

Grit chamber cleaning at city wastewater treatment facility improves efficiency

STARKE, FLORIDA

PROBLEM

A wastewater treatment facility located in the City of Starke, FL, was experiencing a loss of detention volume and reduced water quality as a result of accumulated sand and grit on the bottom of its grit chamber. The roughly 40-foot square grit chamber had an estimated four feet of sand submerged under six feet of water. The accumulated sand and grit had reduced the efficiency of the grit chamber and was potentially exposing other elements in the treatment system to a buildup of sediments and particulates.

SOLUTION

The facility sought assistance from U.S. Submergent Technologies (USST) to remove the material. Using the 949 Combination³® Truck with its 425 hp driven components and the proprietary GritGone Process[®], the crew used an eight inch diameter hose to pull sand, grit, and water from the chamber and through the system at a rate of 2,500 gallons per minute. Sand and grit were immediately separated from the water and the excess water was returned to the wastewater system. The entire cleaning



process was accomplished without taking the system offline. (Previously, in order to clean the grit chamber, the system had to be shut down for an entire day. Grit was then removed using a vacuum truck and a couple of workers with shovels.)

RESULTS

During the cleaning operation, USST removed 90% of the sand from the grit chamber and into the debris tank in less than three hours. Water quality and system capacity were restored. The client was very pleased with the results.



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