



COMMERCIAL		
	Influent	Effluent
FLOW	40,000 gpd	40,000 gpd
BOD₅	800 mg/l	<30 mg/l
TSS	250 mg/l	<30 mg/l
TKN	70 mg/l	
TN		<10mg/l

Lowes Plaza Pembroke, MA

This Aquapoint Bioclere™ wastewater treatment plant in a suburb south of Boston serves three commercial shopping plazas and an office complex. Prior to its construction, two existing plazas, including several restaurants, retail outlets and a supermarket, were operating on failing septic systems. The town's need to remediate the problem and the associated health risks enabled a developer to build a third commercial plaza, providing a collection and treatment system for the surrounding commercial development.

Because of the existing local septic system problems and flow rates to the plant, the treatment system was permitted under Massachusetts Ground Water Discharge standards.

Treatment Components & Processes:

- Grease traps and a 40,000 gallon primary settling tank.
- (3) Aquapoint PrepAer pre-treatment reactors in parallel.
- (3) parallel trains of dual stage Aquapoint Bioclere trickling filters.
- First stage Bioclere are sized to reduce BOD₅ and TSS concentrations. Second stage Bioclere are designed to nitrify the waste stream to <2 mg/l ammonia.
- Nitrified Bioclere effluent is re-circulated to the influent end of the primary settling tank to initiate denitrification.
- Final Bioclere effluent flows to an EQ chamber that feeds a continuous flow, anoxic sand filter. The denitrifying sand filter is dosed with methanol to sustain anoxic conditions and a healthy biomass.
- Sand filter effluent is distributed under pressure to a soil absorption field under Lowes parking lot.

