

# **"Rain gardens...a natural solution to runoff pollution"**

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## **Helpful web resources:**

1. Rain gardens UW-EX information page < <http://clean-water.uwex.edu/pubs/home.htm#rain> >  
Includes:  
"Interactive Native Plant List for Wisconsin Rain Gardens" 24-page document  
< <http://www.dnr.state.wi.us/org/water/wm/nps/rg/plants/PlantListing.htm> >  
"Rain Gardens: A household way to improve water quality in your community" 8-page document  
< <http://clean-water.uwex.edu/pubs/pdf/home.gardens.pdf> >  
"Rain Gardens: A how-to manual for homeowners" 32-page document  
< <http://clean-water.uwex.edu/pubs/pdf/home.rgmanual.pdf> >
2. WDNR rain garden home page < <http://www.dnr.state.wi.us/org/water/wm/nps/rg/index.htm> >  
Nurseries listing < <http://www.dnr.state.wi.us/org/land/er/invasive/info/nurseries.htm#wisc> >
3. Plant web sites  
UW-Madison herbarium < <http://www.botany.wisc.edu/wisflora/> > UW-Stevens Point herbarium < <http://wisplants.uwsp.edu/> >  
UW-Green Bay herbarium < <http://www.uwgb.edu/davisj/biodiv/herbarium/> > USDA plants database < <http://plants.usda.gov/> >  
Shady rain garden plants < <http://www.dnr.state.wi.us/org/water/wm/nps/rg/plants/shady/shady.htm> >

## **Cost tips<sup>1</sup>:**

The following costs may not apply to all rain gardens. The cost varies depending on how much work the landowners do themselves and on the types of plants that they choose to use [you want them to use native plants because they are cheaper than ornamentals, suited to area climatic conditions, and more beneficial to local wildlife].

Construction	\$3.00/ sq. ft.
Design	\$1.00/ sq. ft.
Planting	\$3.00-\$4.00/ sq. ft.
Plant material	\$2.5-\$4.5/ sq. ft.
<b>Total cost</b>	<b>\$11.00-\$13.00/ sq. ft.</b>

## **Location - important points:**

- The rain garden should be at least 10 feet from the house so infiltrating water doesn't seep into the foundation.
- Do not place the rain garden directly over a septic system.
- It may be tempting to put the rain garden in a part of the yard where water already ponds. Don't! The goal of a rain garden is to encourage infiltration, and your yard's wet patches show where infiltration is slow.
- It is better to build the rain garden in full or partial sun, not directly under a big tree.
- Putting the rain garden in a flatter part of the yard will make digging much easier. For example, a rain garden 10 feet wide on a 10% slope must be 12 inches deep to be level, unless you import topsoil or use cut and fill.
- Before you start digging call Digger's Hotline at 1-(800)-242-8511.

## **Size - important points:**

- The surface area of the rain garden can be almost any size, but time and cost will always be important considerations in sizing decisions.
- A typical residential rain garden ranges from 100 to 300 square feet.
- A typical rain garden is between four and eight inches deep.
- The size of the rain garden will depend on: how deep the garden will be in the end; what type of soils the garden will be planted in; and how much roof and/or lawn will drain to the rain garden area.
- A typical rain garden is between four and eight inches deep.

<sup>1</sup> Cost tips are courtesy of Roger Bannerman of the Wisconsin Department of Natural Resources.

## 10 steps/questions to building an effective rain garden:

### Step 1: Do I need a rain garden?

- > Do I have standing water or an erosion problem?
- > Am I concerned about the amount of water entering water resource from my property?
- > Am I concerned about the environment > Am I looking to incorporate wildlife into my yard?

### Step 2: What kind of rain garden do I want?

- > A permanent pond
- > A garden that could hold water when necessary
- > What type of plants do I want? (Native species)

### Step 3: Possible locations

- > Where can I put my rain garden?
- > They can be placed at any of the problem areas mentioned above in step 1 as long as it is 10 feet away from the foundation of the house.

### Step 4: Size matters

- > Determine your roof area > Consider the soil type
- > Determine the amount of rain water that you want the garden to hold.

### Step 5: Design

- > Shape of the depression/rain garden layout
- > Consider type of plants and arrangement that they will be put in. (I.E., put the more aquatic plants where most standing water will be)

### Step 6: \$\$Cost\$\$

- > Can I afford a rain garden?
- > How much of the labor will I be able to do myself?

\*Native species rain gardens will be more inexpensive than ornamental rain gardens.

### Step 7: Site Preparation/plant list/map

- > Can you do it yourself
- > Or hire a landscaper
- > Do soil testing to determine what type of soil you will be working with to better accommodate size and types of plants.

### Step 8: Plant it

- > Plant seeds or plants where appropriate for each individual species depending on water level and flow.
- > Remember green side up for plants and seeds to only be 1/4 to 1/2 inch deep in soil.

### Step 9: Maintenance

- > Weeding
- > Removal of dead plants
- > Hand clipping
- > Removal of dead stems

### Step 10: Relax

- > ENJOY your new rain garden!

## Tips for designing an attractive rain garden:

- When choosing native plants for the garden, consider the height of each plant, bloom time and color, the wildlife it attracts, and its overall texture.
- Try incorporating a diverse mixture of sedges, rushes, and grasses with your flowering species.
- Consider enhancing your rain garden by using local or existing stone, a trail addition, garden benches, or additional wildflower plantings.

## Tips for a productive rain garden:

- A rain garden is not a prairie; focus on using wildflowers versus grasses, although some grasses can be used.
- Tell landowners to ask friends to help plant—a few people helping plant for an hour can cover a lot of ground. In the weeks following installation of plants, weed out dandelions and other weeds until garden plants become established.
- Leave dead or dormant plants standing overwinter—these plants provide cover and food for wildlife—cut back dead vegetation in spring.
- Installation of a rain garden is slightly more work than a comparable area of lawn, but maintenance is low once plants mature.