

A Wastewater Plant Bio-Augmentation Success

by
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Rosethorne WWTP is located in Jefferson Parish, Louisiana, just west of New Orleans. The plant was constructed in the mid-1990s with a design capacity of 400,000 GPD. Today, the average daily flow through the plant is approximately 250,000 GPD. During Hurricane Katrina, in 2005, the plant suffered considerable damage to its mechanical infrastructure, and even after repairs, its effluent was unable to comply with regulatory discharge permit requirements since the storm.

In March 2010, plant administrators made the decision to talk with Reliant Water Technologies about a bio-remediation product that might assist the plant in meeting its discharge requirements. The company introduced Sewper Rx, a poly-microbial bio-remediation product to the plant's management team, explaining how the product would be applied, setting goals and timetables, and committing to meeting the permit requirements if the plan was followed. After discussions with Parish administrators and budgeting for the project, it was determined that Sewper Rx should be tried.

Prior to the initial treatment, in late March of 2010, typical effluent BOD was in the 25 mg/l to 40 mg/l range and TSS effluent was being reported in the 35 mg/l to 50 mg/l range (Figure 1). Discharge limits were then, and still are, 10 mg/l for BOD and 15 mg/l for TSS. The initial treatment consisted of a total of 50 lbs of Sewper Rx, distributed between the aeration basin and the secondary clarifiers. Within 30 days an improvement in water quality was noted, but the plant was still marginally above its BOD and TSS limits. Water quality improvement continued into May and by the end of that month the plant effluent tested within the BOD discharge limit, but the TSS was just above its 15 mg/l limit that month. A small maintenance dose of Sewper Rx, or 50% of the initial treatment amount, was added at the end of May. Finally, in June 2010, just over 2 months after the initial Sewper Rx treatment, the plant's effluent test results fell within the State's BOD and TSS effluent limits, with a 4 mg/l BOD and 11 mg/l TSS (Figures 2 & 3).



Figure 1 - Rosethorne effluent BOD/TSS reduction by Sewer Rx.

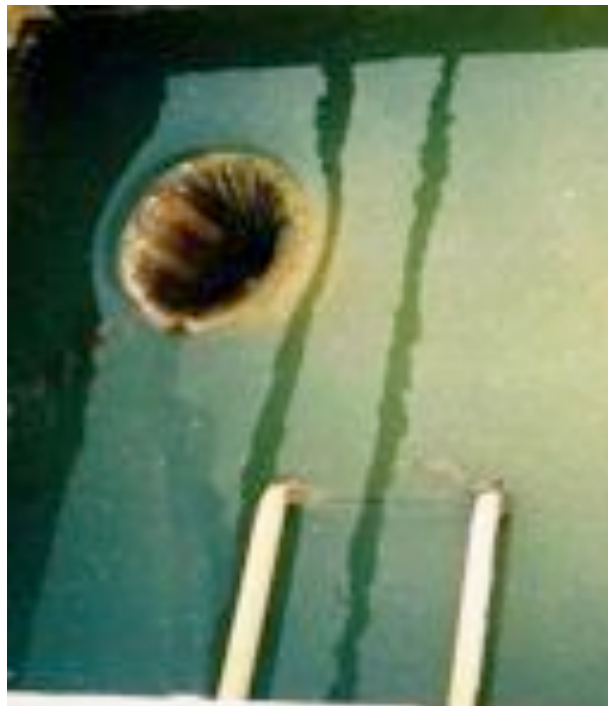


Figure 2 – Rosethorne effluent structure, early March 2010.



Figure 3 – Rosethorne effluent structure, mid June 2010

Since June 2010, Rosethorne Plant personnel add a maintenance dose of Sewper Rx every 45 to 60 days and effluent BOD and TSS concentrations now typically run in the single digits. Plant administrators are pleased with the performance of Sewper Rx and have realized that for no more than \$4,000 per year they will be able to keep the Rosethorne plant within the State's outfall permit requirements.

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