Raindrops keep fallin' on my bed

Plant a garden that attracts wildlife and protects animals downstream

text by RUTHANNE JOHNSON ■ illustrations by ROBERT HYNES

In sunbaked Tucson, Ariz., it's not unusual for summer temperatures to soar above 100. But Brad Lancaster's yard is thriving. Native vines and chuparosa shrubs provide cover for Gambel's quail, horned lizards, and gopher snakes. Cactus wrens sing in the paloverde trees and cholla cacti. Curve-billed thrashers forage for berries and insects. And Gila woodpeckers perch amid the velvet mesquite and desert ironwood trees.

Lancaster has cultivated this desert oasis by planting rain gardens on his ⅛-acre property. During a storm, gutters and natural land contours direct rainwater to the shallow saucer-shaped depressions forming each garden's basin. The water seeps into the soil via channels created by soil microbes and the deep roots of the native plants. Pollutants are filtered out in the process, and the underground aquifer is replenished with cool, clean water that slowly streams back into local waterways.

This natural plumbing system is far superior to the manmade networks in our suburbs and cities, where rainwater gushes off parking lots, roads, and saturated lawns, picking up heavy metals, fertilizers, and other pollutants on its way to storm drains and, eventually, to streams, rivers, and lakes. The runoff's sheer volume and warmer temperatures erode banks, cause flooding, and destroy aquatic life.

As more people work to conserve water, improve storm water management, and clean up waterways, rain gardens are surging in popularity. Cities across the country are promoting them as part of watershed initiatives, cost-savvy developers are incorporating them into their subdivision designs, and homeowners like Lancaster are recognizing the benefits of replacing high maintenance lawns with low maintenance wildlife havens that also protect animals downstream.

"We have all we need in our communities to turn our streets into a naturally shaded, freely irrigated, flood-controlling, food-producing greenbelt," says Lancaster, who shares tips in his book *Rainwater Harvesting for Drylands and Beyond* and at *harvestingrainwater.com*. "Instead of directing the stormwater into the storm drain, we direct it to the landscape. The storm drains are really there for when we have those biblical rain events. But it only takes the overflow, instead of taking *all* the flow."

Lancaster estimates that his eight carefully planned rain gardens harvest tens of thousands of gallons a year. But even a modest rain garden can make a difference. After learning about the environmental benefits of rain gardens at a library presentation, Susan Griffith transformed a small muddy patch in her Barrington, Ill., backyard into a pear-shaped garden filled with sedges and grasses, cardinal flowers, great blue lobelia, woodland phlox, Jacob's ladder, and goldenrod. She has already expanded the garden once and plans to help build a second on her neighbor's property. "The more people we can encourage to do this," she says, "the better."

Follow these four steps to creating your own watershed-protecting wildlife haven.

STEP 1: HARNESS THE FLOW

To find the perfect location for your rain garden, look for depressions or flat surfaces where your property's runoff is flowing. "Is it coming off the roof? Is it sheeting off the slope of the back landscape? Does it flow towards the street or towards the house?" says David Hymel of Rain Dog Designs in Seattle, who has installed more than 150 rain gardens as part of Washington State University's campaign to help clean up Puget Sound.

If runoff doesn't naturally flow to your preferred location, channel it via gutters, pipes, curb openings, or grassy swales. Make sure the garden is at least 10 feet from your house and the right size for the amount of runoff: about 10 to 20 percent of the total area where water is coming from.

STEP 2: DIG IT, BABY!

Rain gardens aren't ponds, and standing water should be absorbed within three days to prevent mosquito breeding. Sandy soils percolate well, while compacted soils such as clay don't. To determine your soil's permeability, dig several 6-inch-deep holes and fill them with water. If water remains after 24 hours, you'll need to amend the soil to increase infiltration. Excavate about 2 feet of soil, and replace it with about 18 inches of a 60/40 mixture of sand and compost. (As with any digging, call local utilities before breaking ground.)

"The 6 [remaining] inches is your ponding depth," Hymel says. "The water comes in and fills up and then filters into the soil."

If your soil is particularly compacted, landscape designer Brad Lancaster recommends building up a "living sponge" with kitchen compost, tree prunings, and grass clippings. "The added benefit of that organic matter is that it increases the rate at which water infiltrates the soil, and you don't have puddles or mosquitoes," he says. "And it decreases the rate at which you lose water to evaporation. … You are creating a living system where roots continue to grow, and you are creating habitat for more soil microorganisms that burrow through the soil and make more channels for the water to infiltrate."

STEP 3: SOW THE SEEDS

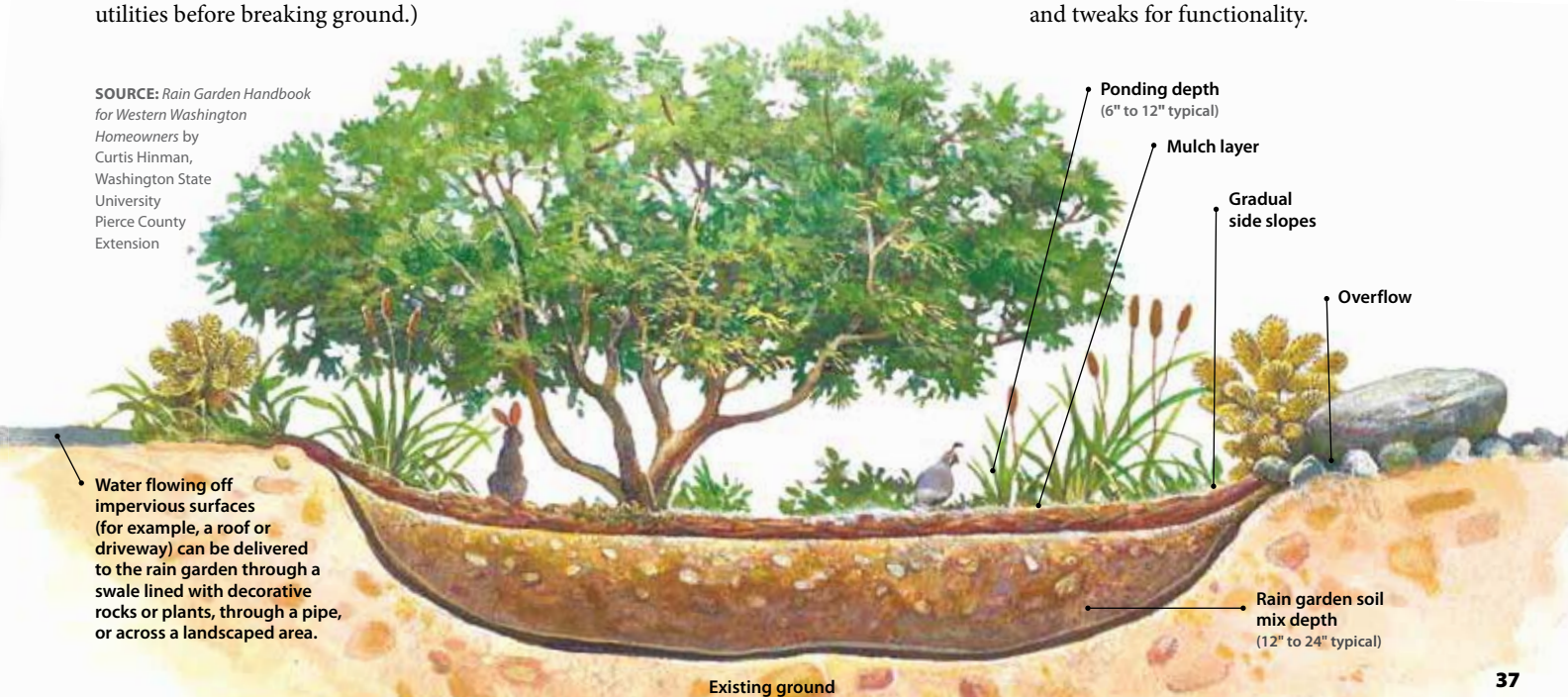
Next, it's time to get busy planting. Native plants that tolerate wet and dry conditions work best, given their channel-creating deep roots. They are also hardier and provide habitat and food for wildlife.

For inspiration, Lancaster recommends putting on your walking shoes. "The best thing you can do is to just take a hike and see what plants naturally grow without any care from people in similar microclimates to yours. … If you plant those same plants in a rain garden, they will thrive." For help identifying plants you find, take photos to a native plant nursery or university cooperative extension.

Your rain garden should consist of three zones, with plants that can tolerate periods of standing water in the inner zone and species that thrive in drier conditions in the outer two. Rain Dog Designs co-owner Marilyn Jacobs plants red and yellow twig dogwood, Douglas iris, and blue medusa rush in the wet zone. In the drier zones, she likes columbines for attracting hummingbirds and creeping snowberry for wintertime wildlife food. For year-round color, she suggests plants that bloom in different seasons and provide a variety of textures.

STEP 4: LET IT BE

Now comes the easy—and rewarding—part: watching the fruits of your labor flourish. "Rain gardens keep getting better with time," says Patsy Mortimer, coordinator for the Flint Creek Watershed Partnership rain garden initiative in Illinois. "When you first plant the native vegetation, they don't have much of a root system. It takes time for that root system to grow down and become effective in terms of channeling water and breaking up the soils." Once plants are established, they require little maintenance besides occasional weed patrols, mulch reapplication, and tweaks for functionality.



SOURCE: *Rain Garden Handbook for Western Washington Homeowners* by Curtis Hinman, Washington State University Pierce County Extension