

Well and Onsite Wastewater Facts

WASTEWATER TECHNOLOGY

FSN - 16

Loudoun County Health Department

July 2016

Component Type: Dispersal System

Function: Dispersal system with gravel trenches serves to provide final treatment to the wastewater and distribute the water to the soil.

Manufacturers:

Gravel Trenches are not manufactured, they are constructed.

First approved in Virginia: 1940's

Number Approved in Loudoun County: 13,442

Allowance to Reduce Dispersal field footprint: No

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Description of Use

Wastewater is delivered from a septic tank or other treatment system to a distribution box where the wastewater is evenly divided to flow into each trench. Wastewater flows into the trenches and through black corrugated pipe. It then trickles across the gravel to the bottom of the trench. A biomat forms on the bottom of the trench. Microorganisms eat the wastewater converting it to water (H₂O) and carbon dioxide (CO₂). The size of the biomat impacts the flow of the water into the soil. Lighter loads from alternative treatment components, allow less biomat to form. This also allows for a reduction in the size of the trenches.

Recommended Maintenance Required

These dispersal systems require minimal maintenance. They should not be allowed to be overgrown with brush and trees whose roots can clog the system. Heavy vehicles should not be driven over the distribution box to make the distribution to the trenches uneven. Also, the lines should not be driven over. Surface water from downspouts should not run off over the trenches. Distribution boxes allow the flow to each trench to be regulated and should be checked when a tank is pumped. Wet or soft areas should be reported to a maintenance provider or the Health Department as they may indicate a failure.

Gravel Trenches



Gravel Trench Under Construction



Example of a Distribution box