

SEEKING VERSATILITY AND SIMPLICITY IN TROY, ALABAMA



CASE STUDY

OVERVIEW

Troy Alabama's Wastewater Treatment Plant was faced with broken discs causing dropping dissolved oxygen (DO) levels in their oxidation ditch.

The 3.5 mgd plant opened in 1979. In 1992-1993, a disc rotor system was installed. After 23 years of service, the discs started breaking. Dave Fiveash, Troy's Plant Manager for the past 21 years, was driven to find a solution to keep the plant operating and meeting DO requirements.

CHALLENGES

The maintenance required on the rotors was difficult for the operating staff to keep up with and the rotors were not meeting DO requirements. The plant was also having issues with motors, reduction gears, bearings, couplings, and discs. Repairing this equipment was very labor intensive, especially since it was necessary to rent removal equipment when maintenance was required.

SOLUTION

Before deciding how to solve these issues, Fiveash and other city officials traveled to the wastewater treatment plant in St. Augustine, Florida to see how Aeration Industries International's equipment performed. They discussed day-to-day operational and maintenance considerations, and received answers to their questions from St. Augustine's plant personnel.

In August 2013, a rotor broke down in Troy's oxidation ditch. Aeration Industries was called to help to improve DO. Shipment of one rented 40hp Aire-O₂ Triton® occurred within 48 hours, so the plant experienced very little downtime. In March 2014, another rotor broke down and an additional Triton was rented to keep the plant up and running.



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SOLUTION

Downtime is especially important to the plant given it treats 3.5 mgd on average and serves industrial contributors like a local plastics recycling plant, chicken hatchery, feed mill, Sanders Lead Company, and Golden Boy Peanut Butter.

After seeing the performance of the Aire-O₂ Triton® rental equipment, the decision was made in the fall of 2014 to purchase six additional Tritons for the oxidation ovals.

RESULTS

The 40hp Tritons were installed as rotors broke over the next two years. A 7.5hp Triton was also installed in the grease trap basin in September 2015. As of summer 2016, Aeration Industries' equipment is the only aeration equipment running in the plant and DO levels have increased significantly with the Aire-O₂ Tritons® in operation.

The blowers are now connected to the SCADA system that adjusts their speed as dictated by oxygen levels to help lower energy consumption.

IMPACT

With the highest ever DO levels seen in the plant, Dave Fiveash and the city are happy with the results. Fiveash says, "I like the versatility and simplicity of the equipment. The ability to mix and aerate or just mix, is a big thing for us." The plant is also experiencing energy cost savings with the aerators vs the brush rotors; a great outcome for all.

SOLUTIONS PROVIDER

Questions on how we can help solve challenges you're facing? Contact us at [+1-952-448-6789](tel:+1-952-448-6789) for more information. Together, we can create innovative solutions for your wastewater challenges.