CITY OF WYLIE PRESERVING ENDANGERED PRAIRIE

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The City of Wylie's 144,000-square-foot municipal complex rises out of 330 acres of open meadows and trees. During the complex's design process, stakeholders worked with architects to ensure the structure complemented the landscape. Incorporating colors and materials, such as regionally quarried Permian Sea Coral limestone, that would be harmonious with the natural terrain, they designed the buildings to mirror the gentle curves of the onsite creek that Caddo Indians once used as a trade route and where deer, wild hogs, and bobcats have been known to run.

Highlighting this open space is a 22-acre portion of the rapidly diminishing Blackland Prairie. The city is working with volunteer naturalists to restore this piece of geographic history to its natural state.

Restoring the Prairie – Slow but Sure

The Blackland Prairie, a 12-million-acre stretch of dark, rich soil, once reached from the Red River on the north to San Antonio on the south. The prairie was part of an extensive and complex ecosystem, home to 50 million bison, an array of small wildlife including rabbits, moles, lizards, turtles, and hundreds of species of birds.

The fertile nature of the soil led to the prairie's demise. When farmers discovered the rich earth, they settled there and planted crops, ultimately destroying the prairie as a natural habitat. Less than one percent remains, making it one of the most endangered ecosystems in North America.

In keeping with the city's commitment to maintain the natural landscape, the Wylie Parks and Recreation Division partnered with the Blackland Prairie Chapter of the Texas Master Naturalists to restore approximately 22 acres of the city-owned property to its natural condition.

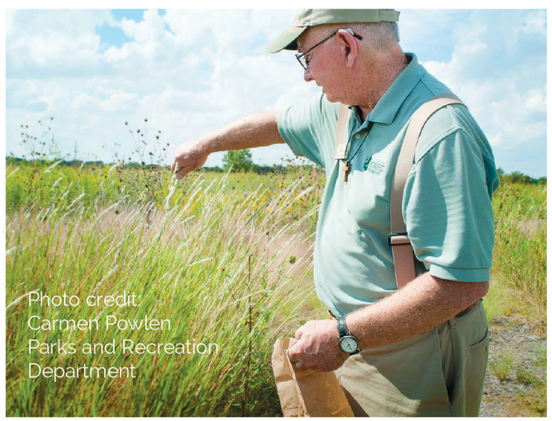

Photo credit: Carmen Powlen Parks and Recreation Department

Overseeing the project is volunteer Dave Powell, a certified trail guide and contract educator at the Heard Natural Science Museum and Wildlife Sanctuary in McKinney and immediate past president of the local naturalists chapter. In spring of 2012, following Wylie City Council's approval of the project, Powell and his volunteers got to work, scattering 10 pounds of grass seed, purchased by the city. "We're trying to play nature and do as much as we can without machines," he said. They started to see results in the fall of 2013, when native plants such as sideoats grama, the state grass of Texas, began to take hold. "This was more progress than the volunteers had anticipated," Powell said.

Volunteers continue to remove invasive and imported plants, such as Johnson grass, King Ranch bluestem, Bermuda grass and woody plants, while replacing them with native prairie grasses, such as big bluestem, buffalo grass, little bluestem, and switchgrass.

According to Powell, seeds from native plants found on the property have a higher success rate. To collect seeds, paper bags are put over the drying seed heads that are gently shaken. "If the seeds come off, they are ready to be harvested," Powell explained. Other naturalist groups also have contributed seeds from local fields to the restoration project.

Using soil from the Wylie complex, Powell grew about 100 plants from native seed, planting them in biodegradable

paper towel tubes and growing them on his home patio so he could identify them when they began to pop up in the prairie. The tubes were returned to the municipal center grounds and planted in test plots.

Although the process is slow, signs of restoration are visible. "We're starting to see more little animals, and more rodent trails," Powell said. "They've found safe places to make their homes, among the bunch grasses. They're part of the natural cycle – coyotes roam the prairies, as well as bob cats and armadillos. Hawks are looking for rodents, which helps control that population. We hope to see some grass snakes, good little snakes that eat rodents. It's all part of maintaining the life cycle."

Once mowing ceased on the redeveloping prairie, the growth of invasive grasses slowed, and a good scattering of wildflowers emerged, including bluestem, Indian paintbrush, and primrose. Recently, green milkweed has appeared which is exciting to those working on the project because the plant attracts monarch butterflies. Larvae feed off the milkweed when adults lay their eggs on the plants. Monarch butterflies need milkweed as fuel for their migration, which can be up to 4,000 miles to a habitat in Mexico.

Powell said patience is key. He visits the meadows twice a week for about three hours, removing unwanted plant life for about an hour and a half. Then he walks around, seeing what's grown and taking photos. He admits he's not likely to see the project fully restored – it may take as long as 50 years. "We're watching and waiting; letting nature take its course."

Outdoor Classroom

The grounds provide unique opportunities for education and enjoying the outdoors. Since 2012, Wylie has secured more than $900,000 in grant funding to create a two-mile, 12-foot-wide concrete hike and bike trail that loops the property. Naturalist volunteers have created an additional half-mile natural mulch trail that bisects the restoration project and connects with the paved pathway.

A water conservation garden, created in partnership with the North Texas Municipal Water District, is located in the breezeway between the recreation center and library. Landscaped with drought-friendly plants, signage provides information about the greenery as well as instructions on how to create a sustainable garden. Some selections are samples of the natural grasses that can be viewed in the prairie restoration project.

A Community Gathering Place

Voters approved bond funds in 2005, and, following the selection of architects and the finalization of plans for the municipal complex, construction began in 2008. Throughout the process, members of the Wylie City Council were adamant that the area around the buildings remain as natural as possible. They emphasized the many benefits of green space, including reduction of the urban heat island effect, soil erosion prevention, and improved drainage. Members also noted studies showing that citizens are happier in communities that provide a place for them to connect to the natural world through recreation, exercise, and play. From a fiscal standpoint, green spaces can have a positive effect on community real estate values, leading to higher tax revenues.

In 2010, the council made its philosophy official by adopting an open space plan that included a low-impact scenario designed to "tread lightly on the land" and provide an area for habitat protection and an abundance of green space.

Although the city had long valued its ball fields and other areas for organized play, stakeholders embraced the concept of a community gathering place, one that provided a link with nature, an opportunity for study, and a pastoral backdrop for activities. The Blackland Prairie restoration is part of this unique initiative and reflects the City of Wylie's commitment to maintaining an unspoiled landscape for its citizens. ★

Photo credit:
Carmen Powlen
Parks and Recreation
Department