

HISTORY

The R.L. Sutton Water Reclamation Facility was originally constructed in 1971. Situated on an original 40 acres along Atlanta Road and alongside the Chattahoochee River, it was sized to treat 10 million gallons per day. At conception, the plant provided advanced liquid treatment and included a pump station, primary and secondary clarifiers, aeration basins, and chlorine disinfection. Solids were treated for disposal with aerobic digesters, thickener tanks, and drying beds.

In 1982, the plant capacity was doubled, with a capacity of 20 mgd. The capacity was again doubled in 1991, with an expanded capacity of 40 mgd. A notable change to the solids processing included the addition of multiple hearth incinerators, in lieu of land-fill disposal.

In 2004, the entire liquid process was replaced and constructed on an adjacent 22 acre site. Its feature component is a 200 foot deep pump station at the terminus of the Chattahoochee Tunnel.

The solids process was replaced in 2008 with two new fluidized bed incinerators and expanded biosolids thickening and dewatering systems. A biosolids receiving station was constructed in 2014 to accept dewatered solids from another treatment facility for incineration. A Biosolids Lime Stabilization Process was added in 2022.



R.L. SUTTON

WATER RECLAMATION FACILITY



Clean water is for everyone. We use it every day in our homes, schools, and businesses. Wastewater is collected in sewer pipes and through a series of pipes is transmitted to water reclamation facilities where it is cleaned and treated before it is released back into the environment, for us to enjoy again.

For 50 years, the R.L. Sutton WRF has been treating and providing clean water for our citizens in the southeast corner of Cobb County.

PRIMARY TREATMENT

SECONDARY TREATMENT

TERTIARY AND SOLIDS TREATMENT

1 • INFLUENT PUMP STATION

The station is the end point of the 9.5 mile, 16-foot diameter Chattahoochee Tunnel. The 170 foot deep shaft houses six 1,750 horse powered pumps that lift raw sewage to the *Headworks* of the facility and the beginning of the treatment process.

2 • HEADWORKS

Four bar screen devices and three vortex grit collectors remove bulk and granular debris from the liquid waste stream.

3 • FLASH MIX / FLOCCULATION TANKS

The liquid waste stream is mixed with iron salts (for solids coagulation and phosphorous removal). The liquid stream is transmitted to the *Primary Clarifiers*.

4 • PRIMARY CLARIFIERS

Four 125-foot diameter concrete tanks separate out the scum and primary biosolids (solids that settle in the clarifiers). Scum is collected and discharged to the primary scum pump station, while solids are swept off the bottom and discharged to the primary biosolids pump station. The liquid stream is transmitted to the *Aeration Basins*.

Primary scum is sent to the rotary scum screens (aka rotostrainers), and the primary biosolids are pumped to the biosolids holding tanks in the solids treatment process.

5 • AERATION BASINS

Biological treatment is used to further remove solid waste from the liquid stream. Blowers pump air into the liquid stream through fine bubble diffusers in six basins to maintain an aerobic environment for bacteria to consume the solids.

Lime and caustic soda (to raise pH), are added to the effluent liquid stream of the Aeration Basins. Liquid stream is transmitted to the *Secondary Clarifiers*.

6 • SECONDARY CLARIFIERS

Five 155-foot diameter concrete tanks separate the remaining scum and digested biosolids from the liquid stream.

Secondary scum is pumped *Biosolids Thickening*.

A portion of the digested biosolids, called Return Activated Sludge (RAS), is pumped back to the *Aeration Basins* for continued biological activity. The remaining biosolids, known as Waste Activated Sludge (WAS) flows to the WAS Wet-well.

The liquid stream is transmitted to the *Effluent Filters* through an 72-inch diameter pipe.



7 • EFFLUENT FILTERS

Twelve filters remove fine particles from the liquid stream as it percolates through granular media (sand & anthracite). Liquid stream is transmitted to the *Ultraviolet Disinfection* structure.

8 • ULTRAVIOLET DISINFECTION

The liquid stream is disinfected as it passes through closed vessels containing high intensity mercury vapor lamps. The effluent is discharged to the Chattahoochee River.

9 • BIOSOLIDS THICKENING

WAS flows from the WAS wetwell to the *Primary Clarifiers*, where it is co-thickened along with the primary sludge.

10 • BIOSOLIDS HOLDING TANKS

Primary and thickened WAS biosolids are mixed and stored in two 90 foot diameter tanks. Biosolids are pumped to the *Dewatering System*.

11 • DEWATERING SYSTEM

Four dewatering centrifuges remove the majority of the liquid from the biosolids. Dewatered biosolids are then sent to a landfill.