

AMPHIDROME[®] FACILITY REPORT

Plant & Location: St. Augustine Preparatory School, Richland, NJ

Facility type: High School

Chemical Feeds: Carbon & alkalinity

Summary: St. Augustine Preparatory School is an all-boys, grades 9 thru 12, day school, with approximately 650 students. A major building project was completed in 2008 that increased enrollment from 250 to 650 students and resulted in the wastewater treatment facility typically operating at loading conditions greater than design. The plant was designed to meet a total nitrogen limit of ≤ 10 mg/L. The system operated under loading conditions that exceeded the design load until 2010, when a larger Amphidrome reactor was installed.

Parameter	Design Values	Actual Values
Flow	2,600 gpd	1,900 gpd
BOD ₅	250 mg/L	345 mg/L
TKN	120 mg/L	220 mg/L
C/N	2.1	1.6

C/N - Carbon-to-nitrogen ratio measured as BOD₅/TKN.

	BOD ₅	TSS	Total N
Permit Limit	<i>None</i>	None	<i>10 mg/L</i>
Average	24.2 mg/L	20.6 mg/L	18.9 mg/L

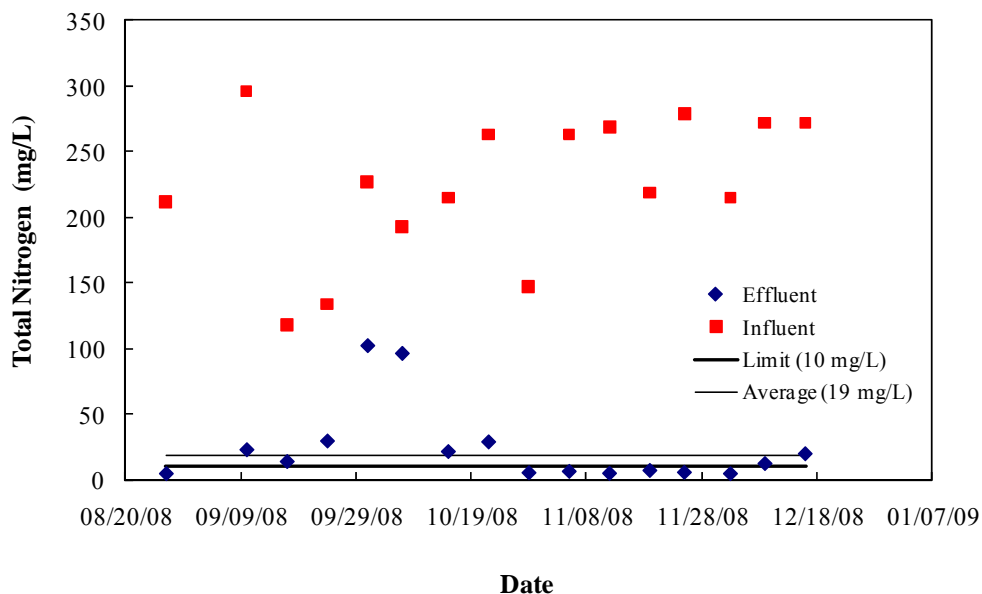


Figure 1. St. Augustine Preparatory School, Effluent Total Nitrogen