

What to Look for When Inspecting a Rain Garden

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A rain garden is an earthen structure used for handling and treating stormwater. Stormwater is collected as runoff from impervious surfaces either directly off of the impervious surfaces such as the edge of a parking lot, or and directed into the rain garden, or flows through a collection system of pipes and/or swales before entering the rain garden. A rain garden is one of the many types Stormwater Control Measures (SCM, previously called a BMP, Best Management Practice).

How a rain garden works

Water entering the rain garden is filter by a special soil mixture referred to as an “amended soil.” The soil has added ingredients that increase the ability of water to infiltrate into the soil (such as sand or other coarse material) and also organic matter such as compost that increases the soil’s ability to hold water. Water is partly taken up by the roots of the plantings in the rain garden, and is released into the atmosphere through transpiration. Some of the water is also slowly released to a stream or other water body after being filtered.

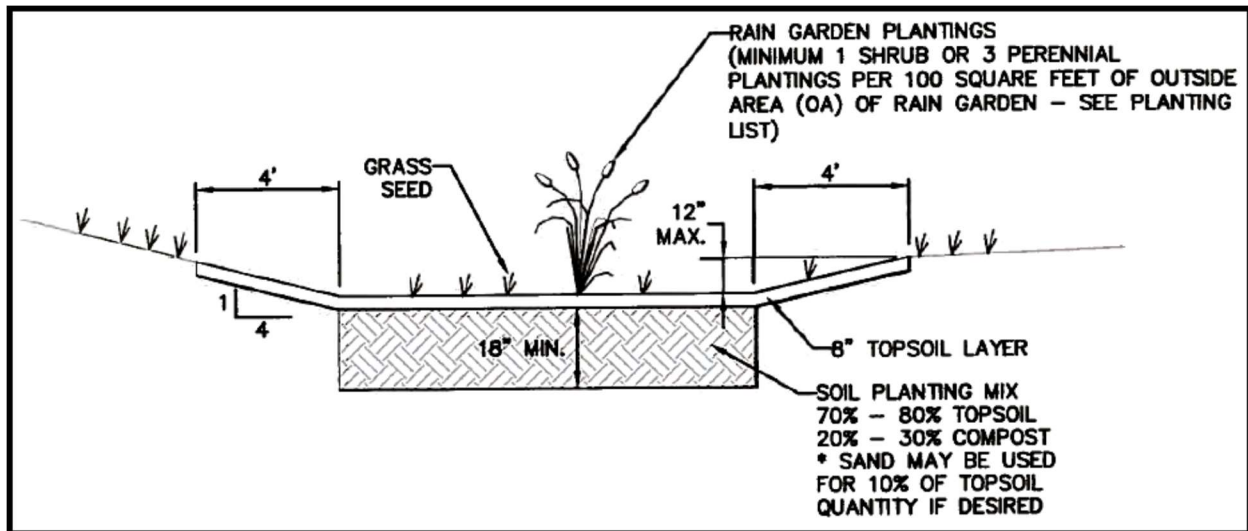


Diagram of a typical rain garden. This illustration is from the East Cocalico Township “Landowner Manual for Stormwater Management in Small Projects & Exemptions.”

There are a number of problems that can affect rain gardens. The most common problems are related to the survival of the plants and the condition of the soil medium.



This is an example of a small rain garden at the edge of a driveway. The stormwater enters the rain garden directly off the pavement and is captured by pervious materials on the surface including gravel and river rock. The water then infiltrates into the amended soil where it is filtered and partly used by the plantings. There are shrubs planted in the area of the river rock. These are plants that can tolerate both dry (between storms) and wet conditions after a storm.

Problems with Rain Gardens



This is an example of a rain garden without the required plantings. A small amount of grass and some weeds have grown in the soil, they are insufficient to transpire sufficient water for the rain garden to function properly. Water enters the rain garden through the pipe at the back corner from a roof downspout. The pipe at the right edge is supposed to be capped except when draining the rain garden under emergency conditions. It is unknown whether the soil has the required infiltration properties.

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