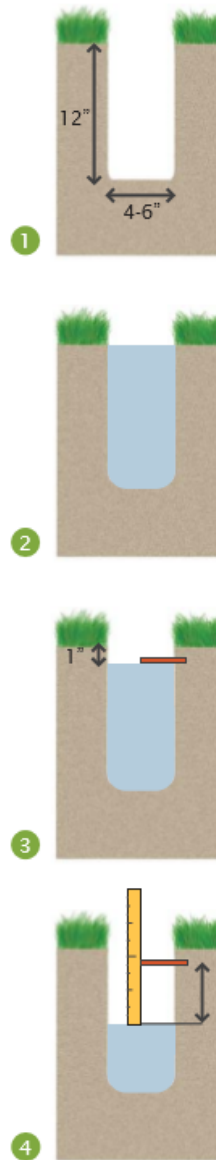


Check Your Soil: Infiltration Test (Percolation Test)

Good soil drainage is important. Determine how fast the soil drains at your site by conducting an infiltration test (also referred to as a percolation test). This test will let you know how well the existing soil infiltrates water. Ideal soils will infiltrate completely within 24 hours at a percolation rate of approximately 1.5 inches per hour.

As the diagram to the right indicates, complete the following steps:

1. Dig a hole in the proposed rain garden site, approximately 12 inches in depth and four to six inches in diameter. To be more accurate, dig two holes. A standard post-hole digger is typically the tool of choice for this activity.
2. Fill with water to saturate the soil and then let stand until all the water has drained into the soil.
3. Once the water has drained, refill the empty hole again with water so that the water level is about one inch from the top of the hole. Use a stick to indicate the location of the starting water level. Record the time using a watch. Measure the depth of the water with a ruler.
4. Check the depth of water with a ruler every hour for at least four hours.
5. Calculate how many inches of water drained per hour. With sandy soils, the water should descend quickly. With clay soils, the water should descend slowly.



If the drainage rate is less than 1.5 inches per hour, or the water does not drain within 24 hours, add soil texture amendments such as coarse sand during installation. Alternatively, consider placing the rain garden in a different location on your property.

It is important to note that sometimes an infiltration test provides a false reading of a site's soil conditions. For example, during dry conditions, an infiltration test may demonstrate that the soil drains quickly and does not need amendments. However, during a rainy season, an infiltration test on that same soil may reveal that it is clayey and does not infiltrate well.

A GOOD RULE OF THUMB:

The rain garden should be about twice as long (perpendicular to the slope) as it is wide.

