

# **The Pittsford Wastewater Treatment Plant**

## **Description of the Town Of Pittsford's Wastewater**

### **Collection and its Treatment Plant**

The Town of Pittsford treatment facility receives wastewater from the area within Pittsford. The area is residential and commercial. There is no industrial process wastewater. Domestic wastewater contains solids, micro-organisms, and dissolved gases. The solids may be classified as suspended or dissolved and as organic or inorganic. Gases in wastewater include oxygen, nitrogen, carbon dioxide, and methane as well as hydrogen sulfide. The wastewater flow rates and strengths vary according to the hour of the day, the day of the week and season. Wastewater collected in the area is carried through the combination of pressure and gravity sewer pipe to the treatment plant.

#### **Gravity Sewers**

The gravity sewer system is made up of various diameters and types of pipe. The older pipe installed upwards of 100 years ago is made of vitrified clay. Much of this type of pipe was lined with cure in place polypropylene pipe in the summer of 2001. Other sewers are made of PVC, asbestos cement, generally installed since the late 1960's. Among the dangerous gases found in manholes are hydrogen sulfide and methane, both which are flammable.

#### **Pump Stations**

The town of Pittsford's collection system has two wet / dry pit pumping stations. One located at Elm Street and the other at Depot Street. An overhaul of the pump stations were done as part of the 2002 upgrade project.

#### **Headworks**

Wastewater enters the Wastewater treatment plant in which is basically an open channel. Here the flow undergoes measurement, coarse screening, gravel and stone removal, and fine screening.

#### **Grit Channel**

A set of grit channels before the coarse bar screen collect gravel and stones which have settled. Collected material must be removed and disposed of regularly in accordance with EPA and local regulations.

#### **Microstrainer Screen**

Down stream from the grit channels and bar screen, the wastewater undergoes fine screening. This is a process in which solids are removed from the waste stream and taken to the land fill by Casella Waste Management.

### **Description of treatment process**

The raw wastewater enters the selector tank and then moves to the first stage aeration basins where it is under aeration for the micro – organisms to be supplied with air. It then flows to the second stage aeration tanks where it undergoes nitrogen removal (denitrification). Eventually this bottom zone becomes anaerobic. This is key for phosphorus removal.

### **Chlorine Contact Chamber**

The chlorine contact chamber accepts Effluent from two clarifiers through six inch PVC pipes. The tank provides a 30 minute detention time at peak daily flow. The chlorine is injected at the start of the contact chamber and flows through the channels where it enters the well for de-chlorination.

### **De-Chlorination**

A dechlorination chemical is then injected into the Effluent with Sodium Metabisulfate. This removes the chlorine from the Effluent before it enters the Otter Creek River.

### **Sludge Removal**

Solids removal is then pumped into a truck and taken to the Rutland Wastewater Treatment Plant for processing.

### **Sewage Works Waste Restrictions**

No person shall discharge or cause or allow to be discharged any of the following described waters or wastes to the public sewer system: Gasoline, fuel oil, or other flammable or explosive liquid, solids, or gas. Any water or waste containing paint, fats, wax, **GREASE**, or oils. Excessive discoloration such as **DYE WASTES**. A copy of the sewer Ordinance is available upon request at the town hall. Or call 483-6297 and ask for Bob Berardo chief operator.