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Municipal Technical Advisory Service

GREASE TRAPS

by Sharon Rollins

What Are Grease Traps?

Grease traps are small skimming tanks attached to wastewater discharge lines. They are used to reduce the amount of grease, oil, fatty acid, wax, and miscellaneous hydrocarbon and petrochemical products entering the sewer system.

Why Are Grease Traps Needed?

Unless grease is removed at the point of discharge, it tends to accumulate on sewer line walls or is carried to the sewage treatment plant in solution or suspension. An incrustation in sewer lines reduces the capacity of the sewer lines. Once an incrustation has formed, it is very difficult to remove. High grease concentration in influent wastewater causes operational problems and increased treatment costs at the sewage treatment plant.

Where Are Grease Traps Needed?

Grease traps are effective if they are located close to the source of grease. Common sources are commercial and industrial dischargers such as restaurants, garages, hospitals, and manufacturing plants. Grease traps may not be sufficient for industrial manufacturing facilities, which handle large quantities of oil. More advanced treatment such as oil/water separators or air flotation devices may be needed.

Design Criteria for Grease Traps

1. Locate the grease trap near the source of discharge.
2. If possible, avoid locating grease traps on bathroom waste lines. Sewage solids could settle in the grease traps.
3. Design for 15 to 30 minutes detention, allowing time for the wastewater to cool and the grease to separate and rise to the surface.
4. Use a baffle to force wastewater flow downward beneath the surface.
5. Provide easy access to the grease trap to encourage good maintenance.
6. Provide a tight fitting cover. Grease skimmings are likely to become putrid.

Maintenance of Grease Traps

Routine maintenance of grease traps is essential to reduce grease concentrations in wastewater. Grease traps are maintained by skimming grease from the surface of the liquid in the trap **frequently**. Daily skimming may be required for some dischargers. If traps are not skimmed regularly, they are of little value. Skimmings may be sold or disposed of as a solid waste.

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Since grease traps usually are privately owned, it is necessary for the municipality to require, via a sewer use ordinance, that grease loading to the sewerage system be limited. Sewer use ordinances generally specify that grease and oil concentrations must be less than 100 parts per million. Field inspections and occasional laboratory testing will be required to enforce the sewer use ordinance.

Most dischargers are willing to limit grease discharge to the sewerage system if they understand the undesirable impacts of the discharge. Educate the dischargers about the importance of grease traps and how to maintain them.

Further Information

For further information on grease traps, contact Sharon Rollins, Utility Management Consultant in Nashville at (615) 256-8141 or your MTAS municipal consultant in Knoxville at (615) 974-0411, Nashville at (615) 256-8141, or Jackson at (901) 423-3710.

The Municipal Technical Advisory Service (MTAS) is a statewide agency of The University of Tennessee's Institute for Public Service. MTAS operates in cooperation with the Tennessee Municipal League in providing technical assistance services to officials of Tennessee's incorporated municipalities. Assistance is offered in areas such as accounting, administration, finance, public works, communications, ordinance codification, and waste water management.

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The University of Tennessee
Municipal Technical Advisory Service
600 Henley Street
Suite 120
Knoxville, Tennessee 37996-4105

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