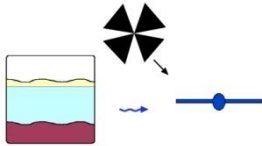


Firm: Geomatrix Systems, Inc.
www.geomatrixsystems.com;
www.soilair.com
System: **SoilAir + GeoU Leaching System**

Category:



**COMPACT DISPERSAL WITH
INTERMITTENT AIR**



SoilAir



Ge

Process: Wastewater exiting a septic tank enters a tank, from which it is dosed to a GeoU leaching system, Air is intermittently blown into the leaching system, and ultimately the soil, where it supports an aerobic environment in which nitrification can occur. Dosing creates a temporary anoxic condition, promoting denitrification. Additional treatment continues in the soil, where microorganisms help process the wastewater. Plants provide additional uptake of nutrients.

System: A two-chamber septic tank with a filter on the outflow is required ahead of the system. In certain instances a dosing tank is used. A SoilAir compressor, and GeoU leaching system comprise the treatment system, which replaces the dispersal field or leaching pits. The GeoU is composed of distribution piping emitting effluent over a serpentine configuration of a textile wrapped mesh. The GeoU maximizes the surface area in contact with the soil and requires less area than traditional leaching fields.

Flow Range: Adaptable to any size.

Tests: The GeoU with SoilAir may be tested as an experimental installation in the Suffolk County Pilot 2.

Cost: For a 300 GPD system, the cost for a GeoU 6-72 would be \$3,600, and the SoilAir system would be approximately \$2,000 or roughly \$10,000 installed, septic tank not included

Energy: The blower runs roughly 4 hours/day, 0.64KWh/day) costing roughly \$3.50/month

Tanks: Concrete, plastic or fiberglass (if separate dosing tank is used), locally sourced

Geomatrix Systems, Inc.

114 Mill Rock Rd East
Old Saybrook, CT 06475

Telephone:
860 510 0730



Installations of GeoU

Venting: None

Footprint: The GeoU leaching system is modular, with each unit 40" long by widths ranging from 36" or 72" wide. Depending upon site conditions, the footprint can range from 72 to 440 SF for a typical home. An additional 5 SF is needed for the blower.

Depth: 18" to 61" plus the desired clearance to groundwater.

Life Cycle: Compressor/blower, 5-7 years (Cost: \$300)

Warranty: One year.

Maintenance: Bi-annually, with inspections as required. Remote telemetry is available. Pump-outs as required.

Notes: At the end of each line there is a clean out (flush to the ground). The SoilAir compressor can be located remotely.

Installations: GeoU: CT, ~ 200; SoilAir: 2,000 installations throughout U.S.A. This is a new configuration.

Treatment: SoilAir by itself has been used to rejuvenate hydraulically failed leach fields as well as improve nitrogen removal by up to 75%.

Advantages:

- Adaptable to site conditions
- Maintains the viability of the leaching field for a longer period of time
- GeoU alone, can be combined with any treatment type

Disadvantages:

- Placement should avoid root intrusion and vehicular loading, but design options to address either are available.