

Yakima Health District On-site Sewage System Program

SITE AND SOIL EVALUATION

The first step in determining whether a lot or parcel of land is "buildable" is to have a **Site and Soil Evaluation** done (also known as soil certification, perk test, check testholes). Soils are not the only thing evaluated while at the property. Other factors that must be checked while on-site are slopes, cut banks, wells, surface waters (including irrigation and drainage ditches), driveways, easements, underground utilities or anything that may affect the installation and/or operation of a septic system.

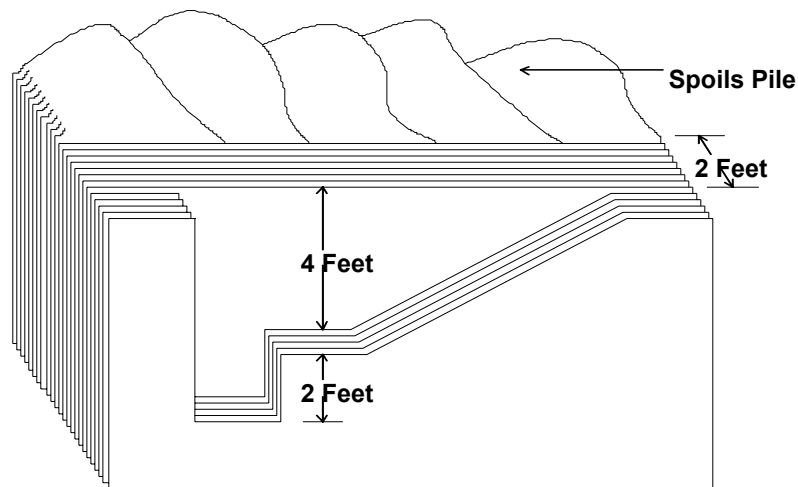
An on-site septic system can be designed for most lots or parcels. The limiting factors are usually soil depth and cost. A gravity flow (conventional) on-site septic system requires a minimum of 4 feet of suitable soil. (A 3 foot separation between the bottom of the drainfield trench and an impermeable layer or groundwater is required.) Sites with slopes exceeding 15 percent may require deeper soil depths for a gravity flow septic system. A site with less than 4 feet of soil requires an alternative septic system.

The soil information gathered during the evaluation of testholes is called a **soil log**. This information is used to determine the location, type and size of the septic system, drainfield and replacement area. When evaluating soils in testholes Yakima Health District (YHD) field staff must determine the type(s), as well as the depth of the soil at the site. Because different soils absorb water at different rates, soil type determines the size of the drainfield necessary to properly treat and dispose of the wastewater. Soil depth determines the type of system that can be installed at the site (i.e. standard trench, shallow-pressurized, sand filter, etc.).

A minimum of two (2) testholes **must** be dug for each proposed drainfield site and replacement area. Some sites may require additional testholes. The testholes are to be located in the area where the proposed system is to be located. They should be located approximately 75 to 100 feet apart and be dug to a depth of 6 feet (8 feet maximum). YHD field staff may advise you in determining where to locate your testholes. Testhole excavation should be stopped at a shallower depth if hardpan, bedrock or groundwater is encountered.

Testholes should be at least 2 feet wide to allow the YHD field staff easy access to observe and evaluate the soil's texture, structure, color, compaction, etc.. Angling one end of the testhole with a landing at the 4-foot level will allow easy access for YHD staff. An illustration of this is attached.

Testhole dimensions



The following definitions may help you better understand this information:

DEFINITIONS:

ALTERNATIVE SYSTEM: An on-site sewage system other than a gravity flow system. Properly operated and maintained, alternative systems provide equivalent or better treatment performance as compared to gravity flow systems. Generally all alternative systems require the use of effluent pumps and are pressure-dosed.

GRAVITY FLOW SYSTEM (CONVENTIONAL): An on-site sewage system consisting of a septic tank and drainfield, with the effluent from the tank being distributed to the drainfield by gravity flow.

EFFLUENT: The wastewater (sewage) after treatment by the septic tank.

HARDPAN: A hardened or cemented soil layer. The soil material is sandy, loamy, or clayey and is cemented by minerals, or other substance. This material inhibits water movement.

SOIL LOG: A detailed description of soil texture, structure and other soil characteristics encountered in a soil profile pit or testhole. The log provides information on the soil's ability to act as a treatment medium for effluent.

TESTHOLE: (aka soil profile pit) A testhole is a hole dug into the ground to expose the profile of the soil so the different soil types and layers can be evaluated and logged. A testhole is best dug with a backhoe. (Another name often used, but no longer accurate, is perk hole.)