

## The 5 Steps in Determining the Water Infiltration Rate

1. Dig a hole that matches the approximate dimensions of a 1 gallon milk jug (same width and depth) in the location where you plan to install your rain garden.
2. Fill the hole with about 3" of water and allow it to fully drain from the soil. This will saturate the soil. Your water infiltration rate measurement must be done on saturated soil because you want your rain garden to function throughout recurring periods of heavy rain.
3. Insert a ruler into the bottom of the hole so you can measure, in inches, a falling water level when water is added to the hole. A pencil or dowel rod with 1" incremental markings can also be used. Make sure that at least 3 incremental inch markings are visible above the bottom of the hole.
4. Fill a gallon milk jug with 3" of water. It is helpful to make a mark at the side of the jug at the 3" level. Pour the water into the hole and observe for 3 hours, or until all the water has drained away. If the water drains away before 3 hours, note the elapsed time.
5. After 3 hours, record in inches the amount of water that has drained into the soil. This is the infiltration rate, determined in inches per hour, for your soil that is close to saturation. Note that if you completely fill the gallon jug with water, pour the water into the hole and record the time required for water to drain away, you will be able to measure the infiltration rate of your soil in 5 terms of "gallon per hour." This number is helpful in determining the impact of your rain garden in terms of the gallons of water the garden is preventing from running into storm sewers or other drainage systems.