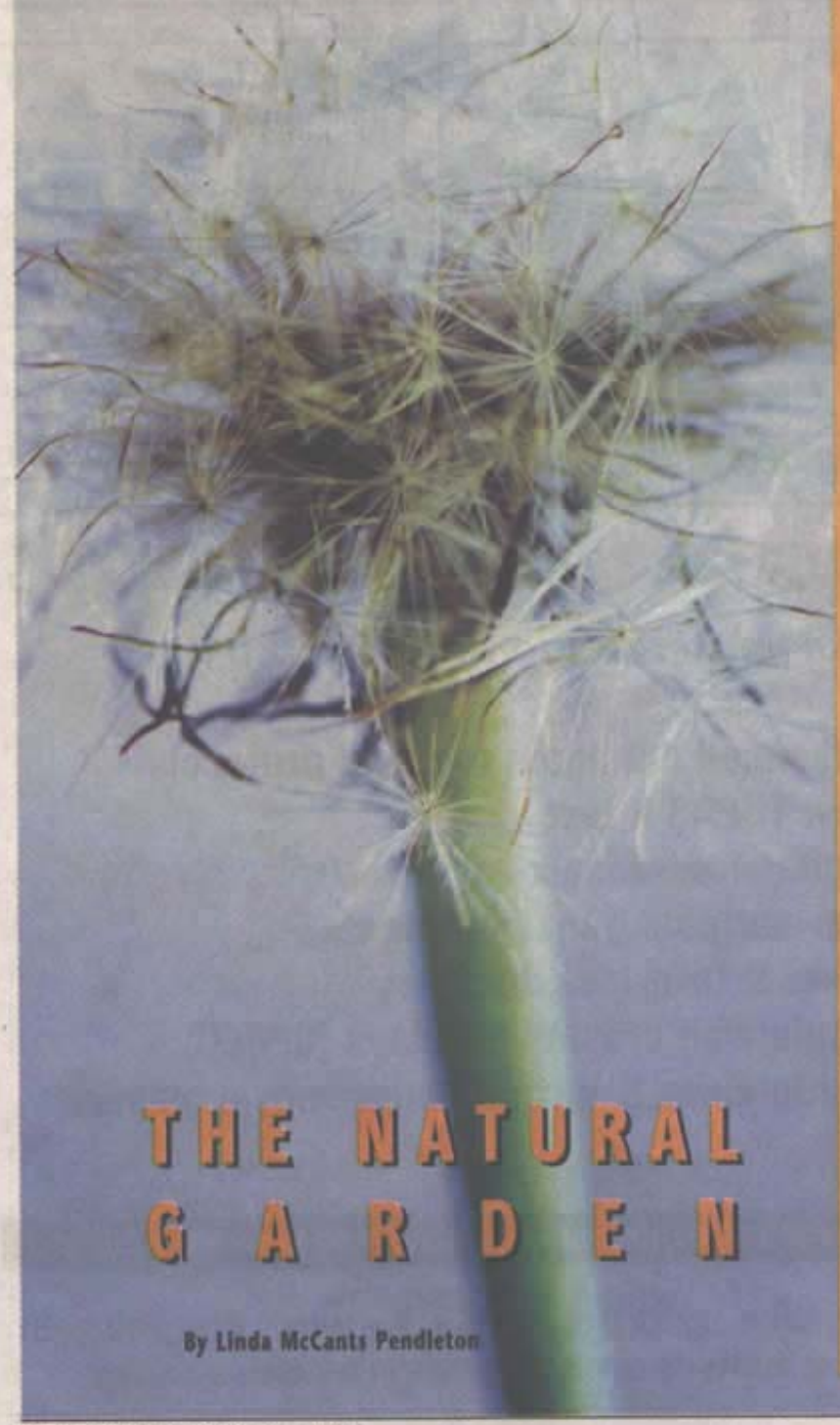
Collect and clean storm water runoff, cleaning rivers, lakes and beaches – all by planting and growing a rain garden.



THE NATURAL GARDEN

By Linda McCants Pendleton

Believe it or not, some Wisconsin homeowners may try to keep beaches from being closed this summer by looking to their own gardens for pollution solutions.

Rain gardens, that is.

Rain gardens help collect and clean storm water runoff, which, according to the U.S. Environmental Protection Agency, can contribute as much as 70 percent of the pollution found in lakes, rivers and oceans. The EPA also found that the leading cause of beach closings in the United States was due to storm water runoff and sanitary and combined (both sanitary and storm) sewage overflows into lakes.

"Runoff is Wisconsin's number one problem of pollution," said Shauna Cook, communications director for Clean Wisconsin (formerly known as Wisconsin's Environmental Decade). Once rainwater hits an urban environment, it can pickup and carry deposits from leaky vehicles, pet waste, baby diaper waste, 20 pesticides and yard waste. Cook added. It all ends up in rivers, creeks, streams and the lake. Untreated.

"Roofs, sidewalks and streets do two things to rain—prevent it from soaking slowly into the ground to filter out impurities, and they send the runoff to our waterways," added Derrek Scheer, Clean Wisconsin's water policy director. "Those rain drops end up collecting pollutants like remnants of road salt, sand, gasoline, windshield fluid and oil." Even before the rain hits any surface, it gathers pollution while falling through the air, such as sulfur dioxide, nitrogen oxides and mercury, he added. Rain gardens are important because "the ground and each blade of grass [along with other plants] filter out many impurities," Scheer said. And rain gardens keep the water in the ground and out of storm sewers.

Algae and the premature aging of lakes pose still other problems for beachcombers, Scheer said. But, again, much of that problem comes from unchecked storm water runoff. Not only does runoff carry pollutants, it also carries yard waste. "Anything like grass clippings or leaves that gets into our water system adds nutrients like nitrogen and phosphorous [which are naturally occurring nutrients]" he said. "But there is way too much in our lakes and streams. They promote growth of weeds, algae and the premature aging of our water bodies." That's when things wash into bodies of water, settle down to the bottom and stay there. Eventually lakes or rivers fill in from the sediments and become lakebeds or riverbeds, he explained.

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Homeowners aren't the only ones to blame for storm water runoff. In fact, farmers, construction companies, road builders, and even cities are now being held accountable by state and federal agencies for controlling the runoff that is harming the Great Lakes and other bodies of water, says the Wisconsin Natural Resources Magazine, in a Feb. 2003 article, "Slow Down in Town." For example, the first thing that a construction project does, whether it's a house or a road, is to tear-up the grass at a site, Sheer said.

Even automobile graveyards are not immune. The Milwaukee Metropolitan Sewage District has recently awarded the corporation, Partnership For Rain Gardens, with a contract to install rain gardens in 17 Milwaukee-area auto salvage yards, said the Partnership's Ellen Rulseh. "The owners of the salvage yards— Automotive Recyclers Cooperative Compliance Program (AARCP)— work to be in compliance with DNR regulations," she said. "Rain gardens will be part of their storm water pollution prevention plan."

By utilizing diverted downspouts or gutters, rain gardens soak-up water from the roof, driveway or lawn into shallow

Suggested plants for a rain garden:

Spring—-Red Milkweed, Shooting Star, Wild Iris

Summer—Nodding Pink Onion, Prairie Blazing Star

Late Summer / Fall— Ohio Goldenrod, Sweet Black-Eyed Susan

Grasses—Indian Grass, Prairie Drop Seed

Trees—-Red Maple River Birch, Swamp Whit:e Oak

Shrubs—Glossy Black Chokeberry, Northern Lights Azalea, Red-Osier Dogwood

Perennials and Annuals—Asters, Astilbe, Campanula, Cardinal Flower, Hosta, Orange Coneflower, Salvia, Siberian Iris

Groundcovers and Ferns—Creepjng willow, Dwarf arctic willow, moss.

Information from Conscious Choice, May 2001.

RAIN GARDENS

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landscaped depressions between three inches to several feet deep. Sometimes called bioretention areas, a rain garden is a form of natural landscaping, which uses native plants that provide food and shelter for local wildlife. It's a stretch to imagine all this at automobile grave-yards, but they're working to clean up their image, Rulseh said.

In planning your rain garden, experts say to look for the naturally low areas on your property, such as the bottom of a driveway and to make sure the site is at least eight to 10 feet away from your house. While digging up the garden bed, keep in mind that there will be three planting zones or depths. The lowest will have the most standing water and will require plants tolerant of wet conditions. The middle zone will be for plants that can tolerate either wet or dry conditions. And the highest zone is for drought-tolerant plants. Fill the bottom with coarse gravel. Then top it with a mixture of sand, topsoil and organic matter. Next, mulch is placed around the edges.

Generally, native plants are the best plants to use. They are species that have adapted to an area, are low-maintenance and they help control soil erosion. Examples of native or prairie plants include: columbine, wild iris, purple and yellow coneflowers, bee balm and a variety of grasses: little bluestem, big blue stem or prairie drop seed, Rulseh said. These plants attract birds and butterflies, she added. "You wouldn't want to put anything that's not a native in your rain garden like impatiens," she added. They require a lot of water to keep them alive and don't have the deep roots. Except for weeding, the garden should be fairly low-maintenance from then on.

For a list of native plants see the Partnership's Website at: www.partnershipforraingardens.com

To learn more about rain gardens or storm water runoff see the following websites:
www.wnrmag,com/supps/2003/feb03/run.htm
www.epa.gov/owow/nps/facts/point7.htm
[dnr.wi.gov/org/water/wm/nps/]