

**RESTAURANT OWNERS**  
12 SIMPLE WAYS TO PROTECT  
YOUR SEPTIC SYSTEM

(Prepared by the Barnstable County Massachusetts Department of Health)

Restaurant kitchen wastewater usually contains high levels of food waste and grease. If grease or food solids reach your leaching field they can permanently damage the field so that it no longer functions to dispose of wastewater. This leads to costly leaching field repairs. You can help protect your leach field by following these simple procedures.

**Changing kitchen practices** is a low cost but very effective way of protecting your septic system from the effects of grease:

1. **Train dishwashing personnel to thoroughly scrape plates and cookware** to remove all food waste, especially cooking oils and creamy sauces and gravies which are high in grease, before rinsing dishes. Thorough scraping of dishes will prevent the majority of grease in your waste stream from entering your septic system.
2. **Consider installing a grease recovery device (grease skimmer).** These devices, installed in the kitchen, are designed to trap and remove floating grease from wastewater before it leaves the building. Wastewater enters the trap where grease rises and is continually skimmed off the water surface. The grease then flows to a collection chamber for recovery. Grease recovery devices can remove a large percentage of grease in wastewater.
3. **Practice water conservation.** Restaurant kitchens produce surge water flows during mealtime dishwashing periods. Surge water loads push wastewater through the grease trap too rapidly for grease to separate. Water conservation helps prevent surge loading.
4. **Low temperature (sanitizing rinse) dishwashers** may assist oil and grease to separate out in the grease trap. High water temperatures cause grease to become emulsified. Emulsified grease does not separate out in a grease trap and may be carried over into your leaching field. Check with your dishwasher manufacturer to see if your machine can be used as a low temperature sanitizing rinse dishwasher.
5. **Look for special dishwashing and general cleaning detergents that promote rapid oil/water separation.** These detergents are formulated to release oil quickly so that it can rise to the water surface instead of remaining emulsified.
6. **Use proper concentrations of solvents, cleaners and disinfectants.** Solvents and cleaners can cause grease to become emulsified and be carried past the grease trap to the leach field. Excess use of disinfectants reduces bacterial action in the septic system which in turn reduces treatment of wastewater.
7. **Use shortening in place of liquid vegetable oil.** Shortenings solidify at room temperature while liquid oils do not. Shortening oils will separate out more rapidly and thoroughly in a grease trap while liquid vegetable oils are more likely to be carried over into the leach field.

**Make sure your septic system and grease trap are serviced regularly:**

8. **Pump grease trap quarterly (unless local regulations require more frequent pumping).** Leaving grease in the grease trap too long causes it to harden which makes it very difficult to pump out.

9. **Leave most of the liquid in the grease trap when it is pumped.** Only the layer of grease which accumulates on the water surface should be removed when the trap is pumped. Leave the underlying liquid to act as a reservoir of water so that new grease entering the trap can cool rapidly and solidify.

10. **Pump septic tank frequently to prevent buildup and carryover of solids.** Because restaurant wastewater contains high levels of solid food waste sludge may accumulate rapidly. If too much sludge accumulates solids can be carried over into the leach field and damage it.

**If you are upgrading your septic system:**

11. **Consider installing a larger in-ground grease trap, or a series of grease traps.** A standard grease trap has a 1000 gallon capacity. This volume is intended to provide wastewater with a long enough residence time so that it can cool and grease can separate and solidify. If the grease trap receives high surge volumes of water and/or high temperature water there may not be enough time for wastewater to cool and grease to separate. A larger grease trap, or a number of smaller grease traps in series, will compensate for this problem by providing a longer residence time. The longer the residence time of the wastewater, the better the grease removal.

12. **If you are replacing your leaching system, consider installing leaching trenches instead of a leaching bed design.** Leaching trenches provide more oxygen to the wastewater entering the leaching field. This promotes bacterial growth which breaks down the wastewater and helps to prevent clogging of the leaching field.