

Pressurized Shallow Drainfields (PSD's)

Overview

- Pressurized Shallow Drainfields are used to distribute wastewater following pretreatment from an I/A OWTS.
- Pressurized Shallow Drainfields are placed in the upper soil layers (6 to 12 inches from the ground surface) for maximum wastewater treatment by natural soil processes.
- Shallow placement also maximizes vertical separation distance from the drainfield base to the groundwater.

Design

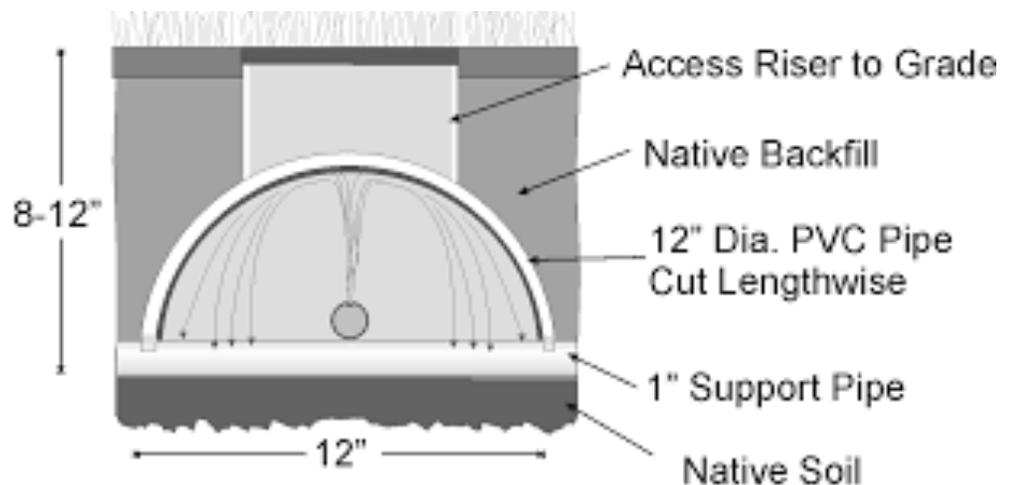
A shallow narrow drainfield works by pressure-dosing treated effluent into a small PVC drainfield lateral which is typically $\frac{3}{4}$ to 2 inches in diameter.

Half Pipe Configuration:

The pressurized effluent squirts up against a cover made of a 12-inch PVC half pipe

This half-pipe protects the trench and helps distribute the effluent evenly over the trench bottom just below the ground surface where biological activity is greatest. Effluent infiltrates the native soil

surface and percolates down through underlying soil where additional nutrient and pathogen removal occurs.



Chamber Configuration:

Chamber configurations are identical to the half-pipe configuration listed above. The only difference is the chambers are proprietary prefabricated products manufactured and distributed by several companies.



As with the half-pipe design, the chamber protects the trench and helps distribute the effluent evenly over the trench bottom just below the ground surface where biological activity is greatest. Effluent infiltrates the native soil surface and percolates down through underlying soil where additional nutrient and pathogen removal occurs.

Geo Textile Configuration:

GeoTextile PSD's are a low profile modular form of the shallow narrow drain field comprised of a core of fused, entangled plastic filaments wrapped with a geotextile fabric which are installed in the shallow soil horizon for enhanced aeration, increased microbial activity, enhanced nutrient removal, enhanced plant uptake and increased evapotranspiration.

A pressurized distribution pipe typically runs the length of the lateral for uniform application of wastewater.



The thin, narrow profile, shallow burial depth and uniform hydraulic loading maximize efficiency of oxygen transfer.