Kansas City’s 10,000 Rain Gardens

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Hallmark joins the initiative

Hallmark Cards, Inc., Kansas City, Mo., has a long history of addressing environmental issues in various ways. The company began recycling paper in the 1940s and has used recycled paper in products since the 1970s. The 1990s brought the creation of a corporate conservation program. Transitioning to water-based inks from petroleum-based inks, reducing solid wastes and encouraging employees to use public transportation or ride share have all kept Hallmark at the forefront of environmental leadership. A recent effort has been the composting of food waste from the vast amount of food sites at the corporate location. Today, Hallmark’s move toward redesigning its landscaping to a more environmentally friendly, prairie style coincides with Kansas City’s rain garden initiative.

Hallmark volunteers plant switchgrass and plants during the construction of the rain garden.Inset: "We’re redesigning our landscaping to more of a prairie look," said Bill Perez, Hallmark director of special service.

Hallmark has joined forces with other corporations to help achieve the 10,000 Rain Gardens goal set by the city of Kansas City. Hallmark has built a 1,200-square-foot rain garden that catches substantial runoff from an adjacent city street, as well as parking lots and walkways. Many of the pollutants are removed before the water is absorbed by the water-thirsty plants within the rain garden.

A Swath of switchgrass slows the water’s entry into the rain garden during heavy runoff.

Rain garden has dual role

The rain garden has a dual role on Hallmark grounds. In addition to its function as a filter for water, contributing to the overall improvement of water quality, the garden adds aesthetic interest to the large, corporate grounds.

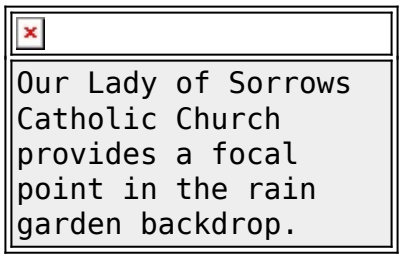
Rick Robson, Hallmark environmental scientist, said that the rain garden is a part of Hallmark’s ongoing environmental program. After becoming involved with the Kansas City 10,000 Rain Gardens initiative, Robson sold the idea to Hallmark management. He noted that Hallmark’s continuing interest in environmental improvements encourages such endeavors. “We talked about it in meetings, and, once we started, our grounds crew leader got excited about it, too,” Robson said.

Carole Léchevin, landscape architect with Patti Banks Associates, Kansas City, designed the Hallmark rain garden. Patti Banks Associates specializes in environmental landscape projects. The design of the rain garden complements existing art on the Hallmark grounds, known as puzzle pieces, which serve as a backdrop. The historic Our Lady of Sorrows Catholic Church is located on Hallmark grounds and provides a focal point in the backdrop.

Hermes Landscaping, Kansas City, constructed the rain garden. Sod was first stripped, and construction was primarily done with a Bobcat. Some of the approximately 100 tons of composted Hallmark food waste, processed by Missouri Organic Recycling, Kansas City, was tilled in as soil amendment. Compost material will provide mulch, as needed, in the rain garden. About 1 inch of locally mined limestone was used to line the rain garden, and dry-stacked boulders highlight the design and contribute to the function of the rain garden.

Due to the heavy flow of water down a slope, a large swath of switchgrass was added to slow the water’s entry to the rain garden. Switchgrass fits well into the overall plan of bringing the corporate grounds along to a more native prairie design. Hallmark volunteers planted various plants in the garden in late spring 2007. Plants include swamp milkweed, blue select lobelia, gay feather, gateway joe pye weed, vivid obedience, spiderwort, bee balm and big root cranesbill. While not every plant within the rain garden is a native plant, all plants have deep root systems and encourage soil absorption of water that enters the rain garden. Additionally, the plants themselves take up significant water. Deep root systems and the plants’ abilities to take up significant water are important to the proper functioning of rain gardens.

Some irrigation heads were repositioned or adjusted to assure sufficient irrigation for the rain garden during its initial year. Irrigation heads are expected to be removed after the second year as the rain garden plants become established.



Our Lady of Sorrows Catholic Church provides a focal point in the rain garden backdrop.

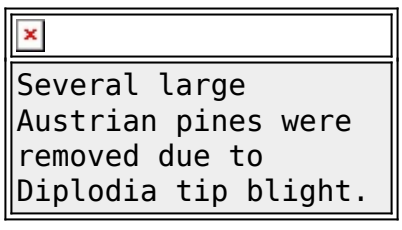
Landscape redesign

Bill Perez, Hallmark director of special service, is responsible for maintaining about 4 acres of corporate turf. His staff maintains the grounds associated with Our Lady of Sorrows as well. The 4 acres of turf are interspersed with more than 4 acres of hardscapes that include parking lots and walkways.

“We’re redesigning our landscaping to more of a prairie look,” Perez said. The landscaping redesign and grounds upgrade evolved to some degree as a result of tree removals required due to disease. The redesign is being completed in several phases. The first phase included the removal of a number of large Austrian pine trees that had excessive needle browning attributable to Diplodia tip blight. While no pine species is immune to the disease, some are more susceptible and more severely affected. Austrian pine is one of the more severely affected species. In addition to the unsightly appearance, continued tip blight infection can weaken and kill even very large trees.

Perez said, “We are replacing some of the Austrian pine trees with white pines, less susceptible to the disease. We’re also adding red bud trees in the islands within the parking lot.” Ornamental grasses are being strategically placed throughout the grounds, adding to the prairie feel and reducing grounds maintenance time requirements. Ground covers have been added to a number of locations.

“Flooding from the hardscapes has been a problem for us,” Perez said. The corporate offices were built in varying phases. The grounds are interspersed with hardscapes, as well as being surrounded by hardscapes.



Several large Austrian pines were removed due to Diplodia tip blight.

General grounds maintenance

Turfgrass is primarily tall fescue K-31 blends. A significant portion of the turfgrass is now on a new Rain Bird irrigation system. An additional

irrigation upgrade will be added in time, bringing the remaining turf under a new system.

Fertilizing is done at various times of the year and includes 30-5-10, 18-5-8 and 20-20-20. Although disease and insects are not significant problems, various pesticides are used when a need is indicated. Dormant Oil, Protec DF Fungicide, Dimension, Astro, Delta Guard, Avid and Merit have been used at various times.

Mowing is done by a contractor, with grass cut to between 2.5 and 3 inches weekly. Core aeration is done each fall to help prevent compaction.

Widespread interest

Concerns about stormwater runoff spurred the rain garden initiative undertaken last year as Kansas City, like so many other cities across the nation, deals with aging sewage infrastructures unable to handle increased runoff. The goal has been to bring corporate and municipal entities, as well as homeowners into the project. A primary goal of the program has been creating awareness of the problem of pollutants contained in runoff, with a second goal of educating people on ways they can contribute toward the solution.

While Kansas City is a leader in involving municipal, corporate and private interests in developing extensive rain gardens, installation of rain gardens in various locations around the country is increasing. Their value in cleaning runoff containing nonpoint source pollutants is increasingly being recognized, and their ability to fit into existing landscape designs encourages their installation.

The success of Kansas City in garnering corporate and private support in its effort has been recognized nationwide. Local seminars on construction rain gardens are now drawing participants from around the country.

Lynn Hinkle, Astra Communications, has worked with neighborhood, business and city leaders. She noted that some residents might not be interested in statistics on stormwater’s effect on sewage systems. They are, however, interested in constructing rain gardens that will have positive effects on their own environments.

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