Arizona Department of Environmental Quality

A Community Discussion

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ADEQ Arizona Department of Environmental Quality

Coconino County Delegation

Authority for Coconino's wastewater program is delegated by the ADEQ.

(http://www.azdeq.gov/final-delegation-agreements)

Authority includes:

- Inspecting newly installed septic systems
- Issuing authorization for discharge from septic systems
- Permitting on-site wastewater systems*

*A septic system or alternative system installed to treat and dispose of wastewater generated at the site

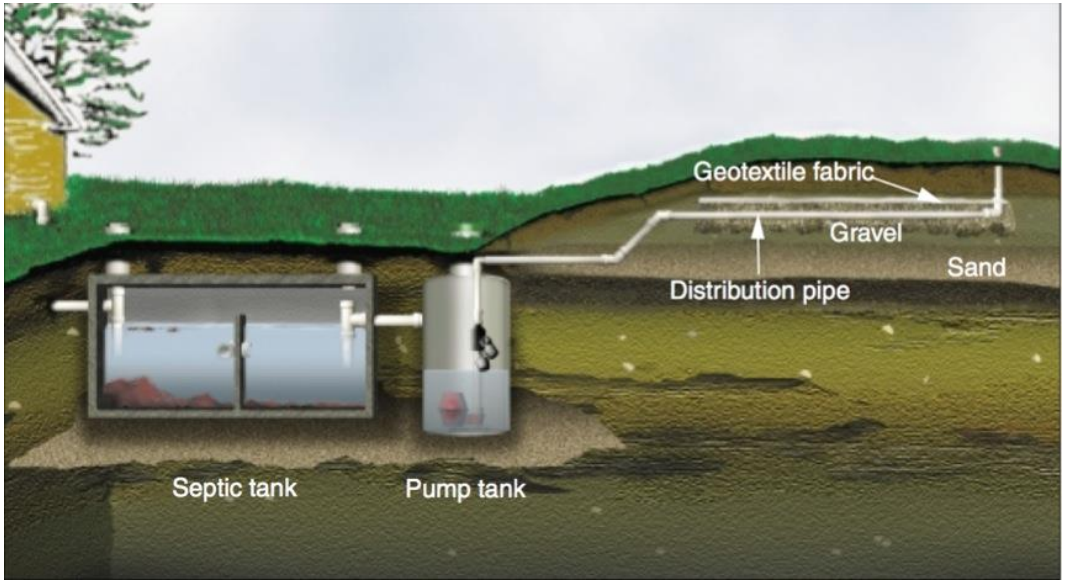
NOTE: Wells that serve less than 25 people or with less than 15 connections are considered private wells.

- Unregulated by the ADEQ
- Responsibility of homeowner

Wastewater and Septic Systems

Coconino County's delegated authority includes conventional and some alternative onsite wastewater systems.

- Septic Systems are approved through a permit.
- Several technologies can be used dependent on site conditions and limitations.
- Goal is to apply a wastewater treatment system based on site conditions and to protect human health and the environment.
- Example: A Wisconsin Mound – Commonly used alternative technology.
  - Treats wastewater to equal or higher standards prior to entering the environment
  - Widely used throughout the county and the US



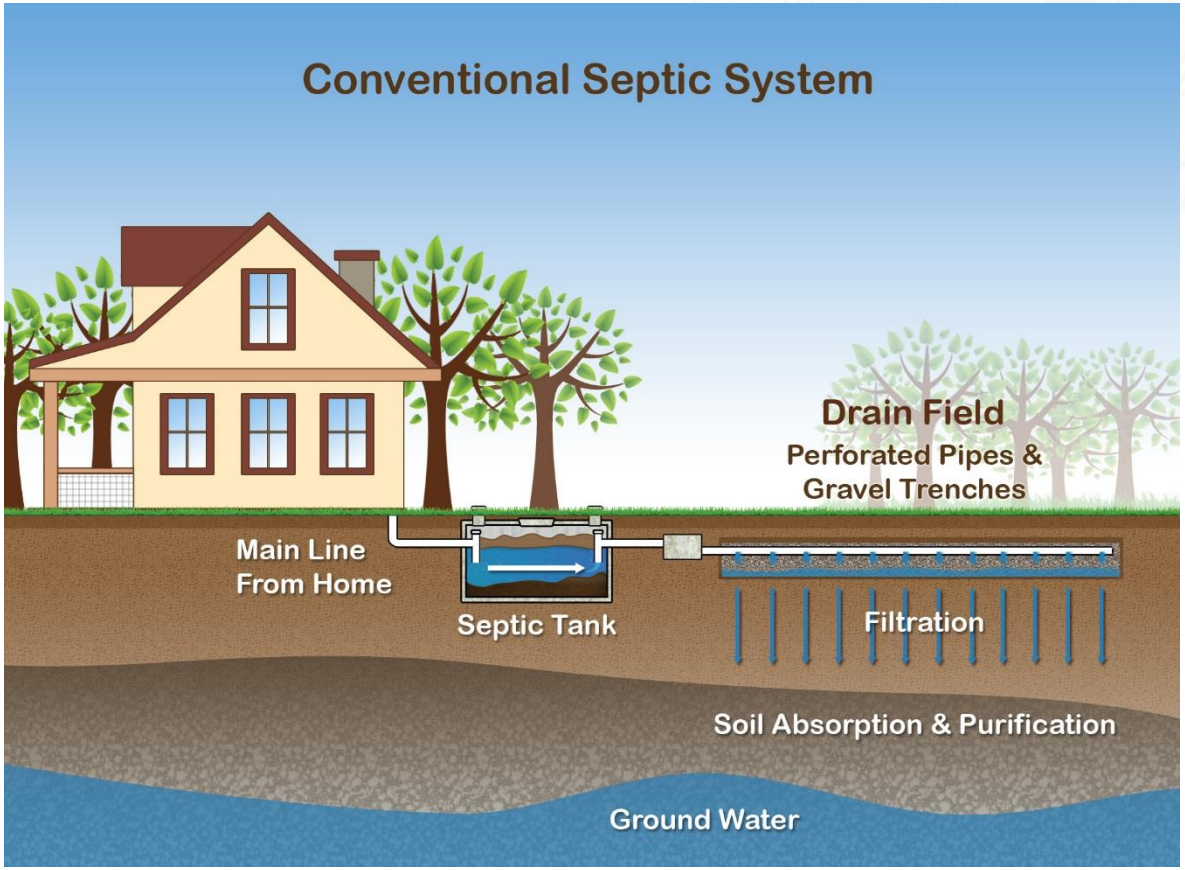
Conditions that require a mound:

- Native soil has very high or low permeability;
- There is little native soil covering fractured or very permeable rock; or
- High water table

How the Septic System Works

How a conventional septic system works

1. System receives wastewater from the home.
2. Pretreatment - The wastewater settles in the septic tank in three layers, scum (oils and fats), clarified water (effluent), solids (sludge).
3. Effluent is pumped out of the tank into the drainfield (a shallow, covered trench) through pipping.
4. Effluent filters through soil where is it is treated.
5. As effluent moves through the soil by gravity flow, coliform bacteria, viruses and nutrients are naturally removed before reaching groundwater.



Is my private well impacted and what can I do?

- Septic systems are designed to treat wastewater to regulatory levels. (R18-9 General Permits)
- A required distance (100 ft.) between the well and the septic system is required.
- Systems need to be maintained by homeowners in order to avoid a failing system.
- When properly used and maintained, a septic system will treat wastewater to acceptable standards and reduce impact to nearby water sources.

What can you do as a private well owner?

Test your water regularly for coliform bacteria, nitrates an other contaminants.

What you put in your septic system can end up in your drinking water!

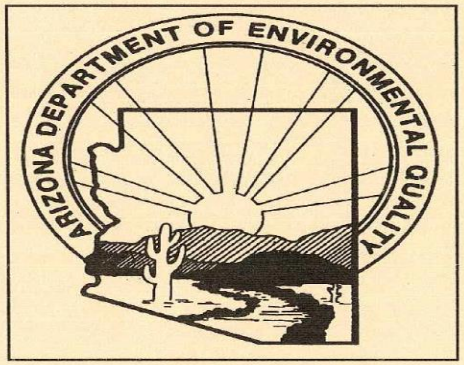
Septic System Maintenance

- Maintain your septic system
  - Pump out regularly (as recommended by manufacturer)
- Avoid disposal of hazardous materials and pharmaceuticals into the septic system (collection box for pharmaceuticals at LEAF and HHHW taken at the Landfill's Hazardous Products Center (HPC)
- Use water efficiently to avoid overloading your system
- Keep Records (maintenance, repair, upgrades)!
- Don't overload! Certain activities like releasing water from hot tubs or doing a heavy volume of laundry loads can overload your septic system.

http://www.azdeq.gov/node/882

STATE OF ARIZONA

THE IMPACTS OF SEPTIC SYSTEMS ON WATER QUALITY OF SHALLOW PERCHED AQUIFERS: A CASE STUDY OF FORT VALLEY, ARIZONA



Prepared by

Hydrologic Support and Assessment Section

Water Quality Division

Arizona Department of Environmental Quality

February 1997

OFR 97-7

Additional information and questions

Arizona Department of Environmental Quality

"*The Impacts of Septic Systems on Water Quality of Shallow Perched Aquifers: A Case Study of Fort Valley, Arizona*"

February 1997

http://www.azdeq.gov/node/882

(Fort Valley Septic Study (1997)

Questions?

ADEQ Ground Water Protection Section

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Thank you.