

**Water and Environmental Programs
Engineering Success Stories**

STATE: Louisiana

BORROWER NAME: Tangipahoa Parish Sewer District #1

ENGINEERING FIRM: Robert Barrilloux & Associates

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CONGRESSIONAL INFORMATION: District #1, Congressman Robert Livingston

COUNTIES: Tangipahoa

Keywords: Rock filter, Wetlands, Lagoons

S. E. Hammond Regional Sewerage Treatment Facility

DESCRIPTION OF PROBLEM/ISSUE:

In 1991, Tangipahoa Parish Sewer District #1 (District) inherited four (4) small aged sewerage treatment plants serving subdivisions located southeast of the City of Hammond. In addition, two (2) older subdivisions had waste collection systems, but no treatment facilities, and were discharging raw sewage into Ponchatoula Creek. In order to treat the waste from the four hundred (400) homes on existing sewage collection system plus additional three hundred (300) homes to be added from a collection system to be financed by a La. CDBG Grant, the District needed to construct a regional sewerage treatment facility. However, to build a facility to treat waste from the seven hundred (700) homes, 280,000 gpd, as well as future from the 3,530 acre service area, the District had only \$200,000 remaining from a USDA low interest loan.

SOLUTION:

In order to hold cost down, a new type of treatment facility was designed, consisting of a series of earthen ponds of different depths and areas. The first pond, in which the waste entered, was 9.0 feet deep, aerated and completely mixed. Waste leaving this pond went through a "High Rate Clarifier", which recycled MLVSS into the pond. This device, which was devised by the District's Engineer, has one moving part and a total capacity of 1 million gpd. The second pond discharges to a third pond over a "rock filter wall", which acts as a passive clarifier into a third pond, which is quiescent. The third pond discharges to a chlorination basin, which discharges to a man-made wetland. The man-made wetland discharges over a "rock filter wall" to a final pond, which discharges to the receiving stream. The entire facility occupies a five (5) acre site and was required by La. Department of Health 7 Hospitals (DHH) to have a sludge drying bed and sludge wasting capacity. The facility, which has been in operation five (5) years, meets all of its discharge limits with BOD averages 5.63 and T.S.S. average 10.0. In addition, it has been able to meet its fecal coliform limits without disinfection. Therefore, because of the savings from chemical cost, the facility has an average

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operating cost of \$795.00 per month or \$2.00 per customer/month. The facility cost \$183,000 to build, including the \$10,000 sludge drying bed and waste system, which was required by DHH as a condition of their approval. To date, we have not had to use sludge wasting system because the treatment facility has achieved equilibrium.
