

Ground Water Protection Multi-Phase Community Removes Nitrogen

The Canal Bluffs Wastewater Treatment Plant – Bourne, MA

On the banks of the Cape Cod canal lies the town of Bourne, Massachusetts, a busy summer retreat for many seasonal residents. Like many Cape Cod communities, Canal Bluffs condominiums has some full time residents and the population spikes in the summer months. Flow rates at the development’s Bioclere™ wastewater treatment system increase substantially in peak months and drop to as little as 10% of design flow in the winter. In order to balance these seasonal conditions with a multi-phase build out of the condominiums, the developer elected to phase build out of the wastewater treatment system. The first phase of the system was designed to process the initial 9,500 gpd to <25 mg/l total nitrogen under Massachusetts Title-V regulations. When the plant was expanded to 38,000 gpd it was permitted under Massachusetts Groundwater Discharge (GWD) pollution control regulations requiring the system to meet a standard of < 10 mg/l total nitrogen.

The project engineer selected an AquaPoint Bioclere™ treatment system for its proven nitrification & denitrification performance capability, energy efficiency, low life cycle costs and its flexible fixed film process. Effluent from the biological process is polished through a sand filter and UV disinfection prior to groundwater discharge.



DESIGN CHARACTERISTICS

	INFLUENT	EFFLUENT
DESIGN FLOW (GPD)	38,000	38,000
DESIGN TEMP (C)	10	-
BOD ₅ (mg/l)	250	< 30
TSS (mg/l)	250	< 10
TKN (mg/l)	65	-
AMMONIA-N (mg/l)	50	< 2
NITRATE-N (mg/l)	-	< 5
TOTAL-N (mg/l)	-	< 10
TURBIDITY (NTU)	-	< 5
FECAL (MPN/100ml)	-	< 200

39 Tarkiln Place
New Bedford, MA 02745
T (508) 985-9050 | F (508) 985-9072

AQUAPOINT.COM

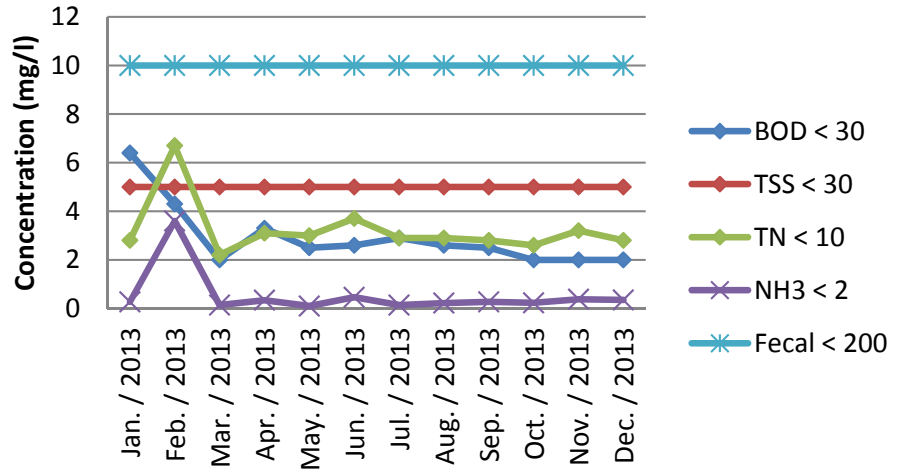


System Layout & Performance

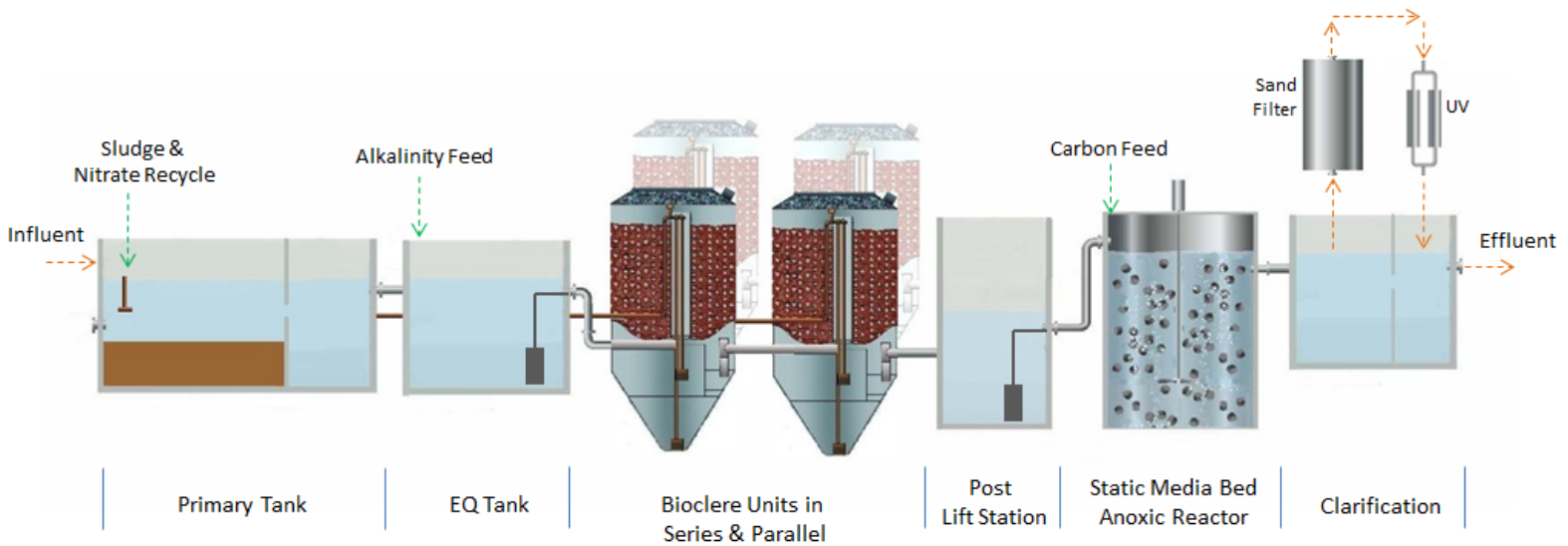
Canal Bluffs, Bourne, MA – Community WWTP

DATE	BOD ₅ (mg/l)	TSS (mg/l)	TN (mg/l)
Jun. / 2011	6.4	5	2.8
Jul. / 2011	4.3	5	6.7
Aug. / 2011	2	5	2.2
Sep. / 2011	3.3	5	3.1
Oct. / 2011	2.5	5	3
Nov. / 2011	2.6	5	3.7
Dec. / 2011	2.9	5	2.9
Jan. / 2012	2.6	5	2.9
Feb. / 2012	2.5	5	2.8
Mar. / 2012	2	5	2.6
Apr. / 2012	2	5	3.2
May. / 2012	2	5	2.8
Average	2.9	5	3.2

Canal Bluffs Performance Data



System commissioned 2008
 Detectable limit for BOD = 2 mg/l
 Detectable limit for TSS = 5 mg/l



AQUAPOINT
 An OBEH Company

39 Tarkiln Place
 New Bedford, MA 02745
 T (508) 985-9050 | F (508) 985-9072
www.aquapoint.com

Represented by: