



Let it Rain Program rain garden rebates

Soil Infiltration Test Certification

**You must perform this test before installing a rain garden. Be sure to Dial 811 before you dig!
Perform this test after your site has been assessed by the city.**

How water flows through soil plays a significant role in the decision to build and size a rain garden. The characteristics of subsoil (the layer under topsoil) play a role in water movement. Subsoil that is made up of glacial till or clay prevents infiltration. If there is enough rain with this type of subsoil, the topsoil becomes saturated, leaving no place for the water to go regardless of the characteristics of the topsoil.

To properly size your rain garden perform the following infiltration test:

- 1) Dig a hole that is 24 inches deep and at least 6 inches across.
- 2) Add a wooden stake to the bottom of a yardstick. Duct tape works to attach the stake. Place the yard stick in the hole with end of yard stick flush with the bottom of the hole.
- 3) Fill the hole with water to a minimum depth of 12 inches and let the water drain completely.
- 4) **SKIP step 4 if doing test during the wet season (December through April).** Repeat filling hole with water to 12-inch depth and drain a second time. **ONLY** do second filling with water if test is done in summer.
- 5) Start in the morning for the next fill, making sure it is within 24 hours of the initial fill of water. Fill the hole with water to a minimum 12 inch depth and
 - a) Measure the water height every hour. Note your results in the table included with this form.
 - b) Continue to note your results until the rate of infiltration stabilizes (the water is no longer draining and the water depth has stayed steady for 2-3 hours).
 - c) Use results to calculate the infiltration or drainage rate (inches/hour) of the soil.
- 6) Multiple test holes are recommended especially if the first test hole fails (i.e. does not drain). It is best to dig test holes at least 3-5 feet apart and be sure to follow Steps 1- 5 for each test hole.



If you find any of the following conditions during your test

- You hit hard pan (dense clay)
- Your test hold does not drain at least $\frac{1}{4}$ inches per hour
- Your test hole fills with water after or during your digging attempt

Your site may therefore not be suitable for a rain garden or other stormwater infiltration systems!

