

CLAYSVILLE WASTEWATER OPERATION

COLLECTION SYSTEM

Pennsylvania American Water Company(PAWC) purchased the Claysville wastewater collection and treatment system from the Claysville – Donegal Joint Municipal Authority on July 31, 2008. PAWC operates a 0.16 MGD Wastewater Treatment Plant (WWTP), a lift station, and collection and conveyance sewers necessary to service Claysville Borough and portions of Donegal Township in Washington County. The system serves approximately 529 customer connections.

The collection system contains approximately 64,750 lineal feet of 8” and 10” sewer mains consisting of PVC pipe. The majority of the pipe was installed in 1983 with several small additions since that time. The system also contains approximately 327 manholes.

PAWC operates and maintains one lift station on the collection system located at the Welcome Center on Interstate 70 which was constructed in 1995. The lift station has two pumps rated at 70 gpm each with backup generator.

WASTEWATER TREATMENT PLANT

The Claysville Wastewater Treatment Plant (WWTP) utilizes Primary Sedimentation, Rotating Biological Contactors and Secondary Sedimentation. The facility is designed for a rated capacity of 0.16 million gallons per day (mgd). The head works is equipped with an influent comminutor and a bypass manual bar rack. Effluent from the comminutor flows to a wet well, where it is pumped to a 47,700 gallon equalization tank.

Effluent from the equalization tank flows by gravity to two primary sedimentation tanks. The primary tanks contain a chain and flight sludge collection system. Sludge from the primary tanks is pumped into holding tanks where it is aerated and hauled away to the East Washington WWTP to be processed.

Effluent from the primary sedimentation tanks flows to two Rotating Biological Contactors. Both units are covered and operate in parallel. Poly-aluminum Chloride is fed into the effluent of the RBC’s for phosphorus removal. Effluent from the RBC’s flows to the secondary flocculating clarifiers.

Influent to the secondary clarifiers enters the units in the middle of the tank and flow down through a circular baffle wall. The flow exits the units via the v-notch weirs and continues to the chlorine contact tank. Solids collected at the bottom of the tanks are pumped back to the raw water wet well.

Chlorine is fed at the chlorine contact tank as a disinfectant. The treated effluent flows from the chlorine contact tank through a flow measuring weir to the outfall. Sodium bisulfate is fed just

before the outfall and is used to dechlorinate the final plant effluent water before it flows into the stream.

A 70 kW generator is used for emergency power. The generator is sized to run the plant at design capacity.