

Reducing Pasture Road Erosion

Rubber conveyor belting offers a solution.

by Kindra Gordon

Road erosion on rangeland and pasture roads is a challenge for many ranchers. Robert Kilian, area range management specialist with the Natural Resources Conservation Service (NRCS) in Miles City, Mont., wanted to come up with a solution.

“Road erosion has been a pet peeve of mine for years, and there’s really been no guidance for landowners on what to do about it,” he says. Instead, landowners often have to fix the road annually, or they just move a portion of the road over to go around the eroded gullies.

He adds that weed establishment tends to increase in areas where roads have become degraded.

Thus, Kilian began to visit with landowners about coming up with a solution. He wrote a grant in 2006 to receive funding from the Montana Grazing Lands Conservation Initiative (GLCI) to demonstrate rubber water diverters as an alternative to minimize road erosion on pasture, hay lands and rangelands.

Kilian explains that rubber conveyor belting is used in strips 15 inches (in.) wide and 16 feet (ft.) long. Each strip is mounted to a treated 2 × 4 board, a trench is made across the road at an 11° angle, and the belting is buried so 1½ to 2 in. remains out of the ground and helps divert water across the road. These diverters are placed about every 80-100 ft., depending on slope, along the road where erosion occurs.

On the first ranch where Kilian tested the practice, about 10 rubber water diverters were installed along 1,000 ft. of road that had about 4½% slope. Kilian reports that the rancher was repairing that stretch of road annually to mitigate the effects of runoff, but since the diverters were installed, the road has remained stable and no maintenance has been needed.

“This equates to not only a time savings but a financial savings as well for the rancher,” Kilian says.

“The diverters have worked well so far, and the beauty of



► **Above & right:** These photos show eroded gullies on pasture roads.

them is that you can drive over them and barely know that they are there,” Kilian adds.

Kilian has worked with another landowner on installing the diverters on about 2,000 ft. of road that had erosion problems.

Kilian says he’s seen similar rubber water diverters used by the U.S. Park Service. “They are not new, but NRCS hasn’t yet pursued them as a conservation practice for pasture and rangeland roads,” Kilian explains.

“Our goal is to test this practice and then get it written up and included in our *Field Office Technical Guide* as an approved practice,” he adds. Because installing these diverters can be fairly expensive, Kilian

hopes they may eventually be an approved cost-share practice.

For more information about the rubber water diverters, contact Robert Kilian at 406-232-7905, ext. 114, or e-mail robert.kilian@mt.usda.gov.

▲



► **Above & left:** These photos show improved roads with rubber water diverters installed to reduce erosion.