

1.2 General Information

The Mud Creek Water Pollution Control Plant (WPCP) was originally constructed in 1979 to treat 1.5 MGD and has undergone two expansions since. The first expansion in 1986 expanded the plant to treat an average daily flow (ADF) of 3.22 million gallons daily (MGD) and a peak hourly flow (PHF) of 8.05 MGD. The most recent expansion project, completed in 2012, increased treatment capacity to an ADF of 5.7 MGD and a PHF of 17.1 MGD. The plant discharges into Mud Creek, which is tributary to the Alapaha River, one of the several sub-basins within the Suwannee River Drainage Basin.

Treatment Process

Wastewater is treated through a series of mechanical and biological processes to assist nature with the removal of pollutants introduced by humans during the use of water. The Mud Creek WPCP is designed to process domestic, commercial, and light industrial wastewater to meet Georgia EPD's, (Environmental Protection Division) NPDES (National Pollutant Discharge Elimination System) requirements, and effluent quality limitations have been written into the plant's NPDES discharge permit. When properly operated, the effluent discharged by the Mud Creek WPCP conforms to the water quality standards established in the NPDES permit.

The most recent expansion in 2012 included building a new treatment process and upgrading existing structures to a modified Ludzack-Ettinger Process (MLE). Innovative technologies, including high-efficiency turbo blowers, high-level ultraviolet disinfection, fine bubble diffusion system and supervisory control and data acquisition (SCADA) system were incorporated to improve the efficiency of plant operations and maintenance and to meet the new permit effluent limits.

Major process systems listed below in order of flow through the treatment plant:

- Treatment Plant Influent Pumping Station (IPS)
- Plant Headworks
- Activated Sludge Process
- Tertiary Filtration System
- Reaeration System
- Ultra-violet (UV) Disinfection
- Outfall
- Chemical Storage and Feed system
- Solids Handling Systems

Treatment Plant Utilities:

- Plant Potable Water system
- Plant Reuse Water

Treatment Plant Operation and Maintenance (O/M):

The operation of the treatment plant is 24/7, with three eight-hour shifts.

All treatment plant operators are certified State of Georgia Wastewater Treatment System Operators.

All the maintenance at the facility is performed by Central Maintenance personnel.