

## Erosion project saves UNL's pecan orchard

By ALGIS J. LAUKAITIS / Lincoln Journal Star  
Wednesday, Aug 15, 2007 - 12:03:34 am CDT

The pecan trees no longer fall into the creek.

But most people who drive along North 48th Street, just north of Holdrege Street, won't notice.

The pecan orchard, part of the University of Nebraska-Lincoln's research acres on East Campus, is overshadowed by other improvements in the area:

\* A new, meandering, 2,600-foot channel that replaced an 1,750-foot unnamed tributary of [Deadmans Run](#).

\* A new rock check dam, designed to reduce erosion and trap sediment.

\* Nearly 9,000 trees and shrubs to hold soil together and reduce erosion, along with wildflowers and 10 varieties of native grasses.

\* A crossing that allows university vehicles to drive over the unnamed tributary to access research plots.

\* A concrete and rock structure for dropping water to a lower level without eroding the channel.

The improvements are part of the nearly finished Deadman's Run Channel Rehabilitation Project. Sponsored by the Lower Platte South Natural Resources District, the city and UNL, the project's main goal is to stabilize the channel of the unnamed tributary and a nearby stretch of Deadmans Run, a larger waterway that flows into Salt Creek.

The project was necessary to stop severe erosion, said Ed Ubben, projects coordinator for the Lincoln-based NRD.

"We realized we had a problem when we lost a control structure on the tributary," Ubben said.

Made of concrete, such structures control the flow of water from a tributary to a main channel — preventing the channel from getting deeper. The unnamed tributary drains a large urban area that includes parking lots and concrete-lined waterways. During a heavy rain, water moves rapidly and severe flooding and erosion can occur.

"The old tributary went straight north and had such erosion that it was threatening many trees along its banks," said Barry Shull, facilities director for UNL's Institute of Agriculture and Natural Resources.

The area the tributary flows through is the only "real" research land contiguous to campus, Shull said. The university has been researching pecan trees for decades and the project helped protect the valuable orchard.

Ubben estimated about 30,000 cubic yards of soil has been lost since 1999, when the control structure failed. The tributary channel also has dropped about 10 feet since then, he added.

The solution involves what's known as bioengineering — as well as some concrete and rock.

Bioengineering uses trees, shrubs and native plants to hold soil together and reduce erosion. The method has been used in other projects, including the Beal Slough watershed in south Lincoln.

Initially, the district believed Deadmans Run would require the most work. But it turned out the tributary had the more severe erosion, Ubben said.

The project is not designed to reduce flooding. That problem is being addressed in a master plan developed for the entire Deadmans Run watershed, Ubben said.

Part of the money for the rehabilitation project came from a \$10 million bond issue approved by voters in 2005.

The NRD and city split the \$1 million cost and the university granted an easement for about 8.5 acres to build the project, Ubben said.

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