0 Requirements

This section describes the requirements for all applicable users. Prior to purchasing a business or signing a lease for an existing retail or other type of space, it is recommended the user contact the District with questions about their requirements. This can help users avoid costly mistakes or oversights.

5.1 Plan Reviews

The user and owner of the property, business, or industry or an authorized representative of the user must contact the District for the purpose of obtaining a plan review. The plan review shall determine the need, size, location, and other requirements of the SOI required to control discharges. Written approval from the District must be obtained prior to installation of the SOI. The review of such plans and operating procedures shall in no way relieve the user from the responsibility of modifying such facilities as necessary to produce a discharge acceptable to the District in accordance with this Policy and the Engineering Standards of the District.

Plans are required to be submitted for approval prior to any of the following:

- Sale or transfer of ownership of the business,
- Change in the trade name under which the business is operated,
- Change in the nature of the services provided that affect the potential to discharge POGS, and/or
- Remodeling of the facility that may result in an increase in flow or POGS loading or that otherwise requires the facility to submit plans or specifications for approval through a building or zoning department, or any other formal approval process of a city, county, or other jurisdiction.

All plans submitted to the District must show the location of the SOI, include dimensions of the SOI and plumbing, show connections to all plumbing fixtures, and include the sizing calculation in accordance with Section 5.2.2.

5.2 SOI Criteria

5.2.1 SOI Plumbing and Structural Requirements

All drains from shop areas, storage areas, washing areas, auto storage areas, and/or potential spill areas shall be connected to a SOI. If an oil or chemical storage room is too small for all oil and chemicals to be kept at least 25 feet from any floor drain, no floor drain shall be placed in that room. Fixtures to be connected include, but are not limited to, floor drains, hand sinks, and wash areas located in areas where sand and petroleum-based liquid waste materials may enter the collection system.

Each business establishment for which a SOI is required shall have a SOI serving only that establishment. Common or shared SOIs are not permitted. The District may grant a variance for a common or shared SOI if it is pre-existing and if the resulting discharge does not exceed 200 mg/L for oil and grease.

All SOIs and associated plumbing shall be installed by a licensed plumber or contractor. All SOIs must have two compartments separated by a baffle wall. The primary compartment shall have a volume equal to two-thirds of the total capacity, and the secondary compartment shall have a volume equal to one-third of the total capacity. Each compartment shall be accessible by a traffic rated manhole above the inlet and outlet piping with a minimum diameter of 24 inches. Manhole covers may not be locked, or otherwise fastened in place, such that access is restricted.

All plumbing shall be compatible with wastewater containing POGS, such as PVC. A sampling-T with a removable cap shall be placed at the outlet end of the SOI to allow sampling of effluent. The top of the sampling-T shall be no more than one foot below grade. In order to maximize retention time in the primary chamber, the bottom of the inlet piping shall extend down no less than 50% of the total water depth. The bottom of the outlet piping must extend down within 12

inches of the base of the SOI. Flow from the primary to secondary compartment shall be through a baffle pass-through (hole) or over the top of the baffle. The baffle pass-through or top of the baffle shall be no more than 5 inches below water line. If a pass-through is used, the cross sectional area shall be at least equivalent to the cross sectional area of the inlet piping into the SOI. Support brackets are required for inlet and outlet piping. Clean outs and venting shall be PVC pipes. Vents shall be independent of any other building venting system and shall be in accordance with local building codes. Refer to Exhibit 1 for a diagram of a SOI.

Car washes with individual wash bays shall have a catch basin located directly below the drain of each bay. The catch basin(s) shall be connected to the SOI.

5.2.2 SOI Sizing

The minimum capacity of a SOI is 500 gallons. The formula for SOI capacity is:

$$\frac{\text{Process floor space (ft}^2\text{)}}{\text{Use factor from Table 1}} \times 7.48 \text{ gallons} = \text{Capacity of SOI}$$

Table 1: Use Categories

Use Factor	Use Categories ₁
3 square feet	Truck wash Heavy equipment wash Commercial automatic car wash
6 square feet	Commercial car wash (hand held spray)
8 square feet	Auxiliary wash bay
15 square feet	Automotive service garage Machine shop
100 square feet	Storage area/warehouse
1,000 square feet	Parking garage ₂

Notes:

1. If your use category is not listed, contact the District for sizing calculations.
2. Do not include the top level of the parking garage if it is exposed to storm events. Runoff from this level shall be drained to the storm water system.

Common or shared SOIs are not permitted unless a variance is granted. Any common or shared SOIs must be sized appropriately for each individual user and the sizes must be added together to obtain the final SOI size. Common or shared SOIs may be reevaluated for proper sizing and capacity as facilities change business operations, practices, or owners or tenants.

5.2.3 SOI Location

Each SOI shall be so installed and connected that it shall be at all times easily accessible for inspection, cleaning, pumping, and maintenance. Each SOI manhole cover shall be readily accessible and safely removable for servicing and maintaining the SOI in good working condition. The use of ladders, the removal of bulky equipment, or any other circumstances that impedes safe access in order to service or inspect SOIs shall constitute a violation of accessibility. SOIs are not permitted to be located in parking spaces or driveways with heavy traffic. The location of all SOIs shall be shown on the approved building plan.

5.2.4 SOI Maintenance

SOIs shall be maintained, at the expense of the user, by regularly scheduled cleaning so that they will properly operate as intended to efficiently intercept POGS from the user's wastewater and prevent the discharge of said materials into the City's wastewater collection system.

A SOI shall be serviced at a minimum of every 90 days for truck washes, heavy equipment washes, and commercial car washes. A SOI shall be serviced at a minimum once per year for all other users. The SOI may be required to be serviced more frequently as needed to ensure the total accumulation of solids, debris, and oil does not exceed 40% of either the total capacity of the SOI or 40% of the capacity of any one chamber. All users are required to structurally maintain all components of their SOI as per the design requirements in Section 5.2.1 of this document.

Maintenance of SOI shall be done in a workman-like manner only by a business or professional normally engaged in the servicing of such plumbing fixtures. Partial removal of contents is not allowed. Contents removed from SOIs shall be hauled off-site and disposed of properly. Under no circumstances shall the SOI's contents be reintroduced to the sanitary sewer system. The user must take reasonable steps to assure that all waste is properly disposed of at a facility in accordance with federal, state and local regulations (i.e. through a certification by the hauler included on the waste manifest or trip ticket for each load.)

All records, receipts, and manifests of SOI maintenance, removal of SOI contents, and off-site hauling of POGS waste shall remain on-site and accessible for review by the District for a minimum of three (3) years. The District may require a user that falls under the provisions of this policy to submit copies of all records, receipts, and manifests of SOI maintenance, removal of SOI contents, and off-site hauling of POGS waste.

In the event a SOI is not properly maintained by the user, the District may authorize such maintenance work to be performed on behalf of the user. The costs of such maintenance shall be billed directly to the user. Failure to pay said charges may result in discontinuance of service.

Biological treatment or enzyme treatment shall not be a substitute for the servicing of the SOI at the frequency determined by the District. Use of enzymes to bypass the SOI is prohibited.

5.2.5 SOI Closure

The District may determine that a SOI is no longer necessary. Abandoned SOIs shall be closed by:

- Complete removal of SOI contents generally performed by a authorized service company,
- Installing of a direct pipe connection from the inlet to the outlet or capping the inlet and outlet pipe,
- Filling of the empty SOI with an appropriate fill material such as sand, and
- Securing the opening(s) to the interceptor (e.g. cement, etc.)

Inspections of closure activities may be required by the District.

5.2.6 Facilities with Existing SOIs

Some facilities may have a SOI in place. An existing SOI may be undersized for a user according to the sizing requirements of Section 5.2.2. The District may approve a new user or a user who is required to submit plans for review under Section 5.1 to use the existing SOI if the District determines it can adequately protect the sanitary sewer from POGS. The existing SOI must have two chambers and be retrofitted to meet the requirements of Section 5.2.1.

5.3 Best Management Practices (BMPs)

The purpose of BMPs is to minimize the discharge of POGS into the sanitary sewer system. The following BMPs shall be implemented by non-domestic users to whom this policy applies:

- **Installation of mesh screens.** Facilities with the potential to discharge debris greater than 1/2" in any dimension shall install a mesh screen or similar device to prevent such debris from entering the SOI.
- **Storage and disposal of wastes and raw materials.** SOIs shall not be used as a means for disposal of spent or spilled chemicals, automotive or other commercial/industrial fluids, sludge, or other substances. All spent or spilled chemicals, automotive or other commercial/industrial fluids, sludge, oils, or other substances shall be collected and stored properly in appropriate containers. Such containers shall be maintained to ensure that they do not leak. Raw materials and wastes shall be stored 1) at a minimum of 25 feet from any floor drain or building access to outside or 2) within adequate secondary containment. Any wastes shall be disposed of in accordance with all Federal, State, and local laws.

- **Employee training.** Employee training shall be provided as part of the normal orientation process and annually thereafter including, at a minimum, the following subjects:
 - How to sweep floors prior to floor wash down to ensure there is no excessive oil or sand entering the sanitary sewer,
 - The location, use, and disposal of absorption products to clean any spills (Washing spills into drains is prohibited.), and
 - How to properly dispose of oils and other wastes into designated containers without spilling.

Training shall be documented and employee signatures retained indicating each employee's attendance and understanding of the practices reviewed. Training records shall be made available for review at any reasonable time by the District.

- **Signage.** Signs shall be posted above all sinks and similar devices prohibiting the discharge of oil and other chemical waste down the drains.

5.4 Spill Prevention

All users are required to have measures in place to control unwanted discharge to the sanitary sewer. Chemicals, petroleum-based liquids, and other liquid products must be stored 1) at least 25 feet away from drains or building access to outside or 2) within adequate secondary containment to reduce the potential of spills reaching the sanitary sewer and/or storm sewer system.

5.5 Elevator Pits

New users with elevator pits shall not have drains in those elevator pits connected directly to the sanitary sewer. Sump pumps may be installed in elevator pits. The requirement for a sump pump to be installed is to be determined by the building engineer, architect, or equivalent and/or as required by the local building authority.

In the event it is determined that a sump pump shall be installed, there are three options to manage the discharge of accumulated wastewater from the sump:

- If a SOI is already required in the facility (e.g., a parking garage, maintenance garage, or warehouse where floor drains are present), then the sump pump outlet may be plumbed through the SOI. A SOI may not be installed for the sole purpose of draining the elevator pit, because not enough wastewater will pass through the SOI to allow it to function as designed.
- If a sump pump is to be plumbed to the sanitary sewer and a SOI is not required based on other infrastructure, an oil detector shall be installed which will shut-off the flow of wastewater and sound an alarm in the event oil is detected in the wastewater. In

the event the oil detector shuts off wastewater flow and the alarm sounds, the wastewater in the elevator pit shall be handled as discussed below.

- If the sump pump is not to be plumbed directly to the sanitary sewer, it may be plumbed to a holding reservoir. The size and structure of the holding reservoir is to be determined by the building engineer, architect, or equivalent and/or as required by the local building authority. Wastewater in the holding reservoir shall be handled as discussed below.

Wastewater may be continuously discharged to the sanitary sewer via a sump pump if the required oil detector described above is installed and maintained in working order. Below are approved options for handling wastewater in elevator pits where the oil detector alarm has been activated, wastewater accumulated at the bottom of a sump where there is no pump and no discharge, or wastewater in a holding reservoir:

- If the wastewater is to be discharged to the sanitary sewer, oil on the top of the water must be skimmed off or absorbed using oil absorbent pads or equivalent and disposed of by an appropriate waste hauler. Following removal of the oil, if the wastewater is in an elevator pit, the remaining wastewater may be discharged to the sanitary sewer via the sump pump. If the wastewater is in a holding reservoir or at the bottom of a sump where there is no pump and no discharge, the wastewater may then be discharged to the sanitary sewer via appropriate means (i.e. hose, bucket transport, etc.).
- Wastewater in either the elevator pit or holding reservoir may be containerized and hauled off-site by an appropriate waste hauler.
- If the volume of wastewater that accumulates in the bottom of a sump where there is no pump and no discharge or in a holding reservoir is limited and does not require discharge to the sanitary sewer or off-site disposal, the wastewater may be allowed to evaporate.

5.6 Variances

A variance as to the requirements of this policy for existing users may be granted by the District for good cause. The user has the burden of proof of demonstrating through data and other information why a variance should be granted. In no case shall a variance result in a violation of any requirement or effluent limit specified in City of Littleton Municipal Code. The granting of any variance shall be at the discretion of the District and requires the approval of the Division.

If a variance is granted, the user shall institute BMPs and other mitigation measures, as determined by the District.

6.0 Enforcement

The District has the authority to enforce the requirements specified herein. Upon inspection of a user's SOI and/or BMPs, the user will be given a copy of the inspection form. The inspection form will contain the inspection results and will indicate the deadline for any corrections if necessary.

Deadlines for violations are as follows:

- SOI repairs must be completed within 15 calendar days;
- SOI pumping must be completed within five calendar days;
- Spills or leaks shall be cleaned-up within 24 hours;
- Mesh screens must be replaced within ten calendar days;
- Missing signage must be immediately replaced; and
- Violations involving improper employee BMP adherence shall require retraining of the employee and documentation of such training to be post marked, hand delivered, email, or faxed to the District within five calendar days.

If a user fails to make the corrections within the allotted timeframe a fine may be levied as an initial enforcement action. If noncompliance continues after a fine has been levied, the enforcement authority will escalate enforcement actions that could include both civil and criminal actions and discontinuance of service.

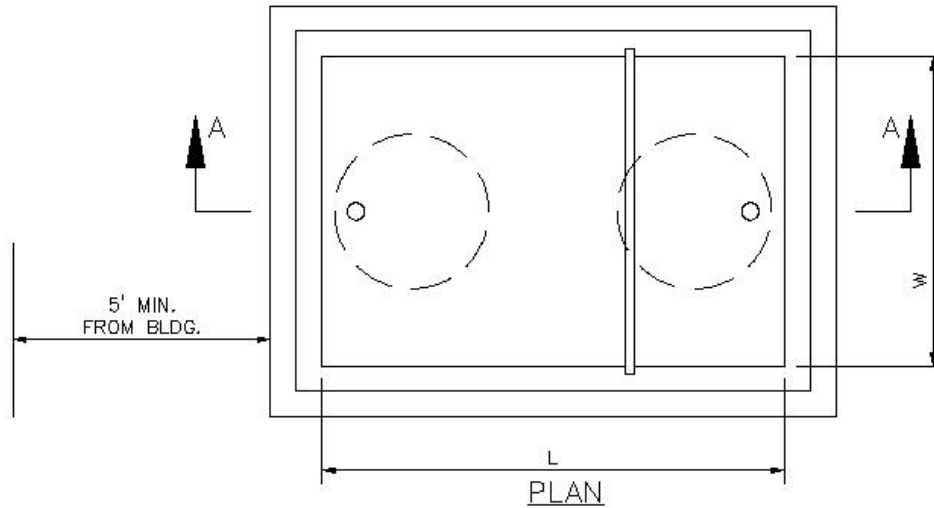
7.0 References

Englewood Municipal Code: Title 12, Chapter 2, Section 5

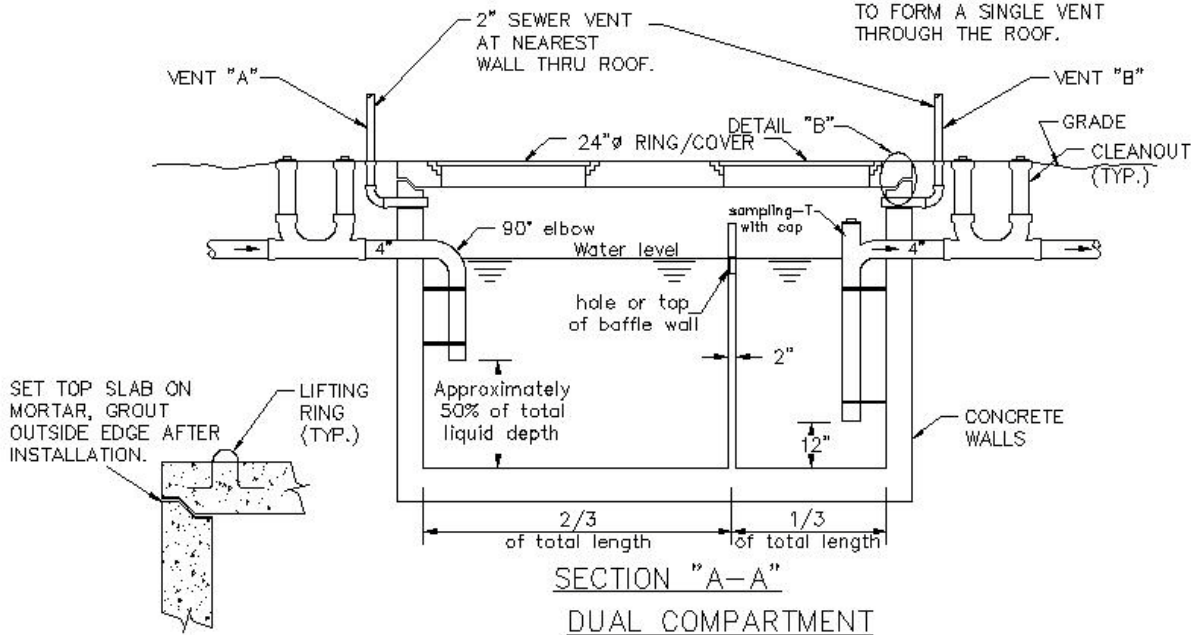
Littleton Municipal Code: Title 7, Chapter 5, Section 25

EXHIBIT 1

HIGH RATE - DUAL COMPARTMENT



VENT "A" MAY RISE A MINIMUM OF 42" ABOVE FIXTURE FLOOD LINE AND MAY COMBINE WITH VENT "B" ABOVE THE 42" LINE TO FORM A SINGLE VENT THROUGH THE ROOF.



DETAIL B