

# Rain Gardens

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## Rain Gardens

### How do Rain Gardens help manage stormwater?



Rain gardens are one of the many BMPs that you can implement at home to reduce the impacts of stormwater in your watershed. Building a rain garden is one of the simplest, easiest and most cost effective ways you can protect water quality at home. The purpose of a rain garden at home is to store and promote the infiltration of rainfall into the groundwater. Without the rain garden, the majority of the rain that falls onto the impervious surfaces around your home such as driveways, sidewalks, and roofs will flow directly into the sewer system or nearby lakes or streams. When properly constructed

a rain garden will reduce the amount of runoff from your property. In addition, the plants in the rain garden will also reduce the amount of pollutants in stormwater runoff. Suspended sediments and attached pollutants such as phosphorus and metals are settled out of the stormwater and captured in the basin. Dissolved pollutants such as nitrogen and organic matter is filtered out and/or transformed by the vegetation and as the runoff infiltrates into the underlying soils.

### How do I design a Rain Garden for my home?

You should consider location, size/shape, and plant selection when designing a rain garden for home. Each of these critical design elements are discussed in detail below.

**Location:** When deciding where to place a rain garden it is important to decide where the runoff water will be coming from. Runoff water can collect near a driveway, roof downspout or a low point in your yard. After you pick a location, the first step is to dig a shallow depression of the shape and depth you want your garden to be. Be sure to remember to locate the garden a minimum of 10 feet from your house to keep the water away from the foundation.

**Size and Shape:** Typically a rain garden will be 2-6 inches deep and about 70 square feet. The most important factor in determining the depth of your rain garden is to make sure the rain garden will drain in approximately 24 hours after it rains. You can easily determine the proper depth by conducting an infiltration test in the area where you have selected to construction your rain garden. The first step in the infiltration test is to dig a hole approximately 12-inches deep and write down the depth of the hole. Next, fill the hole completely with water and wait approximately 24-hours. The next day, measure the amount of water still remaining in the hole. The amount of water that drained from the hole is a great estimation on how deep your rain garden should be. For example, if 6-inches of water drained, the garden should be about 6-inches deep. Gardens that only hold water for a day will not promote mosquito breeding. The shape of the garden can vary depending on the drainage of the landscape but generally rain gardens are in the shape of a teardrop, oval or a kidney bean. Be sure to consider where the water will enter the garden and where it overflows during large events. You want the overflow to be directed away from your house.

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**Plant Selection:** Your garden can include, but is not limited to native wetland and prairie grasses, wildflowers, shrubs or grasses.

### **Suggested Species:**

Black-eyed Susan  
Butterflyweed  
Golden Alexander  
Obedient Plant  
Purple Coneflower  
Spiderwort  
Wild Columbine  
Wild Geranium

### **Special Considerations:**

- Make sure to mark utilities before digging in order to avoid water mains or electrical lines
- Avoid building your rain garden over or near septic drain fields
- Fertilization and exposure to pesticides is not necessary
- Make sure to pick plants that you like but also are able to survive with the amount of sunlight/shade in your yard

### **Costs**

Rain gardens are estimated to cost between \$3 and \$20 per square foot. These costs will vary greatly depending on how much of the planning, design, and installation is done by you. Rain gardens can even be free if you use plants that you already own.

### **Maintenance**

Just like any garden, your rain garden needs to be properly maintained in order for it to function properly. After your garden is first built, the plants will need to be watered through the first growing season. After the first season you will only need to water the rain garden during a drought. In addition, your rain garden should be mulched annually in order to keep weeds out. If any weeds persist they should be pulled. Finally the garden should be inspected periodically for any kind of debris, trash or pet waste, which should be removed.



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