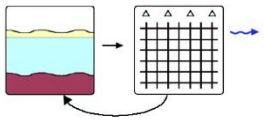
PECONIC GREEN GROWTH
TECH INFO SHEET

Firm: AquaPoint, Inc.
www.aquapoint.com

System: Bioclere

Category:



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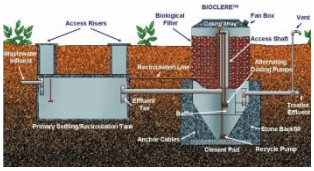

Process: Wastewater flows from a 1,000 gallon primary, septic tank, normally by gravity, into a baffled chamber in the Bioclere sump. A dosing pump evenly disperses wastewater to the top of the Bioclere via spray nozzles over a media bed of HDPE carrier elements with surface areas ranging from 120 sq. m. / cubic m. to 240 sq. m. / cubic m. A colony of microorganisms forms on the surfaces of the media. The "bugs" oxidize the BOD in the waste stream as well as promoting the nitrification of ammonium. A re-circulation pump in the bottom of the Bioclere returns sludge and water back to the head of the primary tank where the anoxic conditions in the primary tank facilitate denitrification. The treated effluent in the Bioclere is dispersed by gravity to the discharge system.

System: The Bioclere requires a 1,000 gallon primary septic tank ahead of the treatment unit. The essential components of a Bioclere are the media, dosing and recycle pumps, a small axial fan, which runs continuously above the media, a conically-shaped clarifier, and a control panel.

Flow Range: 200-60,000 GPD

Tests: NSF 40; EPA ETV; 40 unit/5yrs Pinelands Commission, NJ study of single-family nitrogen-reducing protocol with best performance and general permit status.

Cost: The single-family Bioclere is $6,950. Total Installation costs vary, ranging typically from $11,000 to $14,000. The cost does not include the septic tank or dispersal system.

Energy: The system utilizes 103 KWh/month, costing $18.54/ month.

Tanks: Fiberglass

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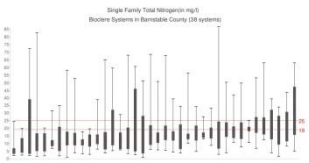

Data from MASSTC

Venting: 2 inch pipe

Footprint: 5 feet in diameter

Depth: Burial depth of 4-7 feet. A portion of the unit extends above ground to facilitate gravity flows to the unit.

Life Cycle: Pumps (2): Gould LSP-0311F 3-7 years (Cost: $234 each)
Fan: Papst 4800- 57 CFM 3-7 years (Cost: $57.40)

Warranty: One year on operating parts from date of commissioning

Maintenance: Semi-annual ($200+); pump-outs as needed (usually 3-5 years).

Notes: The ETV testing noted that noise levels were at an average of 49.5 decibels, below conversational levels and above the background noise of 37.7 decibels when measured 1.5 meters from the unit.

An additional component called ANOX can reduce nitrogen to below 10 mg/L by using submerged sources of carbon.

Installations: 750 single-family systems in DE, MA, MD, NC, NJ, OH RI. NJ Pinelands favored system for treatment and cost.

Treatment:

	TN/aver 50%	*cBOD 25 mg/L aver/mon*	*TSS 30 mg/L aver/mon*
mg/L	11.2-16	14	16
%	57%-70%	93%	90%

Advantages:

- Compact footprint
- Resilient to seasonal variations in flow
- Functions during power outages due to gravity design features
- Modular design facilitates expansion
- Low life-cycle costs

Disadvantages:

- Not appropriate for sites where shallow installations are necessary
- Energy use is moderate
- Top of unit extends above grade