

**GRAND TRAVERSE COUNTY  
SEPTAGE TREATMENT FACILITY  
OPERATING PLAN  
September 13, 2006**

**Facility Name & Address:**

Grand Traverse County  
Septage Treatment Facility  
1717 Ahlberg Road  
Traverse City, Michigan 49686

**Facility Owner & Address:**

Grand Traverse County  
Dept. of Public Works  
2650 LaFranier Road  
Traverse City, Michigan 49686

**Facility Operator & Mailing Address:**

OMI  
606 Franklin Street  
Traverse City, Michigan 49686

**Regulatory Authority:**

This plan has been developed in response to the regulatory requirements of Part 117, Septage Waste Servicers, of the Natural Resources and Environmental Protection Act, 1994 PA 451. The Grand Traverse County Septage Treatment Facility has accepted septage and holding tank waste since 2005 and plans to continue to receive septage, holding tank and grease trap wastes. Special waste may be delivered to GTCSTF on a case by case basis. Subsequently, this Septage Treatment Facility Operating Plan has been prepared pursuant to the requirements of Section 324.11715b.

**Purpose:**

The purpose of the Grand Traverse County Septage Treatment Facility (GTCSTF) is to serve the residents of participating townships by addressing difficulties associated with proper disposal of septage waste material including holding tanks and restaurant grease traps. The facility will eliminate the problems associated with land application of septage waste including frozen soil conditions in winter months, loss of required isolation areas due to continued development of neighboring properties, loss of disposal properties due to increased public pressure.

The treatment facility will utilize membrane bioreactor (MBR) for flow treatment along with an autothermophilic aerobic digester (ATAD) for biosolids treatment. Effluent from the MBR will be discharged into the

Garfield Township wastewater collection system for final treatment at the Traverse City Regional Wastewater Treatment Facility. The ATAD will produce a Class A biosolids which will be dewatered to cake-like material for beneficial re-use.

**Location and Surrounding Area:**

The GTCSTF is located next to the Grand Traverse County Road Commission facility and the Grand Traverse County Humane Society. The parcel is zoned Agriculture with Industrial zoned property to the east and Agriculture zoned property on three sides. The facility is located on a ridge above the Boardman River valley.

**Categories of Acceptable Material:**

In general, the GTCSTF will accept domestic household septic waste, holding tank waste, restaurant grease trap material, portable toilet material and special waste. The facility may accept special waste such as industrial type waste material, landfill leachate or other material as long as that material in its delivered state is not disruptive to the plant operations as determined by Grand Traverse County. Waste that is disruptive to plant operations will not be accepted. All waste is subject to testing upon delivery and may be rejected if disruptive to plant operations.

**Service Area:**

The service area for the GTCSTF is defined as all Townships within Grand Traverse County and Elmwood Township in Leelanau County. Material from other Townships will be accepted provided the following:

1. There is available treatment capacity AND
2. The Township where the material originates has passed a resolution allowing the GTCSTF to provide the treatment service.

**Fee Structure:**

The GTCSTF will provide treatment on delivered material under the following fee structure:

1. Septage: 12 cents per gallon
2. Holding Tank: 4 cents per gallon
3. Restaurant Grease: 12 cents per gallon

Fees are based on facility operation costs, maintenance costs, replacement costs and capital costs. Special waste fees will be determined on a case by case basis. GTCSTF may adjust the fee structure in the future.

**Hours of Operation:**

The GTCSTF will initially be open to receive material seven days per week from 7:00 AM to 10:00 PM local time. Emergency access will be available during non-operating hours via phone contact with plant operators or County staff. GTCSTF may adjust the operating hours in the future.

#### Hauler Licensing:

Material will be received by the GTCSTF from those septage-servicing agents licensed by the State of Michigan and Grand Traverse County (GTC). County licensing process will require each service agent to enter into a contract with GTC and received the required training for use of the facility.

#### Delivery and Treatment Process:

The GTCSTF will receive material from septage waste vehicles licensed and authorized to use the facility. Loads will be discharged from the vehicles and into the facility through one of two truck bays. The truck bays are drive thru bays with automatic doors operated such that the bay is completely enclosed during the unload process.

Unloading of the vehicles uses a quick connect couple hose attached directly to the vehicle. The material is processed through a rock trap, meter, multiple sensors for detecting "hot" loads and finally through a  $\frac{1}{4}$ " screen. Subsequent to passing through screen the material leaves the unload building through underground piping and is sent to a 100,000 gallon equalization tank.

The equalization tank provides volume of material storage to provide a measured feed into the bioreactor vessel. Material is pumped from the equalization tank through a 0.7-millimeter screen and into an on-site pump station. The pump station then pumps the screened material to the bioreactor at a controlled rate.

The material in the bioreactor is aerated and biologically treated while a portion is passed through a membrane canister; that portion of the material that passes through the membrane as permeate/effluent is sent to a post equalization tank. If desired, the effluent can be stored in the post equalization tank for discharge into the sewer collection system during off-peak hours.

As the concentration of solids accumulates in the bioreactor a portion is drawn off, dewatered and sent to the ATAD for biosolids processing. Through aeration and detention time the ATAD unit produces a Class A biosolids for beneficial reuse.

#### Odor Control

The GTCSTF utilizes a biofilter for odor control. Each component in the receiving and treatment process is covered and enclosed. The head

space within each vessel as well as the space within the receiving building is ducted to the odor control system. The air is processed through the ATAD unit for conditioning and sent on to the biofilter. The air enters the filter through a set of distribution piping located under a stock of root material. Bacteria growth on the root material provides the air treatment and removes the odor. Once passing through the root media the cleaned air is discharged into the environment.