EASTSOUND SEWER AND WATER DISTRICT

PROCEDURE MANUAL
FOR
COMMERCIAL AND RESTAURANT USERS

INTRODUCTION

This document serves to establish a sewer use ordinance that outlines proper practices and restricts certain connections and wastes in order to enhance the wastewater treatment process and to protect a local government investment. With periodic review, this manual will serve to help ensure the continued operational integrity of the utility.

DEFINITIONS

BOD - Biochemical Oxygen Demand. This is a measure of the amount of food value in the waste stream available for bacteria and other organisms to consume. It is measured in the laboratory by how much oxygen is used to stabilize the waste.

Emulsifiers - Any product added to the waste stream designed to prevent the separation of solid mater from the liquid stream.

FOG - Fats Oils and Grease. This is a measure of how much of the combined quantity is in the waste stream in parts per million.

Milligrams per Liter - The most common measure of contaminants in water, it is synonymous with parts per million.

On site facilities - This includes the septic tanks, effluent vault, pump, discharge assembly, and discharge to the main sewer line.

TSS - Total Suspended Solids- A measure of how much solid matter is suspended in the waste stream.

DISCRIPTION OF SYSTEM

Unlike most municipal sewer systems, Eastsound is a STEP (septic tank effluent pump) system. This means that each user of the system has a septic tank system on their property that provides primary treatment of the waste stream. When functioning properly the septic tank system removes about fifty percent of BOD and seventy-five percent of TSS from the water. This reduction in waste strength is essential to proper operation of the treatment process.

It is vital to the operation of the sewer system that adequate primary treatment occur in the on site septic tanks. Water usage and septic tank capacity must be regulated to insure that a minimum of forty-eight hours of retention in the septic tanks takes place. This allows the majority of solid material in the waste stream to separate from the liquid and remain in the tank.

The tank output (Effluent) generated by most users is composed of a variety of waste products suspended in water. These can be categorized into four main areas:

1. BOD: This is a measure of the amount of food value the waste stream has to the bacteria and other organisms that consume it.
2. TSS: This is a measure of the solid concentration present in the waste stream.
3. FOG: This is a measure of the amount of fats, oils, and grease present in the waste stream.
4. ALL OTHER PRODUCTS: These include cleaning products, personal care products, pharmaceutical products, and grit(sand dirt etc.).

In order for efficient secondary waste treatment, effluent concentrations should not exceed:

- BOD - Less than 400 milligrams per liter
- TSS - Less than 60 milligrams per liter
- FOG - Less than 50 milligrams per liter

The district may monitor these values and notify system user should they be exceeded, and may request that the user more carefully adhere to best practices.

BEST PRACTICES

The following products are not allowed to be disposed into the sewer system. These include:

- Any liquid or vapor having a temperature higher than 150 degrees Fahrenheit.
- Any gasoline, benzene, naptha, fuel oil, lube oil, or other flammable or explosive liquid, solid or gas.
- Any garbage; any ashes, cinders, sand, mud, straw, shavings, metal, glass, rags, feathers, tar, plastics, wood, paunch manure, condoms, sanitary napkins and tampons, diapers or any other solid or viscous substance capable of causing obstruction in the on site facilities or to the flow in sewers or other interference with the proper operation, care and maintenance of public sewers and the sewage treatment plant. (Amended by Resolution No.597-88).
- Any waters or wastes having a pH lower than 5.5 or higher than 9.0 or having any other corrosive property capable of causing damage or hazard to structures, equipment and personnel of the District or the sewage treatment plant.
- Any waters or wastes containing toxic or poisonous substance in sufficient quantity to injure or interfere with any sewage treatment process which constitute a hazard to humans or animals, or create any hazard in the receiving wastes of the sewage treatment plant.
- Any waters or wastes containing suspended solids of such character and quantity that unusual attention or expense is required to handle such materials in the on site facilities or at the sewage treatment plant.
- Any noxious or malodorous gas or substance capable of creating a public nuisance.
- Any septic tank additive or treatment designed to reduce solids collection in the septic tank.

No products are to be added to the drain or tank that will adversely affect the separation of solids. These include emulsifiers, enzymes and septic tank additives of any kind.
These products are designed to and will keep the solids in suspension in order to keep them from separating from the water and remaining in the tank, reducing tank efficiency.

It is also vital to limit the amount of biological solids that are added to the waste. This means following the following activities to minimize putting solids down the drain whenever possible:

- Wipe plates and cookware to remove food residue before washing
- Recycle used cooking oil or dispose of in a solid waste container
- Limit use of garbage disposals
- Limit the amount of milk products poured down the drain

All restaurant on-site systems connected to the sewer, which generate a significant amount of fats grease and oil, must have a grease interceptor installed in the waste stream. This is a commercially available grease trap designed to separate and retain most of the grease generated.

- A licensed plumber must size and install the grease trap.
- Grease traps must be cleaned regularly to remove trapped grease.
- Grease removed from the trap should be recycled or disposed of with solid waste.

SEPTIC TANK CARE AND MAINTAINENCE

Inspection and maintenance of the on-site facilities is an important part of the overall treatment process. While it is the District's responsibility, there are things you need to be aware of to assist in the process. Maintain access to the tanks and control panel. It is acceptable to place a potted plant or other item on the lids to conceal them; however, it is not acceptable to bury the lids or store materials on them, which deny the District access. The maximum depth of fill from the tank top to the surface is twenty-four inches. If you wish to landscape and raise the ground level beyond this point provisions must be made with the district to maintain access to the tank. Similarly, free access must be maintained to the control panel so it can be opened and examined. Do not plant trees or shrubs near the septic tank or in front of the control panel. As they grow, whey will make it difficult or impossible to maintain the system. Many trees and shrubs are capable of growing through the seal at the top of the tank and growing roots in the tank. This will damage the tank and cause ground water intrusion.

Proper disposal practices and maintenance of the grease trap usually limit septic tank pumping to annually. Excessive grease and solids can cause a significant increase in pumping frequency and corresponding cost.

District personnel will periodically inspect the septic tanks. This inspection will occur three times a year and personnel will pump the system when necessary. When possible, commercial pumping will be scheduled in the off-season to limit disruption of business. The property owner, where a restaurant is located, is required to pay the costs of septic tank pumping and septage disposal.