

Case Study: Plainfield

NITROGEN & PHOSPHORUS REMOVAL PLAINFIELD, CONNECTICUT (POPULATION 15,000)

Process changes at Plainfield's two 35 year old treatment plants demonstrate their ability to meet new nitrogen and phosphorus limits, negating the need for their replacement.

Equipment Savings: \$40 million

Annual Operating Expenses: No Change



After a decade of study, a report recommending a \$45 million replacement of Plainfield's 1.0 and 0.5 MGD activated sludge plants with a new sequencing batch reactor (SBR) was prepared by the Town's former consultant. A \$10,000 investment in monitoring equipment and ongoing process support by CleanWaterOps demonstrated that the two plants could reliably meet new nitrogen and phosphorus limits, negating the need for their replacement.

After experiencing the benefits of full-scale piloting of operational changes, Plainfield abandoned the \$45 million replacement project in favor of a \$5 million plant renovation and repair project.

Plainfield's North Plant removes nitrogen to 10 mg/L by cycling the mechanical aeration equipment to create alternating aerobic and anoxic conditions in the aeration tanks. Plainfield's Village Plant's antiquated equipment is too old to subject to frequent starting and stopping. To remove nitrogen to 8 mg/L and phosphorus to 0.8 mg/L, the Village Plant's gravity thickener is used as a combination anoxic tank / fermenter.

Jeff Young, Superintendent • 860.564.3335 • wpc@plainfieldct.org

"The Town of Plainfield was really fortunate to have CleanWaterOps working for us."



CLEAN WATER OPS.COM™

358 Chestnut Hill Ave, #204B

Boston, MA 02135

Office: 617.505.5095

www.CleanWaterOps.com