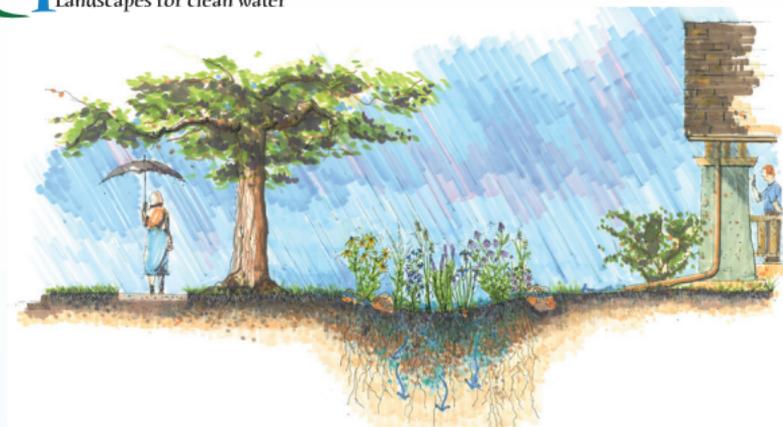




RAIN GARDEN

Installation



INSTALLATION GOAL

Install a rain garden that will percolate stormwater and add beauty to the landscape.

PRE-INSTALLATION NOTES

IMPORTANT: Attention must be given at all times during construction to prevent compaction of soils in the rain garden. **DON'T** drive or operate machinery on the bottom of the rain garden during construction and minimize foot traffic. Prevent runoff from entering the rain garden during construction.

RAIN GARDEN INSTALLATION STEPS

1. UTILITY LOCATION:

Locate all utilities ahead of time by contacting Iowa One Call: 1-800-292-8989

2. PERCOLATION TEST:

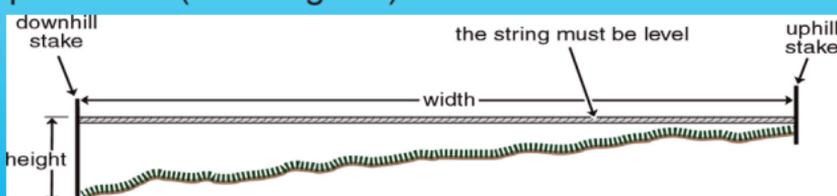
Make sure the site can percolate water at a rate not less than .5" / hour. Otherwise, refer to Bioretention Cell pocket guide.

3. LAYOUT:

Lay out the shape of the garden using flags, a rope or garden hose. Long, narrow gardens that lay perpendicular to the slope are recommended. Remove sod or kill off turf using appropriate herbicides or covers such as tarps, newspapers or plastic sheeting.

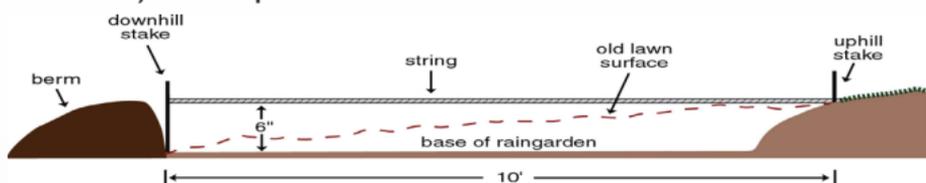
4. CONSTRUCTION:

Stakes and line level. Place stakes at the uphill and downhill sides of the rain garden. Tie a line to the base of the uphill stake at ground level. Then tie the line to the bottom stake so that it is level with the base of the uphill stake (see diagram).



RAIN GARDEN CONSTRUCTION CONT.

Building the berm. Use the cut and fill technique to create a berm on the downslope side of the rain garden (see diagram). The berm should be built 2-3 inches higher than the maximum ponding depth (i.e. with 6 inches of ponding depth, build the berm to a height of 9 inches). Compact the berm and make sure it is level.



Check levelness of bottom. Use a straight board and level to constantly check to make sure that the bottom of the depression is level from side-to-side and end-to-end.

Add amended soil. If you decide to amend the soil in the rain garden, over-excavate by 6 inches. Then place 3 inches of sand and 3 inches of topsoil or compost. Rototill to blend thoroughly.

Smooth surface. Smooth the surface of the rain garden using a rake and make sure it is level.

Edging. Place edging along the circumference of the rain garden. Pavers, plastic or metal edging or rocks can be used to minimize grass intrusion.

Outlet. Install an outlet on the downslope side of the rain garden by creating a notch in the berm that is 3-5 feet wide and 3 inches below the top of the berm. The base of the notch should be at the elevation of maximum ponding depth. Protect the outlet by placing flagstones, seeding and covering with an erosion control blanket or laying sod.

Inlet. Direct the water to the rain garden and armor areas of concentrated flow into a rain garden with flagstones or rocks.

Mulch. Mulch the garden with shredded hardwood mulch.

Plants. Plugs or potted plants can be used in your garden depending on your budget. Use your favorite sun or shade tolerant plants depending on the site conditions. Recommendations are to use native Iowa prairie plants for sunny conditions or woodland plants for shady conditions.

Planting. Spread the mulch before planting and then shift the mulch aside to plant. Re-spread the mulch around the plant. Watering may be necessary until plants are established.

Maintenance. Some plants may need to be replaced. Remove weeds. In the spring or fall remove dead vegetation. It is best to never fertilize plants in rain gardens.