

DRY SEASON

Wet or not, the rain garden fills a niche

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By Gwen Shrift, Staff Writer

Dry as it's been, landscape architect Michael Fleischacker knows rainwater and snowmelt eventually will pour from downspouts and stream across the quad at Delaware Valley College.

When that happens, grass and sidewalks in the area Ulman Hall won't flood—for the first time in a long time.

Instead, the overflow will pour into a carefully engineered, student-designed system of landscaped basins in a space vacated by the removal of a large tree.

The college rain garden, installed in early summer, has yet to fulfill its drainage function. So arid has the season been the college is running sprinklers to water a newly planted bed on one side of the garden.



Even a downpour on Thursday simply moistened the basins. “I think it’s been so dry, it just sucked up the water that came down last night,” says Fleischacker. “It works!”

The garden also has paid off in aesthetics and educational value as flowers and sedges, ferns and milkweed filled in the hollows and attract butterflies, bees and other small insects. That is of more than casual interest to landscape design and entomology students and their teachers.

On a recent bone-dry summer day, the rain garden appeared as an ambitious exercise in the use of native plants by Gio Thomas, the student who designed it.

In and around the basins grow iris, Joe Pye weed, purple coneflowers, St. John’s wort, American elder, gray birch, autumn sunflower, carex, lurid and tussock sedge, asters, winter sedge, Christmas fern, allium, re-twig dogwood, cardinal flowers, Allegheny foamflower, speckled alder and swamp milkweed.

Fleischacker says plants were chosen for their educational value and to fill any horticultural niches at the well-landscape campus, which also is an arboretum. The only non-native specimens in the rain garden are several Japanese stewartia trees rooted in a previously establish grove.

The landscape also takes into account the change of seasons and the maturation of the plants. Species that flower in spring, summer and fall were chosen, as were winter-interest evergreens such as Christmas fern. Certain dogwoods were added because their stems turn red in the winter.

At this time, the garden is open to the sun, but eventually it will be shaded by 30- to 40- foot gray birches.

“Everything kind of changes and evolves. That’s the way to design such a system,” says Fleischacker.

When it rains, the garden is designed to look like a pond for a few days – until the water sinks into the ground.

“The best way to control rainwater is to slow it down,” says Fleischacker, an assistant professor of ornamental horticulture and environmental design whose students at the college worked on the project literally from the ground up – and under.

Capturing rainwater and allowing it to slowly drain into the soil helps filter out pollution. But if it doesn't drain quickly enough, pests begin to breed and in about a week, you've got a mosquito factory, according to Fleischacker.

The garden is close to the center of campus, where there's a lot of foot traffic – and in the past, a definite moisture issue.

Fleischacker points to the gutters on the side of Ulman Hall, a dormitory bordered by a paved path.

“They emptied right out here, and it flowed right down the sidewalk here... There used to be a big beech here that died, and there was just nothing,” he says.

The gutters were neatly routed into a pipe that also carries runoff through an open yard drain next to the building. The pipe empties into the rain garden, which has two interconnected basins divided by an arched bridge, plus an area to accommodate emergency overflows.

Do-it-yourselfers, take note: While backyard rain gardens are increasingly popular as landscape features, piping gutters into a depression in the ground is nothing to try unless you first test the soil for permeability as the college kids did.

The ground was clay down to about 4 to 6 feet, under which the soil was looser. Recycled plastic pipes filled with gravel were sunk into the basin to funnel the water to the permeable layer. The ground was prepared with leaf-litter mulch, non-sterile soil and compost from the college's pile.

The project was funded by a \$4,600 grant from the League of Women Voters and some matching contributions from the campus facilities department.

Thought most of the plants were purchased, some were donated, as was lumber for the bridge built by the students in the landscape contracting course. Doylestown Township municipal workers helped install the bridge.