

Facility Overview

CITY OF VALDOSTA
MUD CREEK WATER POLLUTION CONTROL PLANT
1638 Old Statenville Hwy.
Valdosta, Ga. 31606
NPDES Permit No. GA0020222

The Mud Creek WPCP is situated east of Inner Perimeter Rd. off of Ga. Highway 94 (New Statenville Highway). The plant was originally constructed in 1977 and was expanded to a capacity of 3.22 MGD in 1986. In 2011, the plant was expanded to its current capacity of 5.7 MGD, with peak hourly flow of 17.0 MGD. The Mud Creek facility serves the southeastern portion of the collection service area. The plant is currently permitted to treat an average daily flow of 3.22 MGD of wastewater and a peak hourly flow of 8.05 MGD. The Mud Creek WPCP consists of the following process units:

- Influent pump station consisting of three submersible/dry-pit pumps
- Preliminary treatment which includes screening and grit removal.
- Activated sludge process including six aeration basins
- Six secondary clarifiers
- Three Nova stainless steel screen disk filters, two Aqua-Aerobics disk cloth filters
- Post aeration process
- UV disinfection
- Plant has re-use water system which has four pumps along with three hypochlorite feed pumps
- Waste activated sludge is pumped to aerobic digester; sludge is dewatered using two belt presses; dewatered sludge is landfilled.

Plant Hydraulics

The Mud Creek WPCP consists of both pumped and gravity flow components. Raw wastewater flows into the pump station by gravity. From the pump station, the flow is pumped to the screening and grit removal system. The grit chamber effluent channel weir acts as the first hydraulic control point. Gritted effluent flows to a splitter box and weirs split the flow to the four aeration train tanks by gravity. Effluent weirs serve as control points for gravity flow through each aeration train and flow is matched to the four secondary clarifiers. The clarifier v-notch weirs act as the next control points in the gravity-flow system.

From the clarifiers, the secondary effluent flows by gravity to five filters, (two Aqua Disks/three Nova Ultra-screen). Flow valves are used to distribute the flows to the filters as needed. After filtration, tertiary effluent flows by gravity to a re-aeration tank, where an effluent weir acts as the next control point. Finally, flow enters the UV disinfection system, treated wastewater flows through UV tubes before final weirs, where flow goes by gravity to outfall to Mud Creek.