



Rock Crossing Promotes Stream Health

Cattle on the Glen and Marcia Blundon farm, Russell, no longer need to climb up and down the steep banks of the creek that separates their pastures. They now have by comparison a super highway called a rock channel crossing. The gently sloped approach and solid crossing will eliminate the hoof-induced stream bank erosion that degraded the water quality.

“Riparian area protection is our main objective,” says Carol Blocksome, an agronomist at Kansas State University, and a member of the 2006 Kansas Environmental Leadership Program (KELP) class. She and two of her KELP classmates, Andrea Burns, Ford County Extension agent and John Stannard, Russell County Extension agent, spearheaded the project.

Stannard, on behalf of his fellow agricultural resource professionals, asked the Blundons to allow the crossing to be built on their land to demonstrate its effectiveness. The crossing is one of several applied leadership projects conducted by the 2006 KELP class.

The Kansas Environmental Leadership Program, in place since 1999, broadens participants’ water resource knowledge and fosters leadership skills. All class members complete an applied leadership project before graduation. The applied leadership projects move environmental education from theory into practice.

“The project provided us with an opportunity to work together and with others to improve water quality in Kansas,” says Minson. “By installing a practice, we learned what is involved and are better prepared to assist farmers and ranchers with similar projects.”

Burns adds, “We put ourselves in the shoes of a farmer or rancher, applying for permits and arranging for supplies,” says Burns. “Despite our contacts with state and federal agencies, we found at the last minute that we still needed one more permit.” One upshot of their hands-on experience will be a schedule and list of needed permits for anyone wanting to complete a rock crossing project.

The approach and crossing are a tiered affair that starts with a below grade layer of geotextile fabric. The fabric prevents the subsequent layers of rock from sinking into the streambed over time. For the crossing, the first of three rock layers is a foot of field stone or quarry run (sometimes called shot rock). Next is a nine-inch layer of surface rock and then finer hoof-contact material. The approaches to the creek use only the surface and hoof-contact rock.

A field day at the site will be held at 3:30 p.m. Tuesday, Aug. 15. In addition to the crossing information, presentations will be made on pasture management, watershed restoration and protection and national animal identification systems. A meal will be provided. For those unable to attend the field day, a Compact Disc (CD) of the crossing installation is being developed by the Kansas Farm Bureau.

To reach the demonstration site, exit I-70 at Balta Road (Exit 180). Travel south 3.5 miles to Four Corners Road. Turn west on Four Corners Road and drive one mile before turning south to the bridge. Cross the bridge and turn into the pasture, following the trail to the crossing.

The KERP team members initiated the project, but its execution depended on a much larger cast. Among those involved with the project were Blundon Farms LLC, KERP, Kansas Department of Health and Environment's Clean Water Neighbor program, Big Creek/Smoky Hill Watershed Restoration and Protection Strategies (WRAPS), Kansas Center for Agriculture Resources and the Environment (KCARE), Kansas Grassland Water Quality Project, K-State Research and Extension, Russell County Conservation District, Russell County Natural Resources Conservation Service (NRCS), Northwest Kansas NRCS Area Office, Russell County Farm Bureau, Kansas Farm Bureau, the Kansas Alliance for Wetlands and Streams, and the Kansas Livestock Association.



Glen and Marcia Blundon farm, Russell, Kansas. The hard crossing awaits its first cattle. Photo by Carol Blocksome, Kansas State University Agronomy Department, reproduced with permission



Geotextile fabric underlies the multiple rock layers that make up the rock channel crossing and the approaches. Photo by Sandi Cowdin, Kansas Farm Bureau, reproduced with permission.