

Students from the University of Arkansas take a tour of the Woolsey Wet Prairie Sanctuary.

Wet and Wild

A PRAIRIE SANCTUARY NEXT TO THE FAYETTEVILLE TREATMENT PLANT IS AN ATTRACTION FOR BIRDS AND WILDLIFE, AND FOR PEOPLE WHO APPRECIATE THEM

By Jeff Smith

When City of Fayetteville officials decided about 10 years ago to build a new wastewater treatment plant to keep up with population growth in surrounding communities, they chose a building site that included a 9.88-acre tall-grass prairie wetland.

To offset the loss of that prairie to plant construction, they created a 43.65-acre wetlands next to the new 10 mgd (average) West Side Wastewater Treatment Plant. Known as the Woolsey Wet Prairie Sanctuary, it has become a major attraction for wildlife and for bird lovers and nature lovers in and around Fayetteville, Ark. (population 74,000). "We get hundreds of people each year who visit and enjoy the sanctuary," says plant operations manager Tim Luther.

"It was like peeling back the layers and giving the native plants a chance to come back, which is exactly what they did."

BRUCE SHACKLEFORD

The water level in each of the seven wetland cells can be individually controlled by adjusting stoplogs in the water-control structures. Hydrological modifications were made by building earthen berms using excess soil from plant construction to create a mix of habitats, such as wet meadow, marsh, open water and forested wetlands. Maintenance of the berms primarily involves mowing, done by operations staff members Graydon Carruth and James Rachel.

Another maintenance item is controlled burning, needed to get rid of undesirable vegetation. "Otherwise, invasive grasses like fescue will take over and choke off the emergence of native seeds that have been dormant for

many years," Luther says. Other reasons for controlled burning include control of plant disease, reduction of wildfire hazards, improved wildlife habitat, and improved seedling production.

According to environmental consultant/ecologist Bruce Shackleford, who helped design the wetlands, the goal of the Woolsey Wet Prairie Sanctuary is to restore the native prairie ecosystem. When work on the sanctuary began, there were 47 native plant species present. At last count, there were 380, and seven of them were classified as species of concern.

Shackleford says the original intent was to plant seeds of different species, but soon after construction it became clear that the site, formerly a hayfield and cattle pasture, was full of native seeds that had lain dormant for decades. "It was like peeling back the layers and giving the native plants a chance to come back, which is exactly what they did," he says.

Controlling the water level in each cell is critical to emerging new growth. Instead of making the cells symmetrical with scraped-off flat bottoms, the designers enhanced the hydrology by following the natural contour of the rolling prairie mounds to create the meandering berms. Instead of having everything at a uniform depth, there are areas with two to six inches of water at certain times of the year. This provides uplands, as well as areas where the soils are saturated but do not have standing water.

"If you have that variation in hydrology, then you are going to have a

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LEFT: Maintenance of the wetlands primarily involves mowing and controlled burning, done by operations staff members. BELOW: The water level in the seven wetland cells can be individually controlled by adjusting stoplogs in the water-control structures. Hydrological modifications were made by building earthen berms to create a mix of habitats.

greater variation in plant species," Shackleford says. That in turn increases the variety of birds and wildlife that call the property home or use it as a stopover during migration.

Named after the Samuel Gilbert Woolsey family who settled the property in 1830, the site is a source of pride for Fayetteville. In March 2011, the sanctuary won recognition from the National Wildlife Federation as a certified National Wildlife Habitat.

One offshoot of the Woolsey Sanctuary project has been the creation of a species index where staff members can enter species they see on site: birds, insects, mammals, amphibians, and reptiles. "We'll use that over the years to track species diversity," says Bruce Richart, laboratory director and sustainability champion.

Luther observes, "The most important reason why the Woolsey Wet Prairie Sanctuary is so successful is because of the support it gets from the City of Fayetteville and its residents." **tpo**



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