City of Elk Grove Rain Garden Plaza

Multi-Objective Project - Outstanding Sustainable Project: Elk Grove Rain Garden Plaza

In one year and on one acre, a weedy vacant lot in Elk Grove, California, was converted into one of the most comprehensive demonstration rain gardens in the state. The lot adjacent to City Hall, once a neighborhood eyesore, is now a local and statewide model for low impact development practices.

Home to nearly 160,000 residents in south Sacramento County, the City of Elk Grove has more than doubled in size since its incorporation in July 2000. It was once considered the fastest growing city in the United States by the U.S. Census Bureau.

As cities increase their populations, a growing concern for communities statewide and globally is to preserve small urban open spaces, protect water quality, and promote a healthy watershed. It has been projected that by 2050, more than 75 percent of the population will live in urban cities worldwide. A key factor in the economic and social well-being of these communities is closely linked to the sustainable nature of development, especially the conservation of water.

Realizing that stormwater is a resource rather than a nuisance, Elk Grove developed a public project to demonstrate sustainable stormwater management practices as an alternative approach to a traditionally piped system. The overarching goal of the project was to use a unique, useable, and small open space to build community awareness about water conservation, watershed stewardship, and highlight what individuals can do to reduce pollutants flowing into the local creeks. The City of Elk Grove partnered with the Cosumnes Community Services District and Willdan Engineering to design and engineer the open space with an educational emphasis on a more natural, sustainable approach to stormwater management.

The Rain Garden Plaza features a one-quarter-acre rain garden with a dry well to enhance groundwater recharge, a paved plaza area comprised mostly of pervious pavers, and a shaded picnic area that serves as a quiet community gathering place.

Throughout the site, California native drought-resistant plants are used to encourage sustainable landscaping, attract butterflies, birds, and bees, and promote water conservation. Fitness equipment is stationed on a synthetic lawn with high infiltration characteristics. Fact-filled interpretive signs illustrate and provide information on various stormwater management techniques. An interactive art sculpture, decorated with tiles painted by local school children, showcases the difference between the various types of pervious and impervious surfaces.

One of the design goals was to demonstrate several different ways that stormwater moves through natural terrains. This was accomplished by treating the entire site as a micro-watershed. The low impact development features were designed to slow the flow of stormwater and allow it to be absorbed by native plants before making its way toward the lowest point of the site, the rain garden. This design mimics the natural processes that occur in undeveloped watersheds and serves as a model for how residential and commercial development projects could be designed.

The project design also includes decorative water-harvesting rain chains which hang from the roof of the shade structure. These replace typical roof downspouts. The rain chains capture the roof runoff and convey it to a rain barrel to hold water for future irrigation.

During its first rainy season in late 2012/early 2013, the Rain Garden Plaza successfully retained all water onsite for storm events of one-inch or less during a 24-hour period. One hundred percent of the site runoff is treated in the stormwater quality features, avoiding costly underground mechanical devices.

The stormwater management system for the Rain Garden Plaza serves as an exceptional example of what new development, residents, and business owners can do to improve water quality by demonstrating that water quality protection can be beautiful as well as functional. The Rain Garden Plaza has received multiple local and statewide awards and has earned extensive media coverage.

The community has embraced the Rain Garden Plaza, and the public was involved with the development of the project from the beginning, including the overall organic design and public art displays. Over 1,000 local elementary school students from 32 classes and 14 schools hand-painted tiles to help accent the plaza with a message about water quality and aquatic-resource protection. Volunteers planted many of the plants as part of a community volunteer day creating a sense of community ownership.

On any given day, visitors can be seen watching the hummingbirds and butterflies that frequent the garden, and enjoying the beauty of the large variety of native flowering plants. Employees from nearby businesses frequently use the fitness equipment and enjoy lunch under the shade structure. Residents, students, and community groups are regularly seen walking the boardwalk, activating the interactive art sculpture, viewing the water harvesting technologies on display, or discovering new facts about stormwater pollution prevention from the colorful interpretive signs.

The Rain Garden Plaza has become a destination for many stormwater professionals, a site for educational tours, and a model for the community, State agencies, and other local municipalities on low impact development techniques and sustainable stormwater practices to promote healthy watersheds.