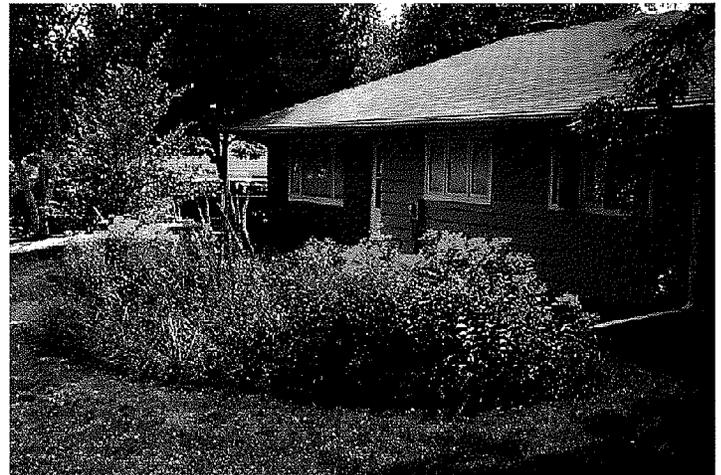


HOW TO BUILD A RAIN GARDEN

A BEAUTIFUL ADDITION TO YOUR YARD
THAT HELPS PROTECT OUR WATER RESOURCES!



WHAT IS A RAIN GARDEN?

A rain garden is a shallow depression in your yard that's planted with native flowering plants and grasses. The garden not only looks great, but also soaks up rainwater and melted snow from your home's downspouts, driveway or lawn. Water soaks into the soil and replenishes groundwater rather than becoming runoff.

THERE IS NINE TIMES MORE RUNOFF FROM A TYPICAL CITY BLOCK THAN FROM A WOODED AREA OF THE SAME SIZE.

WHY PLANT A RAIN GARDEN?

Rain and melted snow runs off our roofs, driveways and yards, into our streets and eventually through the storm drain system to our rivers and lakes. This runoff *is untreated*, and carries with it all sorts of pollutants such as soil, leaves, grass, oil, salt, fertilizer, pet waste, pesticides and more, and delivers it to our rivers and lakes. Rain gardens retain runoff before it can leave your yard and keep the pollutants in the

garden, where they can be absorbed into the soil. Rain gardens have the potential to soak up significantly more water than a regular lawn, improving the water quality in our rivers and lakes, replenishing our groundwater and reducing the chances for local flooding. They also happen to be beautiful and provide habitat for beneficial critters (birds, bees, butterflies, dragonflies, etc.).

HOW DO I PLANT A RAIN GARDEN?

COST

This can vary from no cost to the thousands. It's all up to you. You can do the work yourself (the design, digging, planting) and collect seeds or plants from others with established gardens, or you can hire a contractor to do the whole thing. Many professional landscapers and horticulturists are now in the business of designing and building rain gardens. But the thrifty person can create a fantastic garden as well. Most likely, if you do the work

yourself or with friends, your biggest expense will be purchasing plants. Native plugs usually run \$2-5 each. Plan on one plant per square foot of garden.

LAYOUT DESIGN

This is the fun part! When designing, you'll need to consider where you will create your garden, what soil types you are working with, how big your garden should be and what species you'll plant. You can pretty much make your rain garden any shape that pleases you as long as it lends itself to the natural flow of the runoff. Sometimes a horseshoe shape works; in other settings a long, narrow garden between properties is best. Decide whether you want taller plants in the "back" or center of your garden. Choose a variety of colors of blooms or stick with a single color scheme. Make sure that you pick varieties that bloom at different times so that you'll have beautiful flowers throughout the season and that provide substantive vegetative cover to prevent erosion. It's helpful to sketch your design on paper first.

low-point in the lawn where drainage naturally occurs. Position your rain garden at least 10 feet from any foundation. It's a good idea to talk to your neighbor if your garden will be close to the property line. Call Digger's Hotline to make sure your rain garden will not be located over gas or water services.

Soil Type

You'll need to know what soil type you have so that you know what plants will thrive and so you can ensure your rain garden is as efficient as possible. Sandy soils, for example, will drain more quickly while heavy clay enriched soils will retain moisture longer. Runoff should infiltrate within 4-6 hours. If you have standing water for longer than this, you may want to consider adding more organic matter or increasing the size of your garden. Check with the University of Wisconsin Cooperative Extension (608/244-3700) if you're not sure what soil type you are working with.

Size

The size of your garden should depend on your goals and the area available to you. Generally, you'll want your rain garden to

RAIN GARDENS ARE AESTHETICALLY PLEASING TO LOOK AT; PROVIDE HABITAT FOR BIRDS, BUTTERFLIES AND BENEFICIAL INSECTS (INCLUDING DRAGONFLIES THAT EAT MOSQUITOES!); AND BENEFIT WATER QUALITY.

Location, Location, Location

Rain gardens should be positioned to receive water from downspouts or at a

be a third as big as the roof area that drains to it. If your primary goal is to replenish the groundwater, then you will want to dig a deeper, smaller garden. If the soil is sandy, you can get away with a smaller area, but if you have a lot of clay enriched soils, you'll need a larger area.

Choosing Plants

Nursery professionals or garden clubs can help you choose plants best suited for your garden based on soil, hours of light and your design. Take your sketch with you when you go to purchase plants. Garden clubs often sell native species that are best adapted to our climate, will attract birds, native butterflies and dragonflies, and have root systems that facilitate infiltration and allow plants to survive several seasons of drought. Native plants require little maintenance once established. When choosing the kinds of natives you'll plant, take into account height, colors and when they'll bloom. A partial list of native plants is on the back of this brochure. For more information on native Wisconsin flora, go to the Wisconsin Department of Natural Resources' native plant list for rain gardens at www.dnr.state.wi.us/org/water/wm/nps/rg/plants/plantlisting.htm, or the UW's Botany Department web site at <http://botit.botany.wisc.edu>.

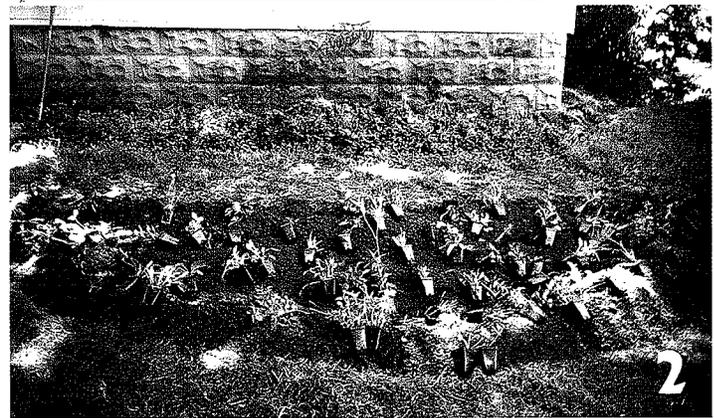
**RAIN GARDENS CAN
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AND LAKES.**

SITE PREP AND PLANTING

Once you have sketched your garden, decided on a location, size and plants, it's time to build your garden. Cut a string as long as the circumference of your garden. Lay it out in the shape of your garden to act as a guide when you dig. Don't forget that your downspout or sump pump outlet needs to be directed to this location. Dig down 4–18 inches, depending on your site needs. Depths of 4–8 inches should suffice if you don't want standing water. You can use the turf and soil that you've dug out to build up the berm on the downhill side of your garden. If you have heavy clay enriched soils, you will need to add some organic matter before planting. Make your job easier by drilling the planting holes using a bulb auger (available in garden stores), rather than just a hand trowel. Mulching right after planting helps to discourage weed growth and keeps moisture in the soil. Free wood chips and compost are available from the City of Madison and Dane County. Go to www.cityofmadison.com/streets/woodchips.cfm or www.countyofdane.com/pwht/recycle/compost_sites.aspx for more information. Or, check with your local municipality to see if they have a mulch, compost or wood chip program.

MAINTENANCE

After planting, remember to mulch and then water every other day for the first two weeks or so until your plants get established. Weed as necessary. Leave the vegetation for the winter as it provides cover and food for birds. Cut off all the dead vegetation in the spring.



1. Soil is prepared for planting, note the berm (raised area of soil)
2. Plant plugs laid out where they will be planted
3. Plants in rain garden before mulching
4. Later in the season — with larger plants and mulch

SOME NATIVE PLANTS

Remember to consider your soil and light conditions when choosing plants. Some plants prefer dry conditions, others prefer wet or shady spots, and they bloom at various times, so check these things as you select. Native plant nursery professionals or native plant enthusiasts can help you with this.

Arrowhead	Golden Alexander	Purple Coneflower	Sweet Flag
Bee Balm	Great Blue Lobelia	Purple Giant Hyssop	Switch Grass
Bellwort	Green Bulrush	Queen of the Prairie	Tall Brown-Eyed Susan
Bicknell Sedge	Hairy Wood Mint	Riddell's Goldenrod	Tall Meadow Rue
Big Bluestem	Interrupted Fern	River Bulrush	Torrey's Rush
Blue Cohosh	Jack in the Pulpit	Rough Cinquefoil	Turtlehead
Blue Joint Grass	Jacob's Ladder	(volunteer)	Tussock Sedge
Blue Vervain	Joe-Pye Weed	Royal Fern	Virginia Bluebells
Boneset	Lady Fern	Sedges	Water Plantain
Bottlebrush Sedge	Lavender Hyssop	Sensitive Fern	Wild Bergamot
Branching Coneflower	Maidenhair Fern	Side-Flowering Aster	Wild Blue Flag Iris
Brome Hummock Sedge	Marsh Marigold	Silky Wild Rye	Wild Blue Indigo
Cattail	Marsh (Red) Milkweed	Smooth Blue Aster	Wild Blue Phlox
Celandine Poppy	Marsh Phlox	Smooth Penstemon	Wild Geranium
Cardinal Flower	Mountain Mint	(Foxglove Beardtongue)	Wild Ginger
Cinnamon Fern	New England Aster	Sneezeweed	Wild Iris (Blue Flag)
Columbine	Obedient Plant	Soft-stemmed Bulrush	Wild Violet
Culver's Root	Ohio Goldenrod	Spotted Joe-Pye Weed	Witch Hazel
Cup Plant	Palm Sedge	Stiff Goldenrod	Yellow Coneflower
False Dragon's Head	Pennsylvania Sedge	Swamp Aster	Yellow Trout Lily
Fireweed	Prairie Blazing Star	Swamp Milkweed	Zig Zag Goldenrod
Fox Sedge	Prairie Dock	Sweet Black-eyed Susan	

LEARN MORE

Visiting well-designed gardens can give you ideas. Talking to folks who have them can provide tips on how to do it right. At www.danewaters.com, you can get in touch with experienced rain gardeners via the rain garden listserv or find out when tours are scheduled to talk with rain gardeners in person.

There's also a list of rain gardens on public or commercial property that are accessible to the public so you can see rain gardens up close on your schedule. Watch for information on grant opportunities, too. If you would like someone to speak to your community group or garden club about building rain gardens, call UW Extension at 608-224-3718. You can also learn about rain garden research and find out about native plants sales on the web. All this and links to other web sites can be found at www.danewaters.com.



This brochure was prepared as a public service by the Dane County Lakes and Watershed Commission, a coordinating and advisory agency that works to protect and improve water quality as well as the scenic, economic, recreational and environmental value of Dane County's water resources.

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www.danewaters.com