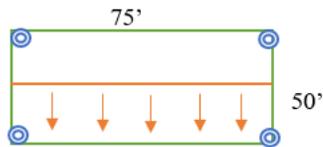


## At Home Rain Garden Quick Steps

1. Determine the location of your rain garden using an aerial view and walking your yard. This should be an area where water naturally flows to or can be an area that captures rainwater from downspouts. The size of the garden needed can be determined through some straight forward math.
2. How much run off does it need to accommodate  
What is the area of run off? From a down spout you might use your roof area.



3. Calculate your size and ponding depth
4. Mark it out and choose your plants

In this example only ½ the roof area is supplying a rain garden.  $75 \text{ ft} \times 50 \text{ ft} = 3,750 \text{ ft}^2$  then  $3,750 \times 0.5 = 1,875 \text{ ft}^2$

An average rain garden should be 3 or 6 inches deep to allow for ponding and water storage and absorption.

Total  $\text{ft}^2$  impervious surface to be treated  $\div$  **conversion factor** (accommodates 0.5 in/hr drainage infiltration rate = standard raingarden).

For 1,875  $\text{ft}^2$  of rainwater captured at 3 inches deep you would use a conversion factor of **10**, for a garden area of 188 $\text{ft}^2$

For 1,875  $\text{ft}^2$  of rainwater captured at 6 inches deep you would use a conversion factor of **20**, for a garden area of 94 $\text{ft}^2$

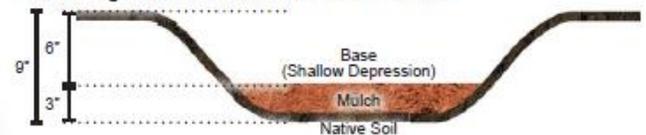
You can determine the shape of your garden by using the square root of your needed area. So a 94  $\text{ft}^2$  area pond might be a 10 x 10 square.



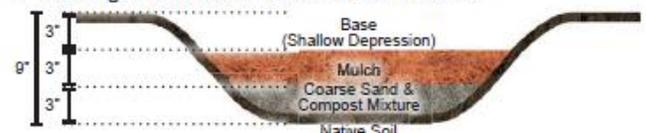
Credit: Alabama LID Handbook

### Rain Garden Excavation Depths

#### 6" Ponding Rain Garden - no soil amendments



#### 3" Ponding Rain Garden - with soil amendments



### **Where NOT to place your rain garden:**

1. **Do not place your rain garden on top of a septic system drain field.** When uphill of a septic system, provide at least 50 feet between a rain garden and the septic system.
2. **If capturing roof water, place your raingarden at least 10 feet downslope of a roof downspout to avoid impacting existing structures.** You can direct water from your downspout to a rain garden by creating a swale or using rocks or tiles. Avoid placing rain gardens uphill of a house.
3. **A rain garden should be the final feature installed as part of a larger landscape or architectural project.** If sediment flows into your rain garden from construction or loose soil, it may limit infiltration.
4. **To prevent slumping and to protect concrete structures:** make sure the outer edge of your rain garden is at least:
  - a. Three feet from a sidewalk
  - b. Six feet from a basement
  - c. Two feet from a crawl space or slab
  - d. Ten feet from a retaining wall
5. **Just because there is ponding water in your yard does not mean that it is a good place for a rain garden!** Your soils need to have good percolation rates to avoid standing water for more than 2-3 days.
6. **Avoid areas that stay wet during the rainy season, such as wetlands, natural springs, or seeps.**
7. **Avoid placing a rain garden under large trees.** The tree roots can be damaged by the excavation and may also be overwhelmed by the amount of water that pools beneath them.
8. **Avoid soils that have been contaminated by chemicals or other toxic substances.**
9. **To prevent surface erosion, do not place rain gardens on slopes steeper than 10%.** If you have very sloped property, consider contacting a licensed landscape professional or engineer to design site specific safe ways to store and route water off-site without damage.
10. **Don't make your neighbors angry!** During large storms, it is normal for rain gardens to overflow. Make sure to route the overflow to a safe location away from step slopes, structures, and neighbors' properties.



*Example of the multiple practices that could be installed around your home to improve water quality. Pictured: 1. Rain garden site 2. Rain Barrel 3. Permeable Pavement 4. More trees and vegetation.*

*Credit: Laura Bell, ACES Water Program*

**Table 5.1.3**  
**Rain Garden Plant List**

Botanical Name	Common Name	Type	Soil Comments	Prefers
<i>Acorus calamus</i>	sweetflag	herbaceous grass	acidic, wet	2,3 Sun to Part Shade
<i>Asclepias incarnata</i> *	swamp milkweed	herbaceous perennial	any	3 Sun or Part Shade
<i>Amsonia tabernaemontana</i>	Eastern bluestar	herbaceous perennial	sandy	3 Part Shade
<i>Baptisia alba</i>	white wild indigo	herbaceous perennial	sandy to rocky, tolerates clay	1,2 Sun
<i>Carex crinita</i>	fringed sedge	grass like	any	2,3 Part Shade to Shade
<i>Carex comosa</i>	bottle brush sedge	grass like	any	3 Part Shade
<i>Carex lurida</i>	lurid sedge	grass like	any	3 Part Shade
<i>Carex tribuloides</i>	bristlebract sedge	grass like	any	2,3 Part Shade
<i>Chasmanthium latifolium</i>	river oats	herbaceous perennial	any	2 Part Shade
<i>Conoclinium coelestinum</i> *	blue mistflower	herbaceous perennial	any	2 Sun to Part Shade
<i>Clethra alnifolia</i> *	summersweet	shrub	any	2,3 Sun or Part Shade
<i>Coreopsis auriculata</i> *	lobed tickseed	herbaceous perennial	rich, acidic	2 Part Shade
<i>Coreopsis lanceolata</i> *	tickseed	herbaceous perennial	any	1,2 Sun
<i>Coreopsis nudata</i>	Georgia tickseed	herbaceous perennial	rich, acidic	2,3 Part Shade
<i>Echinacea pupurea</i> *	coneflower	herbaceous perennial	sandy	1,2 Sun or Part Shade
<i>Eupatoriadelphus fistulosus</i> *	Joe Pye weed	herbaceous perennial	acidic, moist, or wet	2,3 Sun
<i>Helianthus angustifolius</i>	swamp sunflower	herbaceous perennial	any	2,3 Sun to Part Shade
<i>Hibiscus coccineus</i>	scarlet rose mallow	herbaceous perennial	any wet	3 Sun
<i>Hibiscus moscheutos</i> *	crimson eyed rose mallow	herbaceous perennial	moist, alkaline	2,3 Sun to Part Shade
<i>Ilex glabra</i>	inkberry	shrub	sandy, acidic, peaty	1,2 Sun or Part Shade
<i>Ilex verticillata</i> *	winterberry	small tree	any, acidic	1,2 Sun or Part Shade
<i>Itea virginica</i>	sweetspire	shrub	any, acidic	1,2,3 Sun or Part Shade
<i>Juncus effusus</i>	common rush	grass like	any, wet	2,3 Sun or Part Shade

Botanical Name	Common Name	Type	Soil Comments	Prefers
<i>Lobelia cardinalis</i> *	cardinal flower	herbaceous perennial	any, will tolerate limestone based soils	2,3 Sun to Part Shade
<i>Muhlenbergia capillaris</i>	muhly grass	herbaceous grass	sandy or sandy loam	1,2 Sun or Part Shade
<i>Phlox carolina</i> *	Carolina phlox	herbaceous perennial	sandy, loam, acid, will tolerate some lime	2 Sun to Part Shade
<i>Phlox divaricata</i> *	blue woodland phlox	herbaceous perennial	any	2 Part Shade
<i>Physostegia virginiana</i> *	obedient plant	herbaceous perennial	humus rich soils	1,2,3 Sun to Shade
<i>Pontederia cordata</i>	pickerelweed	herbaceous perennial	any	3 Sun to Part Shade
<i>Rudbeckia fulgida</i>	orange coneflower	herbaceous perennial	sandy	1,2 Sun or Part Shade
<i>Sisyrinchium angustifolium</i>	blue eyed grass	grass	poor to average moist soils	2,3 Sun to Part Shade
<i>Stokesia laevis</i> *	Stoke's aster	herbaceous perennial	well drained acid sand preferred	1,2 Sun or Part Shade
<i>Vernonia noveboracensis</i> *	Ironweed	herbaceous perennial	tolerates clay and acidic soils	1,2 Sun
<i>Viburnum nudum</i>	possumhaw	shrub	prefers acid mucky soils, but is adaptable	1,2,3

\*Attracts butterflies, hummingbirds, or both

1. prefers dry conditions and can tolerate drought conditions; to be used on buffer, slope, or berm of standard rain garden and wet rain gardens with zoned topography.
2. prefers moderate or moist conditions and can tolerate occasional inundation. Plants labeled 2 are appropriate for the center of standard rain garden designs or wet rain gardens with zoned topography.
3. prefers wet conditions and are appropriate for wet rain gardens and deep pools of wet rain gardens zoned topography.

**Sun** – at least 6 hours of full sun per day.

**Part Shade** – 3 to 5 hours without direct sun per day.

**Shade** – less than 2 hours of direct sun per day.