



ONSITE WASTEWATER DISPOSAL SYSTEMS



P.O. Box 1696
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www.dowra.org

- ▶ Delaware
- ▶ Onsite
- ▶ Wastewater
- ▶ Recycling
- ▶ Association

Mission Statement

To provide leadership and promote the onsite wastewater treatment and recycling industry through education, training, communication and provide quality tools to support excellence in the performance.

Vision

DOWRA will be the preeminent organization working to achieve sustainable development through effective performance of on-site wastewater systems.

What We Do

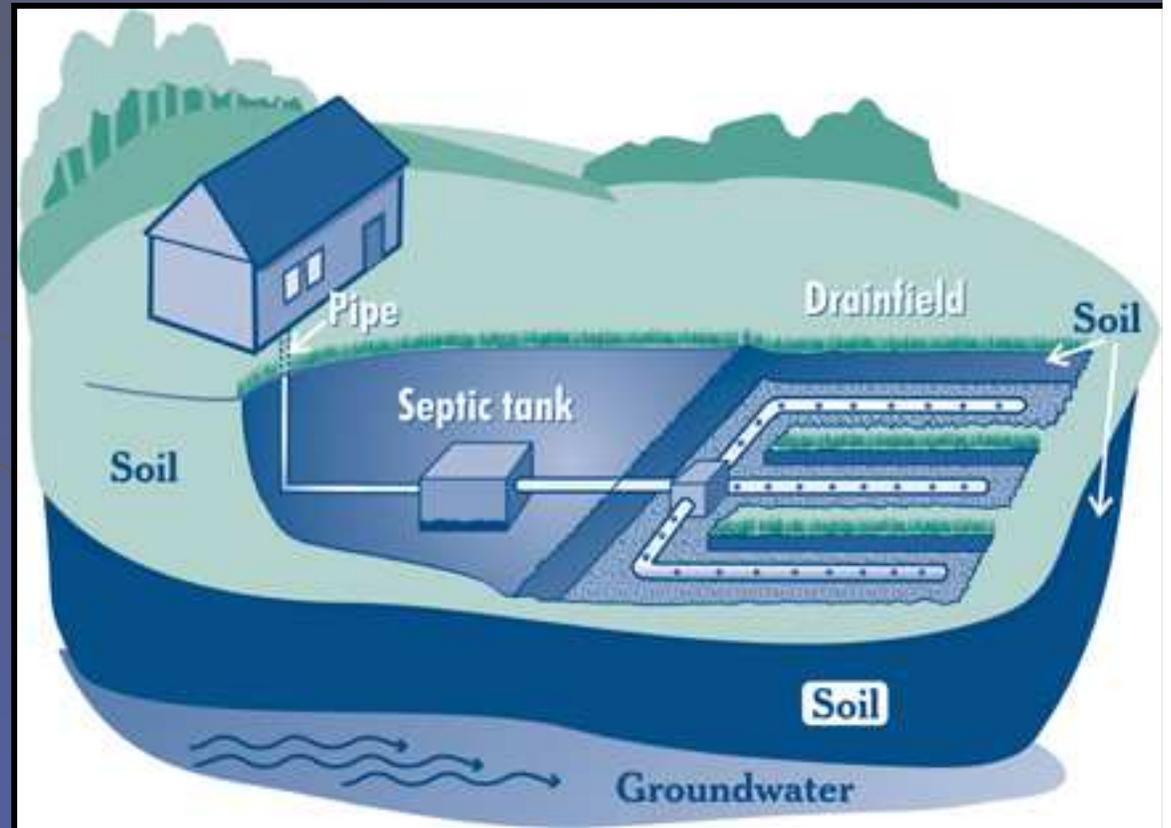
The driving force to the work of this organization is to provide education and training programs to professionals within this industry, to policy officials, the public, and system owners. Through education, we provide a leadership role in local and state initiatives to protect water quality and public health.

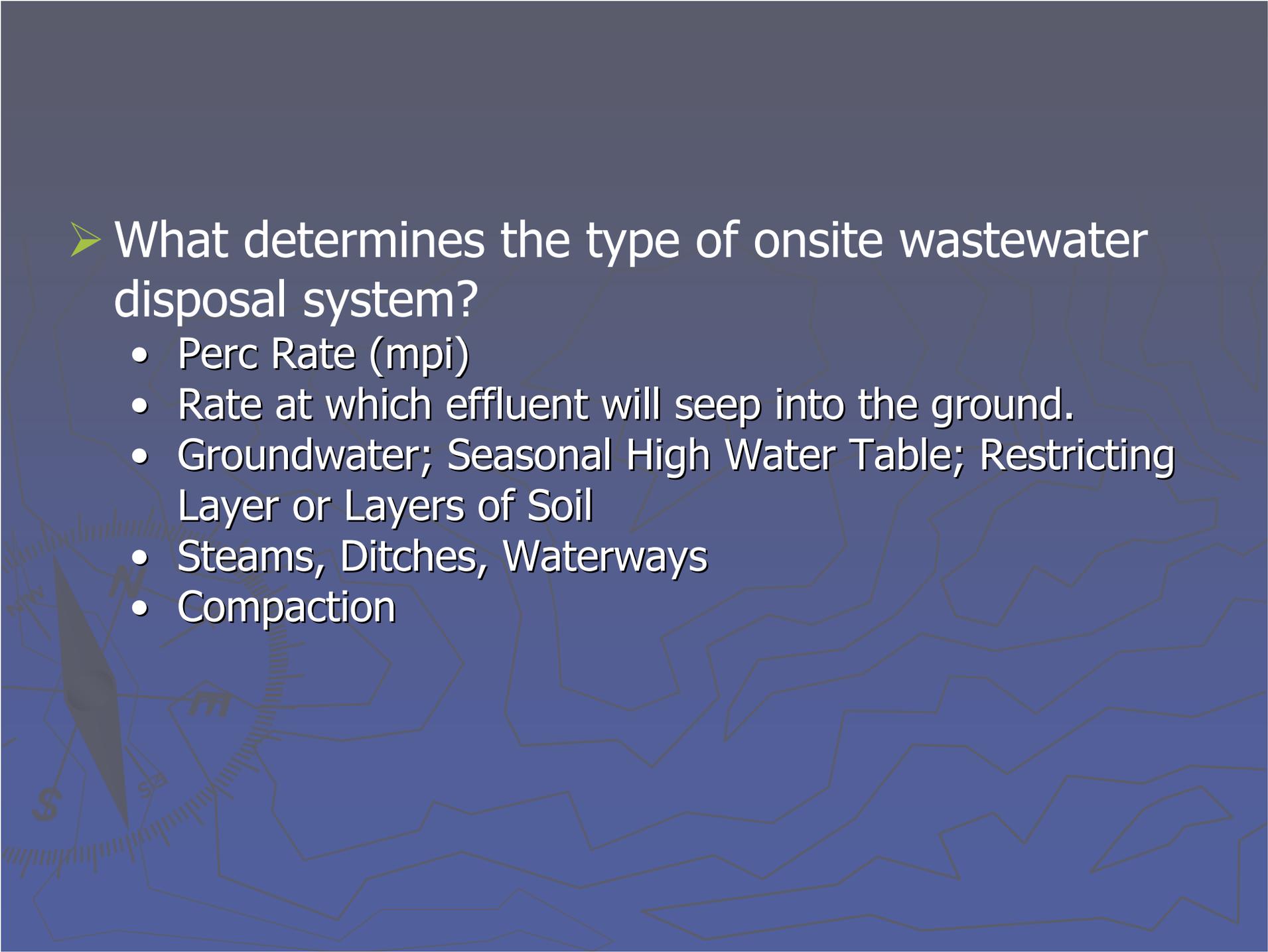
What To Expect to Learn Today

- What a wastewater disposal system is.
- What determines the type of wastewater disposal system installed.
- How a wastewater disposal system works.
- What an inspection should include.

WHAT IS AN ON-SITE WASTEWATER DISPOSAL SYSTEM?

- ▶ Building Sewer
- ▶ Septic Tank
- ▶ Distribution Box
- ▶ Dosing Chamber
- ▶ Drain field

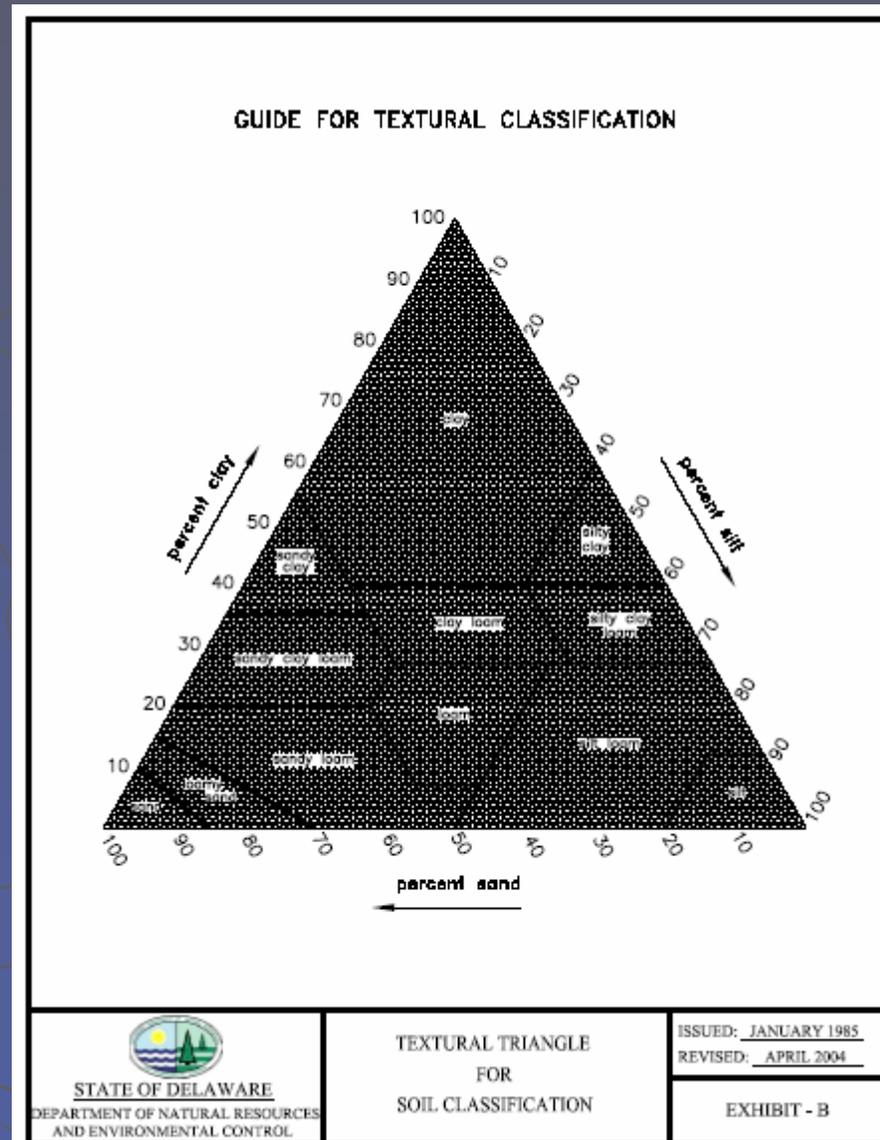


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- A topographic map with contour lines and a compass rose is visible in the background. The compass rose shows North (N), South (S), East (E), and West (W) directions. The map is rendered in shades of blue and grey.
- What determines the type of onsite wastewater disposal system?
 - Perc Rate (mpi)
 - Rate at which effluent will seep into the ground.
 - Groundwater; Seasonal High Water Table; Restricting Layer or Layers of Soil
 - Steams, Ditches, Waterways
 - Compaction

SOILS

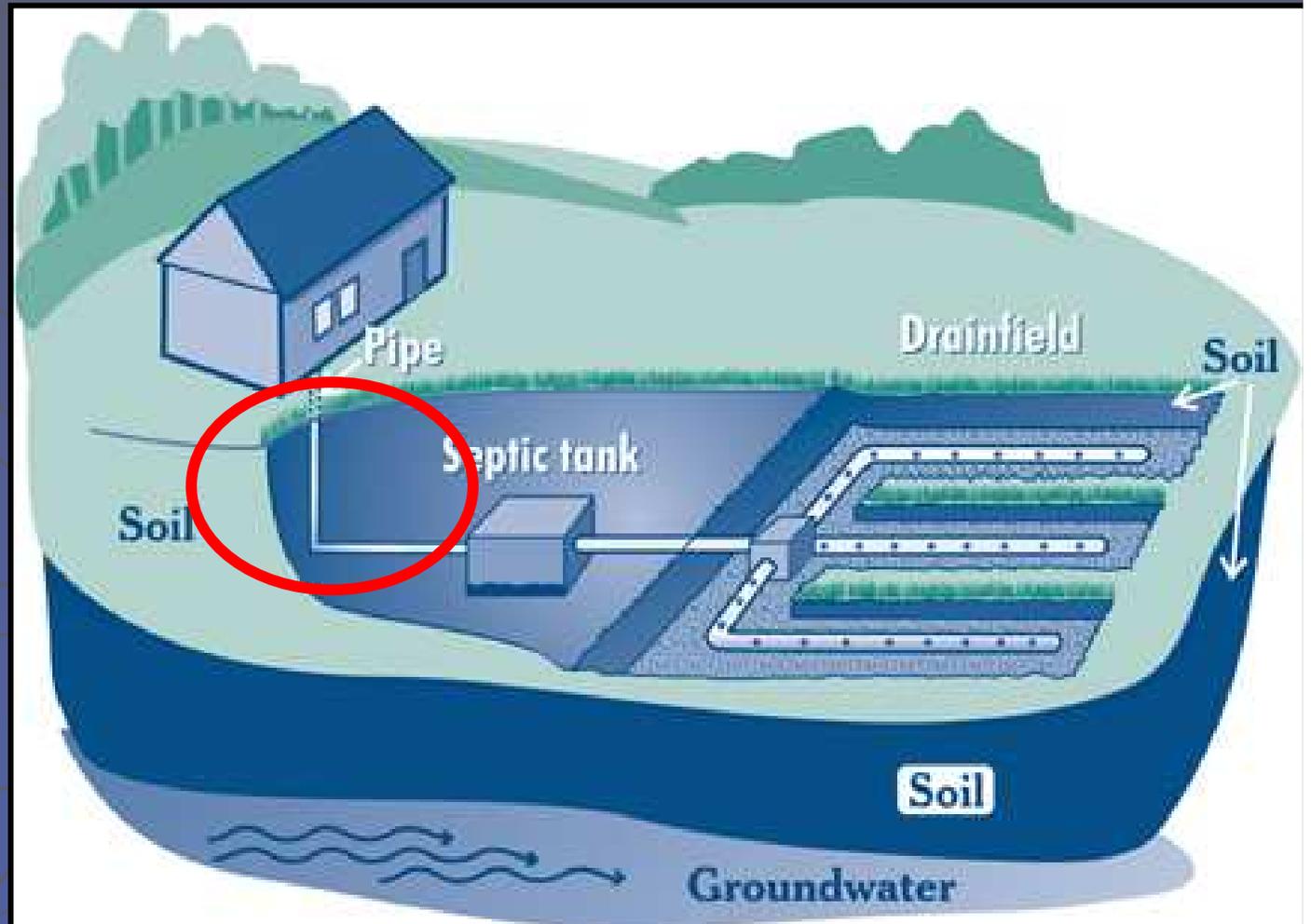
► Textures of soils

- Clay
- Sand
- Silt



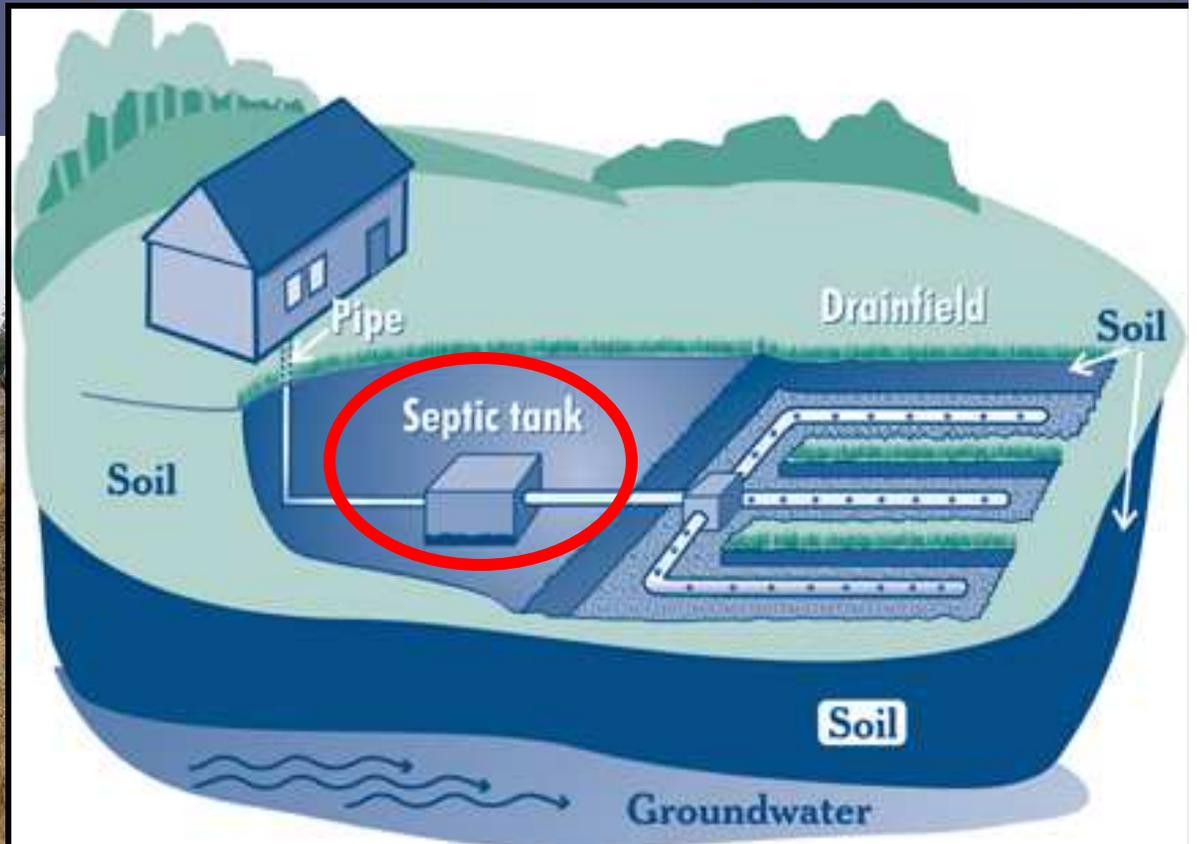
BUILDING SEWER

- ▶ Plumbing from the house to the septic tank



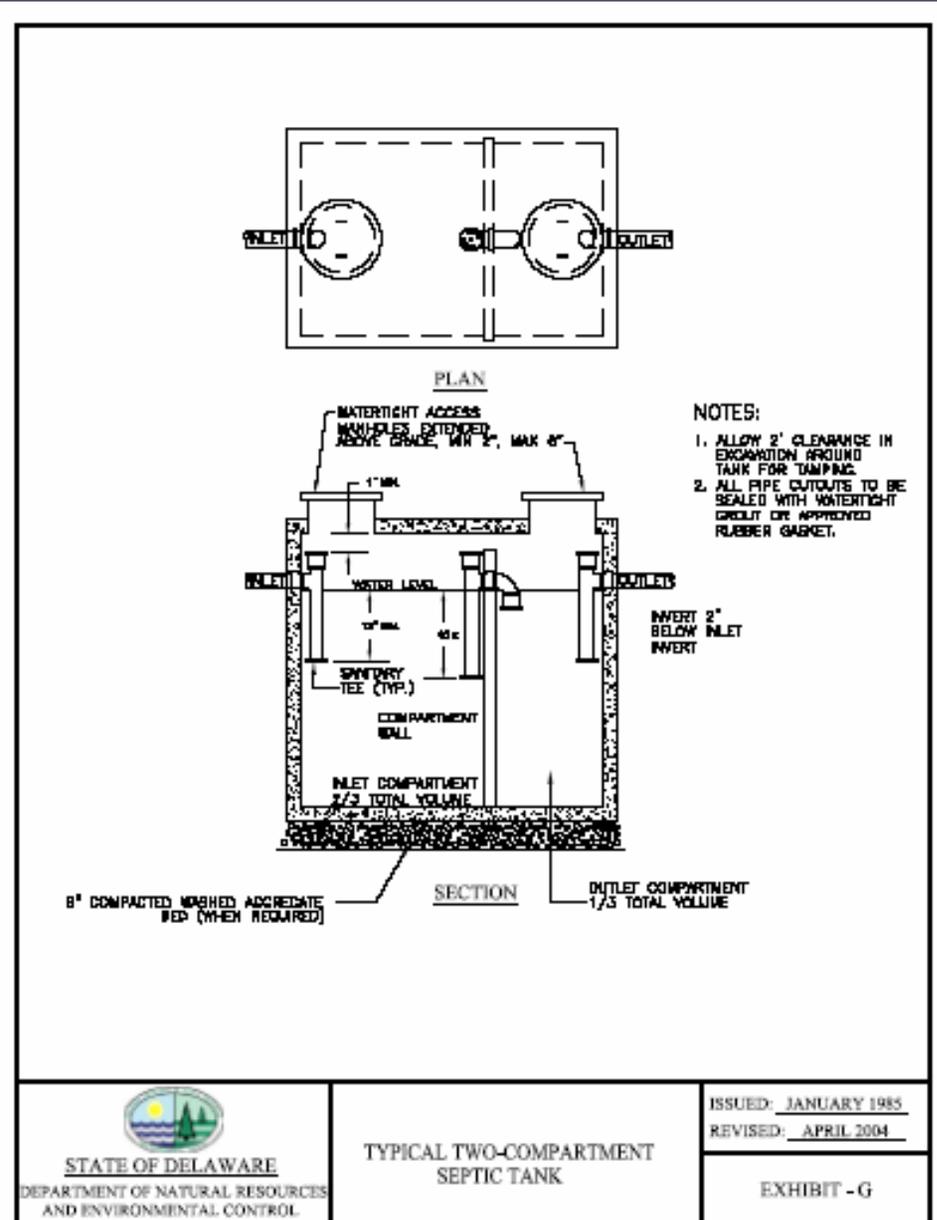
SEPTIC TANK

- ▶ Consists Of:
 - Inlet & Outlet Baffles
 - Multiple (2) Compartments
 - Effluent Filter
 - Risers To Grade



SEPTIC TANK

- ▶ Treatment
 - Removes Solids
 - Oils & Greases



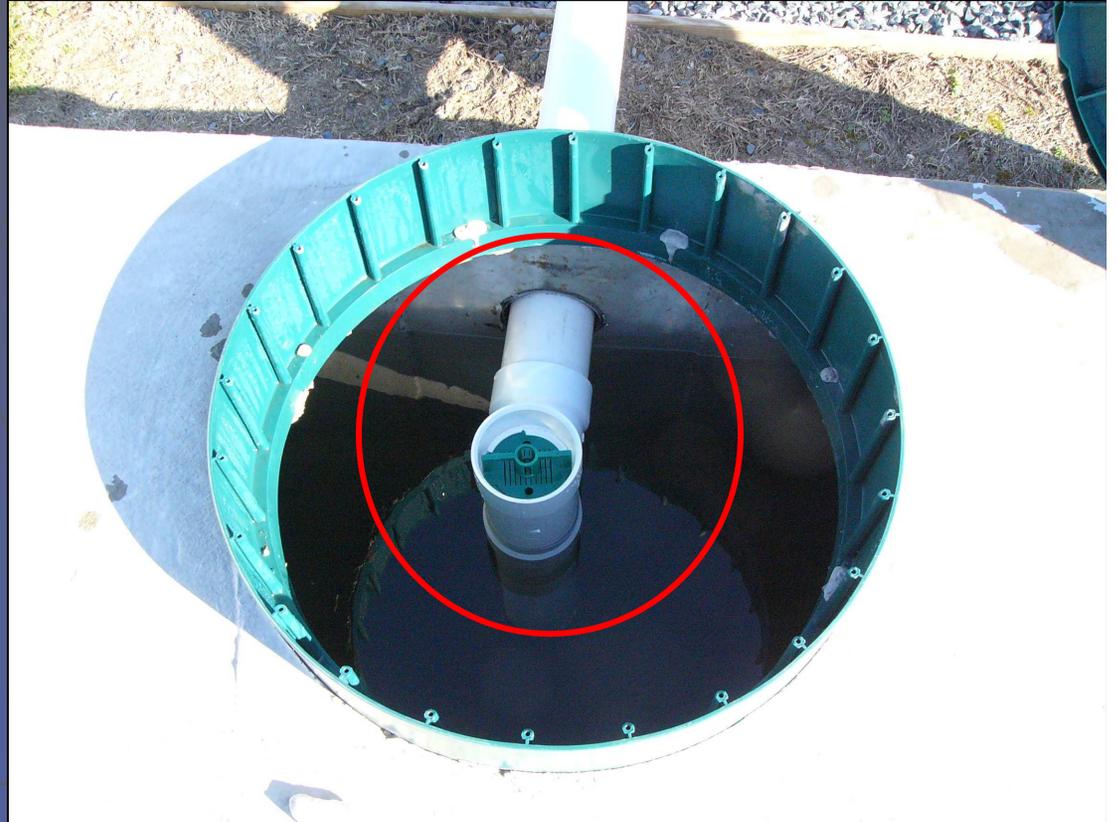
SEPTIC TANK



SEPTIC TANK

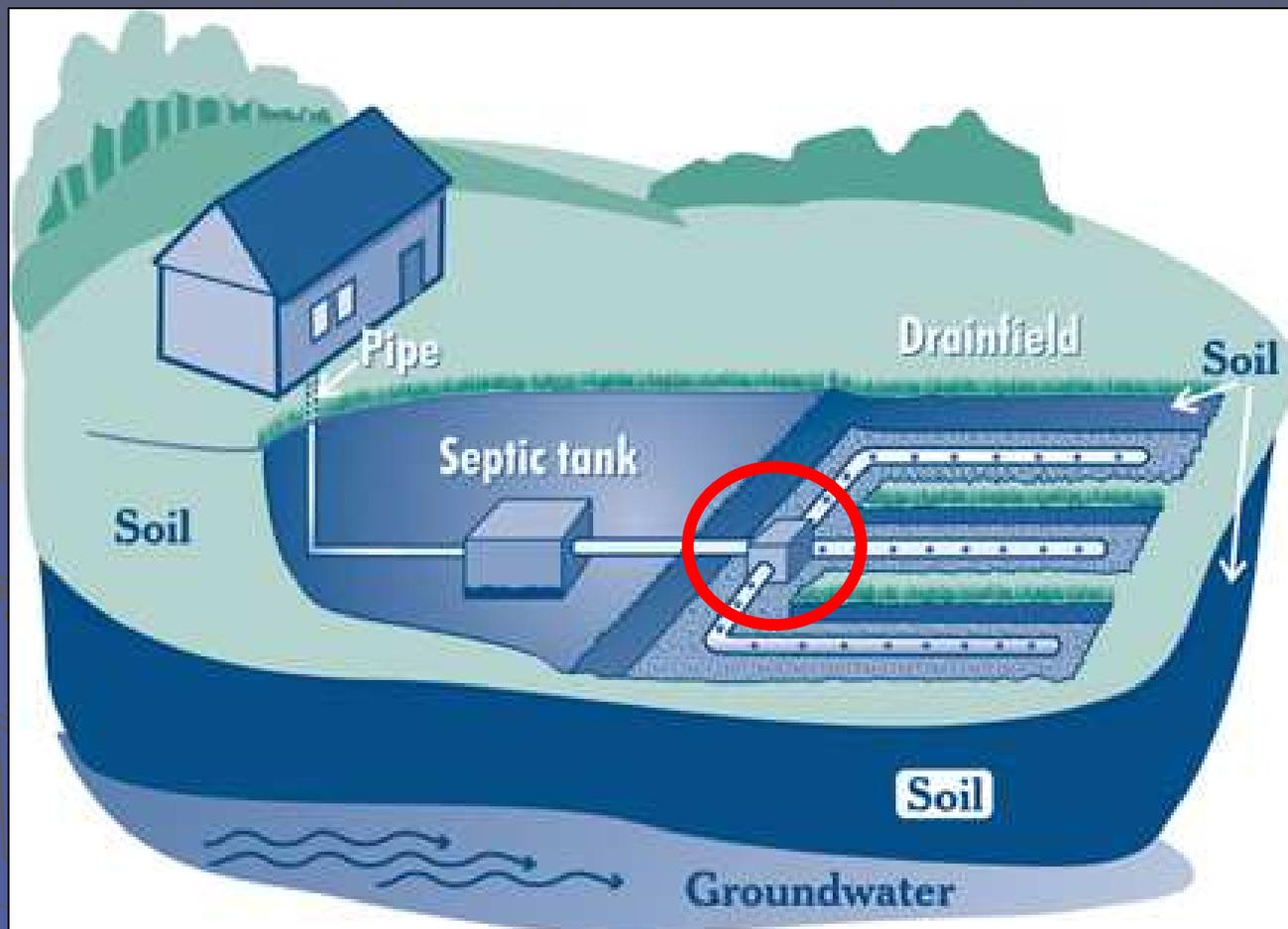
▶ Effluent Filter

- Must be cleaned once or twice a year.
- Can be flushed out with hose into the first compartment of the septic tank.



DISTRIBUTION BOX AKA: D-Box

- ▶ Allows septic tank effluent to be evenly distributed throughout the drain field.



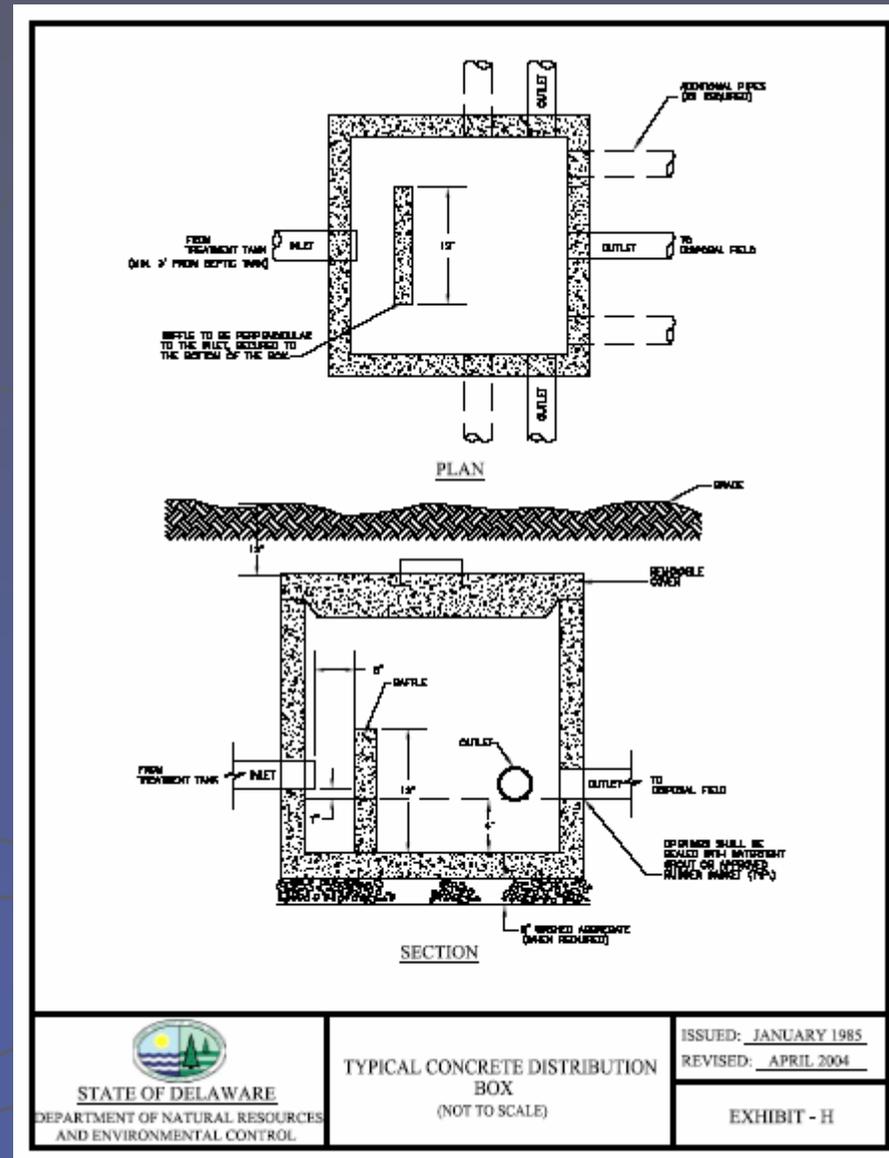
DISTRIBUTION BOX

► Components

- Baffle Wall

 - Reduces Flow

- Several Pipes Leading to Drain Field



DISTRIBUTION BOX



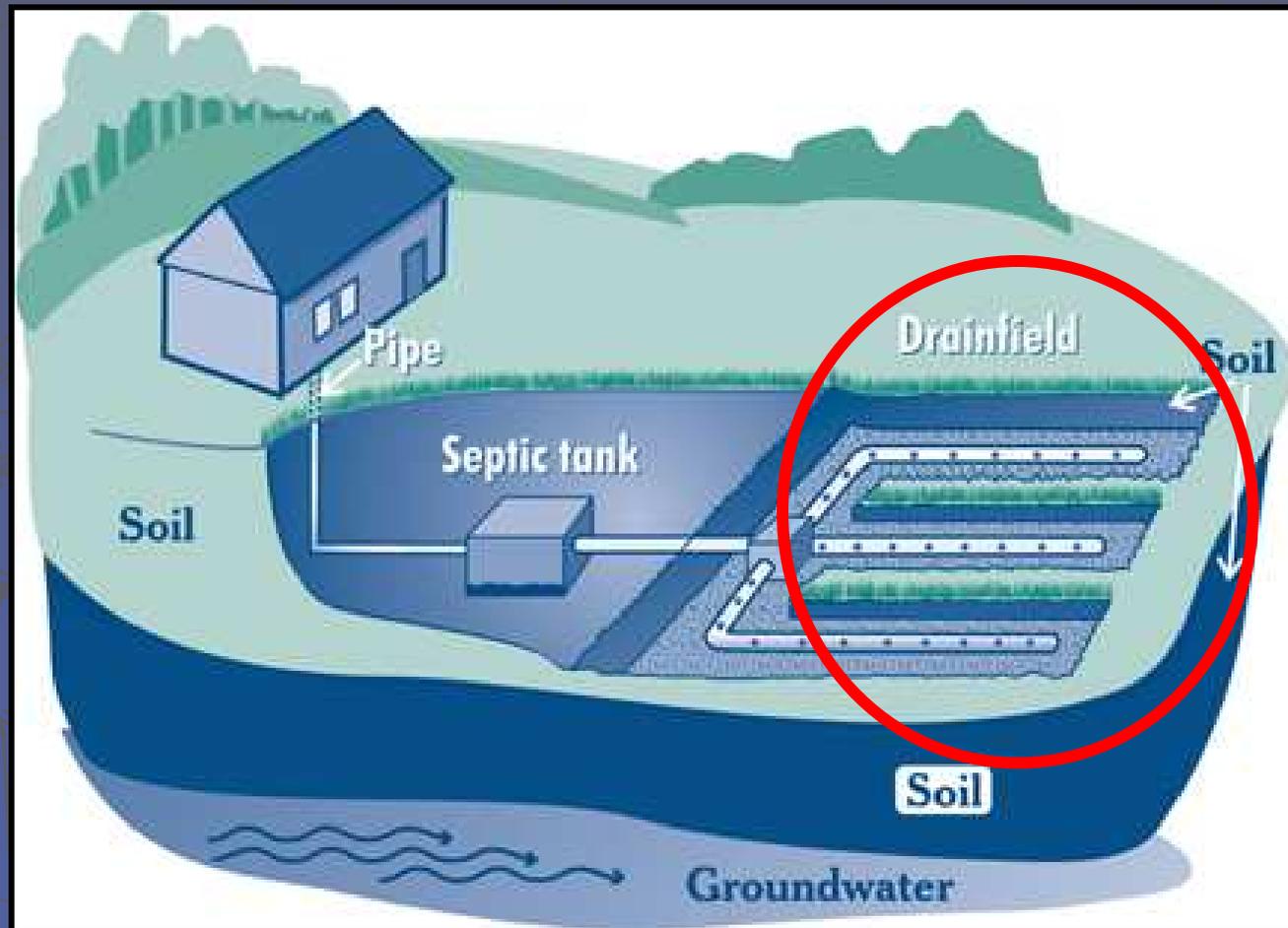
DOSING CHAMBER



DRAINFIELD

► Purpose:

- To Allow Septic Tank Effluent to Seep Back Into the Groundwater



DRAINFIELD

► Types:

- Standard Gravity Bed
- Standard Gravity Trench
- Capping Fill
- Elevated Sand Mound
- Standard Pressure Dosed
- Low Pressure Pipe (LPP)
- Innovative & Alternative Systems and Units

STANDARD GRAVITY



CAPPING FILL SYSTEM



ELEVATED SAND MOUND



LOW PRESSURE PIPE (LPP)



STANDARD PRESSURE DOSED



EXISTING ONSITE DISPOSAL SYSTEM INSPECTIONS

- ▶ A thorough inspection should include the following but may not be limited to:
 - An interview with the owner/occupants
 - Uncovering of the septic tank
 - Pumping of the septic tank
 - Uncovering of the distribution box
 - Uncovering of the lift/pump tank
 - Observation of the drain field

INNOVATIVE & ALTERNATIVE

▶ IA Units

- FAST
- Norweco
- Clearstream
- Klargester
- Jet
- Cromaglass
- Biocler
- White knight
- Ecopod
- Pirana

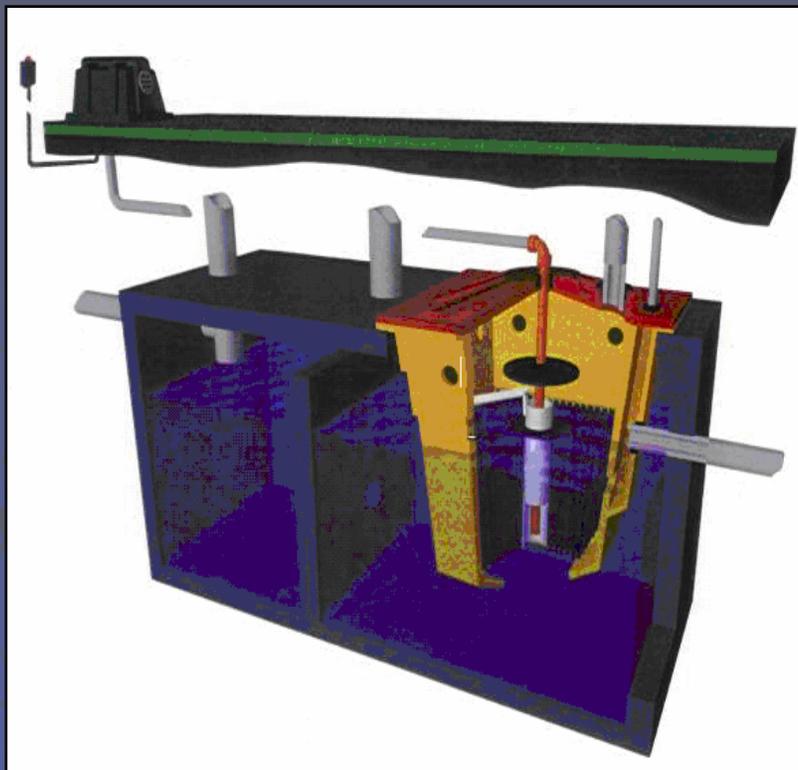
▶ IA Systems

- American Drip
- Geoflow Drip
- Puraflo Peat
- Ecoflo Peat
- Eco-Pure Peat

INNOVATIVE & ALTERNATIVE

- ▶ Purpose of IA treatment units
 - Reduce the strength of septic tank effluent through aerobic or aerobic/anaerobic processes
- ▶ Systems are placed in areas with:
 - Severe limiting soil characteristics
 - Overcome density requirements
 - Reduction in isolation distances
 - Environmentally sensitive areas

INNOVATIVE & ALTERNATIVE



INNOVATIVE & ALTERNATIVE



AEROBIC UNIT

INNOVATIVE & ALTERNATIVE



PEAT FILTER

INNOVATIVE & ALTERNATIVE



MICRO-DRIP

INSPECTIONS INNOVATIVE ALTERNATIVE SYSTEMS

- ▶ The inspection will include the standard requirements of a traditional wastewater disposal system.
- ▶ Will also include special procedures as required by each manufacturer.
- ▶ Inspector Must be certified on the type of I/A system being inspected.
- ▶ I/A systems require yearly Operation & Maintenance Contracts.

Important Phone Numbers

- ▶ DNREC (Kent & NCC): 302-739-9947
- ▶ DNREC (Sussex): 302-856-45961
- ▶ DOWRA: www.dowra.org
- ▶ Hilary Moore: 302-739-9331
- ▶ Benjamin Miller: 302-226-2844

Questions
Or
Comments??

