

Orangetown Wastewater Treatment Plant Tour -- Fact Sheet

Directions

Orangetown Wastewater Treatment Facility
127 Route 303, Orangeburg, NY 10962

Turn off of 303 onto Jim dean Way (by the old Drive-In movie sign), pass the Orangetown Highway Department (119 NY-303), follow the road until it ends at the Sewer Department parking lot.

Tour Description

Join town staff for a 1.5 hour tour of the Wastewater Treatment Facility. You will learn about the entire wastewater treatment process from when it enters the plant from the Town's sewer system through when the cleaned wastewater is sent to the Hudson River.

The tour is appropriate for small groups of adults and 6-12 grade students. It is largely outdoors, on uneven ground and grated stairs, so wear appropriate footwear and clothing. And be sure to wash your hands before you leave!

Background Information

It wasn't until the 19th century that cities first started thinking about treating their wastewater. In 1948, Congress passed the Federal Water Pollution Control Act, the first federal law geared towards eliminating pollution from our waterways and improving sanitary conditions.

Water from the Orangetown passes through the Town's Sanitary Sewer Lines, through 45 pump stations, to reach the plant. Depending on the amount of rain, the plant treats from 7-15 million gallons per day (That's 5000 gallons per minute on a rainy day!). A series of physical, biological and chemical processes removes solid and dissolved waste from the water before it is released into the Hudson River via a pipe shared with the adjacent Rockland County Sewer Plant.

Zone 1

Preliminary Treatment begins with two physical processes: bar screening and grit removal. These processes remove the larger debris from the waste stream, such as wipes, latex gloves, and other items that should not be flushed.

Zone 2

Primary Treatment is also a physical process called Sedimentation. This process removes the settleable solids called *sludge* and the floatable solids called *scum* by allowing them to separate out from the waste stream. About 60% of the solids are removed during this process.

Zone 3

Secondary Treatment consists of both a biological and a physical process. Part I is a biological process that deals with the materials that don't settle out of the water, called suspended solids. A bacteria mass, called "slime growth," feeds on the solids left in the water. Then the waste water is passed on to Part II.

Zone 4

Part II of the Secondary Treatment Process is also Sedimentation. It works to capture all of the settleable solids that slipped through the other processes and any bacteria from the biological process.

Zone 5

The chemical process is the disinfection stage. Between May and October, the water is treated with an industrial chlorine solution, called Sodium Hypochlorite, to kill the disease causing organisms, and an additional solution, called Sodium Bisulfite, to reduce the chlorine in the water. The Plant uses about 300 gallons of the chlorine solution and about 30 gallons of the Sodium Bisulfite per day.

The water that leaves the plant is called Effluent. The effluent wastewater joins other treated wastewater from the Rockland County Sewer District and runs into the Hudson River via a pipe that ends underwater beyond Piermont Pier.

Zone 6

The final process is called sludge handling. Sludge and scum is collected and sent to sludge holding tanks. Excess water is removed from the sludge using a Belt Filter Press. The remaining "sludge cake," which is now 25% solid, is sent to the Rockland County Solid Waste Authority to be treated and turned into compost and other byproducts. The plant produces about 15 wet tons of sludge per day.