Lesser Prairie-Chicken Fence Marking Initiative in New Mexico

Nancy Riley, USFWS

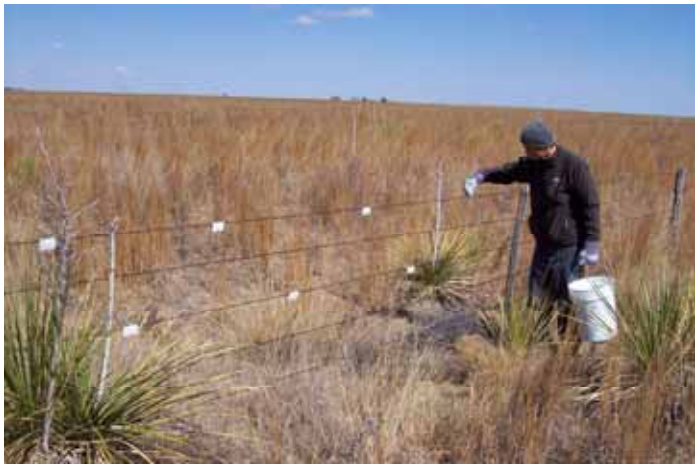
Male lesser prairie-chicken. Photo: Nancy Riley, USFWS

The lesser prairie-chicken and is one of eleven species of grouse found in North America. Historically it was found across eastern New Mexico, southeastern Colorado, Southwestern Kansas, western Oklahoma, and west Texas. The bird occupied sandhill habitat characterized by mixed-grass prairies, shinnery oak-bluestem and sand sage-bluestem plant communities in these five states. Because of the dramatic decline in lesser prairie-chicken numbers over the last fifty years, the U.S. Fish and Wildlife Service (Service) was petitioned to list the bird as a federally threatened species under the authority of the Endangered Species Act. The Service found that the species warranted protection, but was precluded from listing by higher priority species and the lesser prairie-chicken is defined as a Candidate Species for Federal listing.

Biologists have determined that reduced nesting and brood-rearing success are the primary reasons for lesser prairie-chicken population declines. Increasing the number of chicks hatched and successfully fledged (independence from the hen) and reducing hen mortality are considered key to bolstering the New Mexico population.

Researchers are studying mortality factors for the birds in New Mexico, Oklahoma, and Texas. Their initial report found that collisions (mainly with fences) account for 35 percent of the hen mortalities in New Mexico. Approximately 50 percent of all hen mortalities occur during May and June, primarily when hens are searching for suitable nest sites and laying and incubating eggs. Loss of hens at this time of year may impact overall population numbers more than would be the case at other times of the year.

Researchers have been working to develop a low-cost method to increase the visibility of fences to lesser prairie-chickens as one way to reduce adult mortality and improve nesting and brood-rearing success. Fence markers are cut from strips of vinyl house siding trim into pieces that are 3 inches long and 1.5 inches wide. This trim has a loop along one edge that makes it perfect for clipping on the fences between the barbs.



Texas Tech student installing fence markers on private lands in New Mexico. Photo: Nancy Riley, USFWS

The markers are placed about 4 feet apart on the top and third wires in an alternating pattern, so the markers on the third wire are clipped approximately halfway between the markers on the top wire. An initial study of this technique found no dead birds due to fence collisions along marked fences and an estimated collision-reduction benefit that extended outward from the fence approximately 0.5 mile in either direction.

The Service's Partners for Fish and Wildlife Program (Partners Program) in New Mexico has initiated a fence marking project to fund the installation of fence markers on private landowners'fences in the heart of the New Mexico lesser prairie-chicken population, in an effort to reduce adult hen mortality and improve nesting and brood-rearing success. The Partners Program is providing the fence markers at no cost to landowners who are willing to enter into a Private Lands Agreement with the Service and maintain the markers for the 10-year life of the agreement.

So far, three landowners have agreed to have fence markers installed on more than 47 miles of barbed wire fence in 2008.

Volunteers are helping the Partners Program to cut the markers and to install them on the fences. The first 2 miles of fence markers were cut from 12.5-foot strips of vinyl siding by members of the Dora Future Farmers of America Chapter at the Dora Consolidated Schools in Dora, New Mexico (The Coyotes). Mr. David Bass, principal of the Dora Schools, encouraged these high school students and their teacher/sponsor, Mr. Kit Pettigrew, to cut the markers and have them ready for installation in time for the 7th Annual Prairie Chicken Festival in Milnesand, New Mexico, April 11-13, 2008. Mr. Wiley Teel, the financial manager for one landowner, is a retired woodworking teacher and volunteered to cut an additional 7 miles of fence markers. An additional mile of fence markers were cut with the help of Terry Riley, representing the Theodore Roosevelt Conservation Partnership and the North American Grouse Partnership, and Nancy Riley, State Coordinator for the Service's partners for Fish and Wildlife Program. Trader Horn's True Value Hardware Store in Portales, New Mexico, donated six, five-gallon buckets to carry the markers for installation.

Saturday, April 12, 2008, fence marking crew. Photo: Nancy Riley, USFWS

Approximately three miles of fences were marked during the Festival in three activity periods during that weekend. Marker installers included individual Festival participants, Dr. Susan Tomlinson and her Natural History and Humanities Honors Class students from Texas Tech, Dennis Prichard, Assistant Refuge Manager – Sevilleta National Wildlife Refuge, Tish McDaniel – The Nature Conservancy of New Mexico, and Wiley Teel – financial manager for one landowner. In all, 18 people participated during the Festival fence marking and two individuals asked

Sunday, April 13, 2008, fence marking crew. Photo: © Tish McDaniel, The Nature Conservancy of New Mexico.

if they could volunteer to travel from the greater Albuquerque area to install fence markers in their spare time.

Partners in the fence marking initiative include:
Private landowners in Milnesand, NM
New Mexico Department of Game and Fish
New Mexico State Land Office
Natural Resources Conservation Service
The Nature Conservancy of New Mexico
North American Grouse Partnership
Theodore Roosevelt Conservation Partnership
Trader Horn's – True Value Hardware
Dora High School Future Farmers of America Chapter
U.S. Fish and Wildlife Service

Lesser prairie-chicken tracks (upper left of the white fence marker) crossing under a barbed wire fence with newly-installed fence marker. Photo: Nancy Riley, USFWS