

Onsite Sewage and Water

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Question 1

- Within 10 years, when was the Virginia Department of Health established?

1908 (1899-1918)

Question 2

- How often, if ever, should a septic tank be pumped?

5-7 years

Question 3

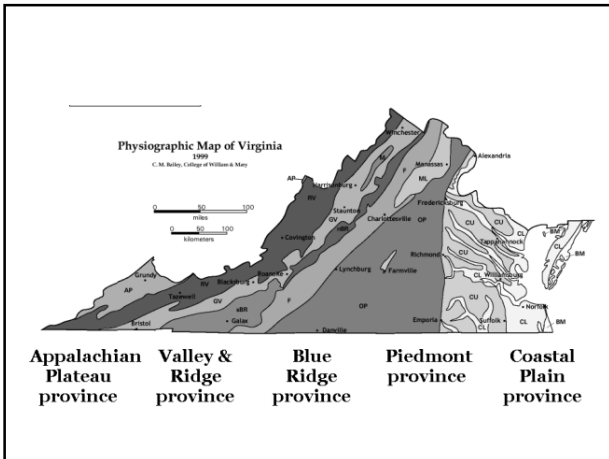
- When was the first groundwater protection rule established in America?

1610 – *“There shall be no man or woman dare to wash any unclean linen, ...nor rinse or make clean any kettle, pot or pan,... within twenty feet of the well.”* (AGWT, 2003)

Big Picture

- States must comply with federal environmental protection laws
- Pollutant levels are set for drinking water (public)
 - Boil water notices
- Wastewater treatment standards are also set (Clean Water Act)
 - Primary, secondary, tertiary treatment

- Virginia has five physiographic provinces
 - West to East
 - Cumberland Plateau
 - Valley and Ridge
 - Blue Ridge
 - Piedmont
 - Coastal plain



**Onsite = Out-of-site
(not out-of-mind)**

- All sewage systems require maintenance
- Our private well water is recycled
- Recent advances in onsite sewage systems.

Maintenance

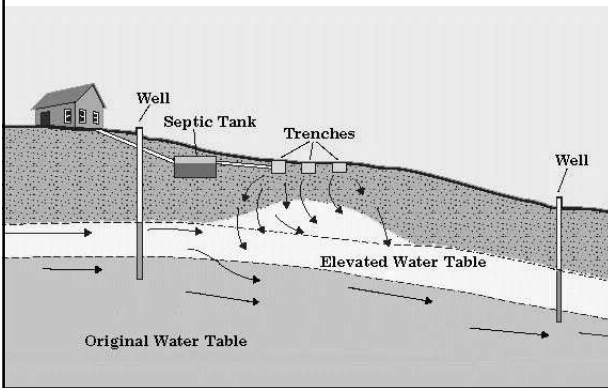
- No different than other elements of home
 - HVAC, exterior, roof
 - Primary: septic tank
 - Secondary: bio-filter, attached growth,
 - Soil based absorption systems

What's in Wastewater?

1. **Water (99 Percent)**
2. **Organics & Nutrients**
3. **Fats, Oils, and Grease (FOG)**
4. **Inorganics and other solids
(Hair, cloth)**
5. **Virus and Bacteria**
6. **Heavy Metals**
7. **Ammonium, Phosphates**



Why do we regulate? (The Hydrologic Cycle)



Community

- Sewage – cluster systems
 - One owner
 - Loudoun, Franklin Counties
- Water – public water supplies
 - Testing, maintenance
 - Office of Water Programs





System Failure









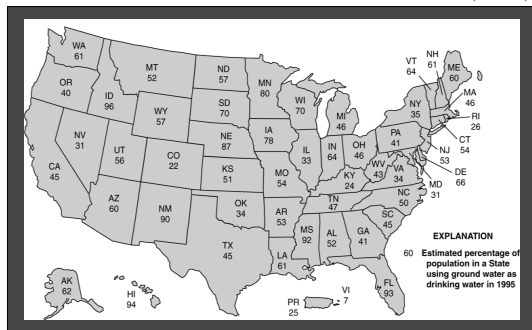


What is a well?

- A deep hole or shaft sunk into the earth to obtain water, oil, gas, or brine (*dictionary.com*)
- i.e., man's attempt to get water from stone



Ground Water Use in the United States (1995)



Drilling a Well



DOH website

- <http://www.vdh.virginia.gov/>
