

## 1.2 General Information

Commissioned in Spring 2016, the new Withlacoochee WPCP provides the city with a state-of-the-art wastewater treatment for an ADF of 12 MGD, with the capability to treat peak flows of 18 MGD. When high flows require the use of the six-million-gallon equalization basin, the plant can treat a peak hourly flow of 38 MGD. In November/2020, an additional EQ basin (7.26 MG) was completed and placed into operation. The new plant uses a Sequencing Batch Reactor (SBR) System to treat wastewater while effectively removing nutrients and reducing phosphorous. The SBR system utilizes the activated sludge process, the most advanced biological treatment method used to treat domestic wastewater. As opposed to the conventional activated sludge process, in which wastewater treatment takes place in various, linearly arranged tanks, the SBR process occurs sequentially in the same tank. The SBR process is extremely flexible and suited to all types of wastewater and plant capacities.

Treatment begins at the plant headworks where mechanical bar screens remove sticks, plastics, and other large solids from incoming raw wastewater (influent.) The wastewater then enters one of the four SBRs to begin the activated sludge process. There, in a carefully controlled environment, the wastewater is mixed with air and live bacteria to oxidize organic material and remove inorganic solids through adsorption. After settling for solids removal, the partially treated wastewater then enters a process known as a tertiary treatment, where it is filtered through a cloth media disk filtration system. Finally, treatment includes disinfection with hypochlorite followed by chemical neutralization (dechlorination) to remove residual chlorine before the treated wastewater (effluent) is dispersed into the Withlacoochee River.

### 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 (CMMS) personnel.