



WASTEWATER TREATMENT FACILITY

About the Facility

Flow enters the plant from Pittsburgh's 140 miles of sanitary sewers, passing through a bar screen before being lifted by pumps to a "pre-air" grit removal area. Circular primary clarifiers with scum removal gear are next in the line, followed by the trickling filters, 140 feet in diameter and 10 feet deep. In one, wastewater is fed to the media through a two-ended distributor arm. The other has a retrofitted four-ended distributor mechanism supplied by WesTech Engineering Inc.

Further treatment and nitrification is provided by a Schreiber LLC extended aeration activated sludge system. After final clarification, the effluent flows to a two-train, 16-bulb Aquionics UV light disinfection system before discharge through a cascade re-aeration channel to Cow Creek.

Biosolids and floatables from the primary clarifier move to an anaerobic digester that operates in the mesothermic range (68°F - 104°F). Digester gas is used to heat the digester via heat exchange, and any excess is flared off. Secondary solids are digested aerobically. Both solids streams are conditioned with polymers before dewatering on an Ashbrook Simon-Hartley belt press. The staff takes care to select a polymer that will work effectively on both primary and secondary solids.

City trucks haul the dewatered cake to area farm fields and spread it using a city-owned tractor and slinger machine. In cases where additional solids accumulate, the plant has drying beds available for additional dewatering.



Laboratory



Activated Sludge



U.V. Disinfection

Projects for 2017

Trickling Filter Distribution Arm Replacement

Barscreen Control Room Upgrade

PLC Upgrades

- Elks Lift Station
- Lone Star Lift Station
- Airport Lift Station

Variable Frequency Drives

- 2 Raw Sewage Pumps at WWTP

New Sampling Station at Airport Lift Station

Facts

- The facility is capable of treating 20 million gallons per day
- The facility treated 1.05 billion gallons in 2016.
- The average flow to the facility is 2.6 million gallons per day.
- The facility produces 425 tons of biosolids per year

Compost Facility

The City compost area is also located inside the Wastewater Treatment Plant grounds. The site accepts compostable waste such as leaves and grass clippings.

It takes two to four months for the raw waste to properly compost depending upon weather but yields a very valuable soil enhancement material.