



**Client: East Coast Property Developer**

**Help Requested: Identify Cause of WWTP Operational Problems, Fix Operation, and Value Engineer a Lower-Cost WWTP Expansion Alternative**

**Type of Treatment:**

1. Biological – Batch Reactor Activated Sludge
2. Physical – Sand Filtration, UV Disinfection

An East Coast developer needed to expand a wastewater treatment plant before opening a new housing development. His Consulting Engineer presented a design with a plant expansion cost of \$1.8 million to accommodate both the flow capacity increase and additional nutrient removal requirements. However, the high cost of the plant made the contractor's planned development expansion economically unfeasible.

*Wastewater Experts, Inc.* was hired to Value Engineer the design and determine if any cost savings were possible. A detailed review of plant operating history revealed that the history of failures was quite readily addressed with a low-cost flow-equalization basin. After on-site investigations and a thorough review of the operating history of the plant and of the existing and proposed designs, *Wastewater Experts, Inc.* showed that the proposed expansion design had underestimated the capacity of the existing facilities and over-estimated the amount of capacity required for the application. The Designer had relied upon textbook values without referencing actual treatment results at the plant.



*Wastewater Experts, Inc.* recommended a design which optimized use of existing facilities with a modest addition of new capacity. The new design would achieve the required nutrient removal ability by converting to a modified SBR process.

The total cost for all of the new proposed modifications was \$1.2 million - a 33% reduction from the original design. The Developer's housing expansion was now feasible and the plan initiated.