

Please visit the Town of Sullivan's Island web site to keep up to date on current events.

www.sullivanisland-sc.com

You may also check the following web site to find out how the plant is doing in relation to monthly discharge parameters submitted to SCDHEC which in turn are submitted to EPA.

www.epa.gov/echo



Mailing Address

*Sullivan's Island Water &
Sewer Dept.*

PO Box 427
Sullivan's Island, SC. 29482
Phone: 843-883-3947
Fax: 843-883-3662
Emergency After Hours: 883-3931
Email: ggress@sullivanisland-sc.com

Wastewater Treatment Facility



Greg Gress
Manager

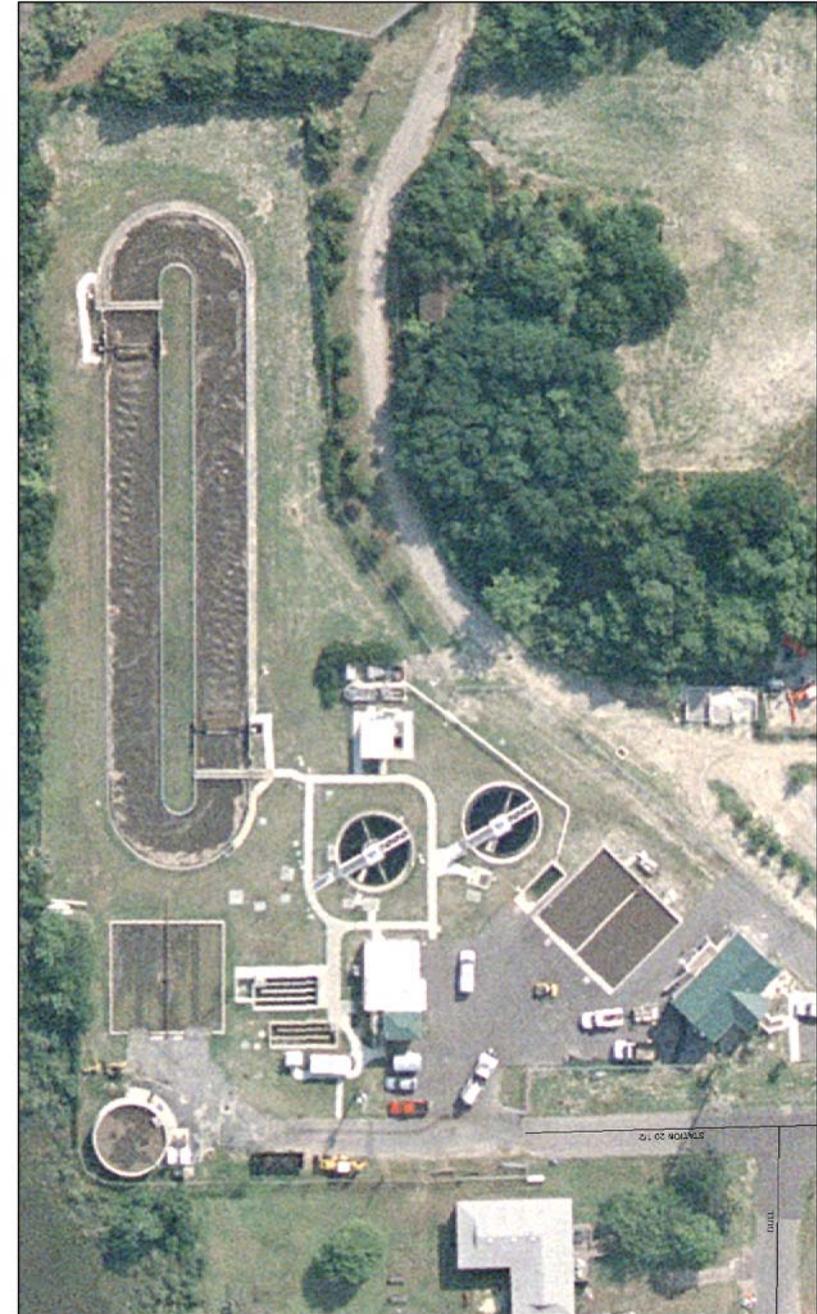
Darrell Noisette
Chief Operator

Paul Fouchecourt
Operator II

Tommy Bean
Operator Trainee

Mike Reynolds
Operator II

2051 Gull Drive
Sullivan's Island, SC. 29482
Phone: 843-883-3947
Email: ggress@sullivanisland-sc.com
Web: www.sullivanisland-sc.com



Sullivan's Island
Wastewater Treatment Facility

Wastewater Treatment

Technology gives us capabilities to treat residential wastewater so that the processed water can be safely returned to the environment. The



View of downtown Charleston from atop the aerobic digester

Sullivan's Island Wastewater Treatment Facility utilizes proven treatment processes to accomplish this goal. These

treatment processes have been operational since the 1960's to provide an effluent friendly to the environment so to insure fishable and swimmable conditions in compliance with regulations issued by both USEPA and SCDHEC.

Population Served

Sullivan's Island Wastewater Treatment Facility is designed to treat 0.570 Million Gallons per day. In order to get the flow to the Treatment Facility, we also own and maintain approximately 15 miles of gravity sewers. During normal dry weather conditions the facility will receive on average 0.431 Million Gallons Per Day.

Preliminary Treatment

Mechanical bar screens remove trash that is in the wastewater such as rags, sticks, and plastic products that could otherwise clog pumps and lines that would result in interfering with proper treatment of the wastewater. This accumulated material is taken to a landfill for disposal. The grit tank removes sand and rock that gets into the sewer lines from cracked or broken private, (sewers connecting buildings to publicly owned sewers), or public sewer lines. By removing this material early in the process, it will reduce interference with other treatment units and increase their operational life.

Secondary Treatment

The Activated Sludge treatment process is an aerobic biological treatment process which encourages the growth of dissolved oxygen dependent micro organisms, (activated sludge) that uses the contaminants in the wastewater as food source. These activated sludge organisms are heavier than water



Oxidation Ditch— Oxygen is added to the water by splashing it into the air.

when given enough time to eat and rest and as long as dissolved oxygen is available they will continue to feed and produce others to remove more contaminants. After a period of approximately 18 hours of eating, the activated sludge, (mixed liquor), flows to Sec-

ondary Clarifiers where the velocity of the wastewater is slowed down. The heavy activated sludge organisms settle to the bottom of the tank and the cleaner wastewater overflows out of the tank. The activated sludge on the bottom of the clarifier is continually pumped back to the Oxidation Ditch hungry for more food. Before the processed wastewater is discharged to The Intracoastal Waterway, there is a chance that some viral organisms



Secondary Clarifier— The solids are separated from the treated clean water

may have survived. To dispose of these organisms, chlorine gas is injected into the processed wastewater and mixed thoroughly by running back and forth through a maze to insure that the chlorine has had enough time in contact with and kill those organisms. At the end of the chlorine contact chamber some chlorine may remain in the wastewater. To remove any remaining chlorine before discharging to The Intracoastal Waterway, sulfur dioxide, a friendly compound, is used to remove any residual chlorine.

Sludge Treatment

Excess activated sludge is pumped to the Aerobic Digester for further treatment. This is done by providing an environment of dissolved oxygen only. The food source becomes the organisms themselves which allows further destruction/removal of contaminants and generates a byproduct which include

biosolids that have nutrient value needed to make agricultural plants grow. After approximately 20 days in the aerobic digester the liquid biosolids are pumped to Drying Beds to dry. After the first day on the drying bed, most of the water drains back to the head of the treatment facility for further processing. The remaining 13 days on the drying beds is devoted to the evaporation process. At this point the biosolids are picked up with a small front end loader and put into a lined dumpster which is currently hauled to a landfill.

Support Services

There are many activities required and utilized to insure the wastewater treatment processes are operating efficiently. This includes running laboratory analysis of collected samples throughout the facility.

Plant Upgrade

The Town has committed to upgrading this treatment facility to ensure regulatory compliance and that the residence have continued reliable sewer service. The upgrade was completed March 9 2005. The project consists primarily of an added clarifier, larger chlorine contact chamber, two additional drying beds, and a new administration/control building.