

**DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST**

Date / Time: _____ Test Performed by: _____

Owner: _____ TMK: (____) ____ - ____ - ____ : _____

Elevation: _____ feet

Depth to Groundwater Table: _____ feet below grade

Depth to Bedrock (if observed): _____ feet below grade

Diameter of Hole: _____ inches

Depth to Hole Bottom: _____ feet below grade

<u>Depth, inches below grade</u>	<u>Soil Profile (color, texture, other)</u>
_____	_____
_____	_____
_____	_____

PERCOLATION READINGS:

Time 12 inches of water to seep away: _____ minutes

Time 12 inches of water to seep away: _____ minutes

Check one:

____ Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

____ Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at least every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

<u>Time Interval</u>	<u>Drop in Inches</u>	<u>Time Interval</u>	<u>Drop in Inches</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Percolation Rate (time/final water level drop): _____ minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Engineer's Signature/Stamp

Date

**DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM**

FALLING HEAD TEST PROCEDURE

1. Preparing Percolation Test Hole(s)
 1. Dig or bore a hole, four to twelve inches in diameter with vertical walls to the approximate depth of the soil absorption system (bottom of trench or bed).
 2. Scratch the side wall and bottom to remove any smeared soil and remove loose material.
 3. Place one inch of coarse sand or gravel on bottom.

- B. Determine Percolation Rate
 1. Place twelve inches of water in hole and determine time to seep away. Record this time on the site evaluation form.
 2. Repeat step B.1. above. Also record this time on the site evaluation form.
 3. If the time of the second test is less than 10 minutes go to Step C, if not skip to Step D.

- C. Sandy (granular) Soils
 1. Establish a fixed reference point, add water to six inches above gravel and measure water level drops every ten minutes for 1 hour.
 2. Use a shorter time interval if first six inches seeps away in ten minutes or less.
 3. Refill when necessary, do not exceed six inches of water.
 4. Record time intervals and water drops on site evaluation form.
 5. Use final water level drop interval to calculate percolation rate. (Step E)

- D. Other Soils (non-granular, e.g. silt, loams & clays)
 1. Maintain at least twelve inches of water in the hole for at least four hours to presoak soil.
 2. Do not remove water remaining after four hours.
 3. Permit soil to swell at least 12 hours. (Dry clayey soils should be soaked and permitted to swell for longer periods to obtain stabilized percolation rates).
 4. After swelling, remove loose material on top of gravel.
 5. Use fixed referenced point, adjust water level to six inches above gravel and measure water level drop.
 6. If the first six inches of water seeps away in less than 30 minutes, measure water level drops every ten-minutes and run for one hour.
 7. If the first six inches of water takes longer than 20 minutes to seep away, use 30 minute time intervals for four hours or until two successive drops do not vary by more than one-sixteenth inch (stabilized rate).
 8. Refill with water only when necessary, but no adjustment during last three readings except to the limit of the last drop. Do not exceed six inches of water.

- E. Use final drop interval to calculate percolation rate and record on site evaluation form:

$$\frac{\text{Time Interval}}{\text{Water Level Drop}} = \text{Percolation Rate}$$