



MEMORANDUM

TO: Engineers, surveyors, and septic contractors

DATE: May 8, 2023

FROM: Heidi Benham, Manager, Well and Septic Section *HB*

RE: **Percolation testing and design - Updates and clarifications**

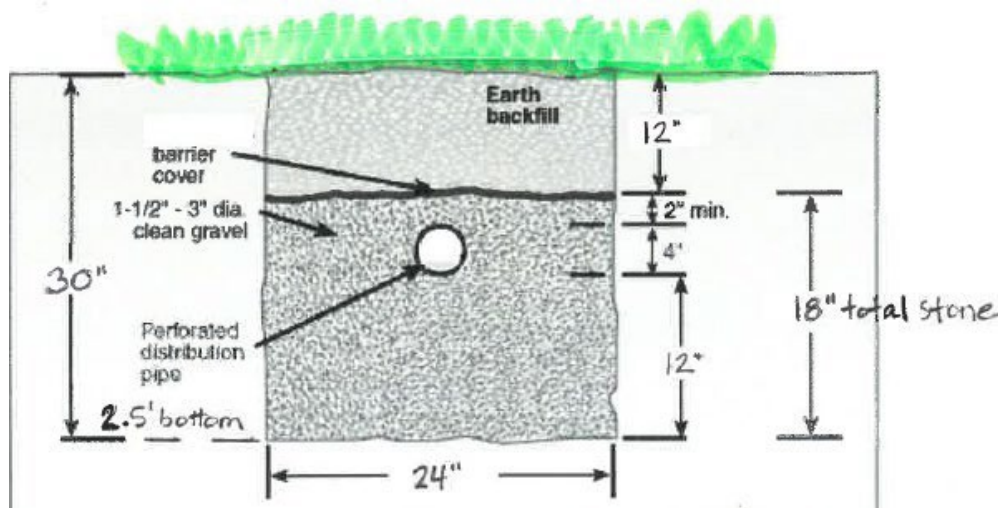
This memorandum is published to clarify and update all customers on the percolation testing process, including suitable test depths and system design, for all new construction proposals for establishment of sewage disposal areas. ***Any updates to our current processes shall be effective June 1, 2023.***

Percolation Testing Criteria for Shallow Trenches

Historically, a shallow trench system was designed based off a series of shallow percolation tests at a depth of 2.5' and spaced every 50 feet within the proposed septic area. A deep test was also conducted at 6.5' but only at the high and low portions of the proposed septic area. The test depths of 2.5' & 6.5' is not dictated by the county regs, but was an established practice for many decades. It appears that the deep tests for shallow systems were implemented in an effort to confirm the presence of the four-foot treatment zone as dictated in COMCOR 1979.

The shallow test depth of 2.5' represents the bottom of the trench, to support bottom absorption area. The trench bottom is designed at 2.5', and the stone is placed above the test, in this case the shallow test depth does not represent the trench invert as it does for all other deep trench systems. Typically, using bottom area only there would be 12" of stone beneath the pipe as shown below.

Shallow Trench Design – Using 18" stone 2.5' trench bottom



NOT TO SCALE

Shallow trench system percolation test requirements:

- **The minimum** shallow percolation test depth shall be **2.5'** which represents the bottom of the trench.
- The **maximum** deep percolation test depth shall be **8.5'** which represents the bottom of the treatment zone.
- There must be a **minimum of 4' of separation** between the shallow test and the deep test.
- The design will be based on 18" of stone only regardless of the test depths. For example, a test at 3.0' and 7.0' will result in a trench bottom of 3.0' and 18" of stone but with more cover (18" instead of 12").
- A shallow and deep test will be conducted at every test site, instead of only in the high and low part of the septic area as done previously.
- Spacing between test sites will be done the same as perc tests for deep trench systems (approx. every 90'-100'), instead of every 50' as done previously.

Deep trench system percolation test requirements:

- **The minimum** shallow percolation test depth shall be **1.5'** which represents the invert of the trench.
- There is **no maximum** test depth for the deep test cup except that which is dictated by the applicable water table test result(s).
- The deep test cup will represent the bottom of the treatment zone.
- A minimum of 8' of separation between the shallow and deep test is necessary to use 4.0' of effective stone depth. Less separation between shallow and deep tests will result in less effective stone depth and therefore require more linear footage of trench per system.