



July 2012

## **Rain Gardens: A Natural Solution To Stormwater Management**

### **What is a rain garden?**

A rain garden is a shallow depression planted with moisture-loving plants that soak up rainwater from your roof, driveway and lawn. It is specifically designed to slow the flow of rainwater from your property into the sewer system. By slowing runoff from a storm, more water filters into the ground — about 30 percent more than soaks into a similar patch of conventional lawn — and contributes to a more sustainable environment.

The benefits of a rain garden are numerous:

- Enhances the beauty of your yard
- Keeps clean water from going down the sewer system
- Increases habitat for birds, butterflies and beneficial insects
- Reduces polluting runoff
- Avoids sewer overflow
- Decreases the size of a high-maintenance lawn

Infiltration recharges the groundwater (an important feature even for communities bordering Lake Michigan) and filters out many of the surface pollutants that would otherwise enter the sewer system and eventually end up in our lakes and rivers. These pollutants include fertilizers, oil and grease from cars, animal droppings, sediment, and other harmful substances.

Reducing the amount of water that enters Evanston's combined sewer system (which collects stormwater and sanitary wastes in the same pipes) can also help prevent the discharge of wastewater into Lake Michigan. A heavy downpour can overwhelm the system, sending the overflow into the North Shore Channel and, on some occasions, into the lake.

Converting some of your lawn into a rain garden will increase the variety of birds, butterflies, and beneficial insects on your property. The monoculture of green lawns has reduced natural habitat for these creatures. Lawns also have a high environmental price: fertilizer use, noisy gasoline-consuming mowers, disposal of clippings, reduced variety of plants, and more. Even starting a small rain garden can help.

### **Isn't a rain garden just another name for a pond?**

No. A pond is a permanent feature that holds water for an extended period of time. A rain garden holds water for only a few hours while it soaks into the ground and/or evaporates.

### **Is this going to create a mosquito problem?**

No. The life cycle of the mosquito (7 to 14 days from egg to adult) is not a good fit for a rain garden, where the water drains within a few hours after a rainstorm. Mosquitoes need standing water that lasts for days, not a sunny rain garden that is dry between rainfalls.

### **Where do I build a rain garden?**

Your rain garden should be placed at least ten feet from your house to assure that water doesn't end up in your basement. Ideally it should be situated in a place that naturally tends to get wet — a low spot, for example, or an area that will catch the water discharging from a downspout. A place that stays wet for days after a storm, however, is usually not a good spot.

The best location will have a lot of sun and not much tree root competition. Excavation for the rain garden could damage root systems, and directing water to tree roots could weaken or kill them. Putting the rain garden in a flatter part of your yard will make the digging easier. Be sure to call JULIE (Joint Utility Locating Information for Excavators) before you dig. Just dial 811. A locator will come and mark the underground utility lines on your property to make sure you don't hurt yourself or damage the utility pipes and cables.

### **What plants go in a rain garden?**

Moisture-loving perennial plants that are native or adapted to this region are recommended. They are acclimated to local conditions and will not need extra maintenance once they are established. Do take care to avoid invasive species. There are many different plants to choose from — irises, asters, ferns, grasses, milkweeds — but make your selections carefully. Some irises hate wet feet, for example, while others thrive in such conditions. And you don't want *aquatic plants*; those are for ponds.

### **Does a rain garden need much maintenance?**

At the beginning, you will need to water the rain garden every day or two until the plants are established. You should also plan to weed it regularly during the first season to eliminate invasive plants. A layer of mulch can help reduce the need to weed and water.

### **Where can I get more information?**

The [Chicago Botanic Garden](http://chicagobotanic.org/) (<http://chicagobotanic.org/>) is a rich resource for all things related to gardens and is a great place to start.

These online resources provide detailed information about designing and building a rain garden.

The University of Wisconsin-Extension (<http://clean-water.uwex.edu/pubs/>) offers two detailed guides to creating a rain garden:

*Rain Gardens: A household way to improve water quality in your community*

*Rain Gardens: A how-to manual for homeowners*

RainGardens.org (<https://www.raingardens.org/>) offers a variety of resources, including a step-by-step guide, *Create A Rain Garden* (<https://www.raingardens.org/index.php/create-a-garden/>).

The Rain Garden Network ([www.raingardennetwork.com/](http://www.raingardennetwork.com/)) provides a variety of materials about rain gardens, including newsletters, photos, downloadable presentations, and books on many different water topics.