

**DPS****Montgomery County
Department of Permitting Services**

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Well and Septic Guideline for Percolation (Soils) Testing

Percolation testing is part of the evaluation process required for installing or replacing a septic system. Percolation testing must be conducted and supervised by the County. It determines percolation rates and if the soils can effectively treat wastewater in the proposed area of the initial septic system and replacement septic systems. This area is often referred to as the Sewage Disposal Area or Septic Reserve Area.

When is percolation testing required?

Testing is required for either of the following conditions:

- **Subdivision:** Properties intended for subdivision development.
- **Individual parcels/lots:** Properties intended for individual use on which a septic area must be established for supporting improvements such as additions, a replacement dwelling, a change in use, etc.

How do I apply for testing?

Follow the steps below to initiate soils testing by the County:

- **Secure the services of a professional engineer** to prepare a test plan for submission
- **Submit a complete application package to our office** in person or by mail:
 - a) Application for Well/Septic Permits or Services:
 - Initial Plan Review
 - Water Table Test (if applicable)
 - Percolation Test
 - b) Two hard copies of a professionally prepared test plan
 - c) Fee payment (refer to the FY22 fee schedule)
 - Fees may be paid online after the submission is received. If you wish to pay online, please indicate such on the transmittal.
 - d) Additional items (if applicable)
 - For unimproved parcels with no street address, an Address Verification/Assignment Memo issued by M-NCCPC (Maryland National Capital Park and Planning Commission)
 - For proposed major subdivisions, confirmation of application to M-NCPPC for subdivision.

- For unplatted parcels, an exemption memo from M-NCPPC confirming that the property is exempt from platting requirements.
- **A well and septic plan reviewer will review the submission.** If the test plan is approved the reviewer will approve locations for water table and/or percolation testing. If not, comments will be sent to the engineer for further revisions.
- **The approved test sites will be forwarded to the engineer.** The professional engineer/licensed surveyor must stake out all approved test sites in advance of testing.
- **Secure the services of a qualified excavator.** An experienced excavator must prepare the test holes for evaluation by the County (see details below). The excavator must also contact the area Well and Septic Inspector to schedule the test date(s).

What are the testing requirements?

- **Water Table Tests:** Percolation tests must be supported by ‘water table’ tests. A water table test must be conducted in a declared wet season (period of the seasonally high water table) typically Feb. 1st thru April 15th. The purpose of the water table test is to confirm depth to seasonally high groundwater. The test should be proposed at or below the lowest elevation of the proposed septic area. If successful water table tests are completed, then percolation tests may be conducted any time of year except in areas restricted by wet season soils (see description below). Water table tests are always required unless it has been determined by County staff that there is sufficient water table data on record. If scheduling allows, it is possible to conduct water table and percolation tests simultaneously.
- **Restrictions:**
 - **Original Soils:** Testing cannot be conducted within disturbed soils.
 - **Floodplains:** Tests cannot be conducted within a floodplain.
 - **Wet Season Soils:** Septic areas proposed in hydraulic soils, known as ‘wet season’ or ‘restricted’ soils, may only be tested during a declared wet season.

How should the test site(s) be prepared?

Test site preparation may vary based on the test site conditions and approved plan.

- **Types of soils tests:**
 - **Water Table tests** – The site must be excavated to a total depth of fifteen (15) feet, or to the point at which the excavator encounters groundwater and/or excessive rock fragments.
 - **Percolation tests (for trench systems)** – The sites must each be presoaked with approximately five (5) gallons of clean water, no more than twenty-four (24) hours before testing. Each test site must consist of one (1) shallow and one (1) deep test. The exact depths will be determined based on soil conditions at the discretion of the excavator. Test cups must be six (6) to eight (8) inches in diameter, and thirty (30) inches in total depth.
 - **Sand Mound tests (for sand mound systems)** – A infiltrometer test must be conducted within the most restrictive layer of the upper 24” of soil. The test should be conducted at the geometric center of the proposed sand mound sites.

- **Supplies needed** include:
 - Clean five (5) gallon bucket filled with clean water
 - Straight edged board to conduct water level measurements for the percolation rate. The board must be three (3) to four (4) feet in length, two (2) to four (4) inches in width, and one half (½) to two (2) inches in thickness.

****Caution:** *Open test holes are hazardous to humans and animals. No test holes shall remain open longer than necessary to complete testing. Test holes must be filled immediately after testing is completed. Open test holes must be fenced off and barricaded at all times.***

How do I receive approval after testing?

All test results will be forwarded to the excavator. When successful testing is completed, the engineer must submit a Final Plan for review and approval. Please refer to the ***Well and Septic Final Plan Guideline***.

Who to contact with questions?

For any questions or issues about percolation testing, please contact the DPS Well and Septic Section at (240) 777-0311.

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