



U. S. Fish and Wildlife Service

Conservation Practices for the Lesser Prairie-Chicken and Sand Dune Lizard Candidate Conservation Agreement and Candidate Conservation Agreement with Assurances in New Mexico

Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*) Conservation Practice Number 1 – Installation of Fence Markers



Male lesser prairie-chicken.

Photo: USFWS

The lesser prairie-chicken (LPC) is one of eleven species of grouse found in North America. Historically, it ranged across eastern New Mexico, southeastern Colorado, southwestern Kansas, western Oklahoma, and west Texas. The bird occupies sandhill habitats characterized by mixed-grass prairies, shinnery oak- sand bluestem and sand sage-bluestem plant communities. Since the nineteenth century, the LPC and its habitats have declined about 90 percent, mainly from conversion of native prairie to agricultural uses, incompatible grazing management practices, habitat fragmentation from oil and gas development, and prolonged droughts. Because of the dramatic decline in LPC 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

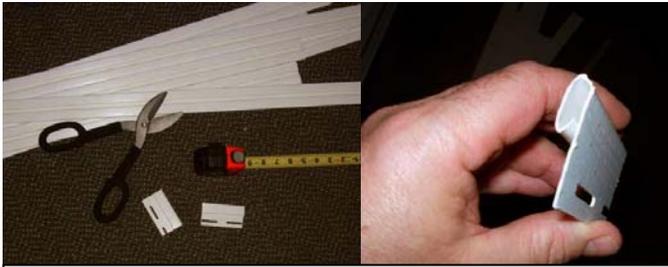
under the authority of the Endangered Species Act (ESA). The Service found that the species warranted protection but was precluded from listing under the ESA by higher-priority species; currently the LPC is defined as a Candidate Species for Federal listing.

A Candidate Conservation Agreement/Candidate Conservation Agreement with Assurances for the LPC and the sand dune lizard (SDL) in New Mexico was signed in December 2008. Non-Federal landowners and industry will be able to enroll properties and leases under these agreements and apply conservation measures to the property that will benefit the LPC.

The primary LPC habitat in eastern New Mexico is the sand shinnery oak-sand bluestem grassland, ranging from the Texas state line on the east to the Pecos River on the west. Biologists have determined that reduced nesting and brood-rearing success are the primary reasons for LPC population declines. Increasing the number of chicks hatched and successfully fledged and reducing hen mortality are considered key to bolstering the New Mexico population.

Researchers studying mortality factors for the birds in New Mexico, Oklahoma, and Texas, 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.

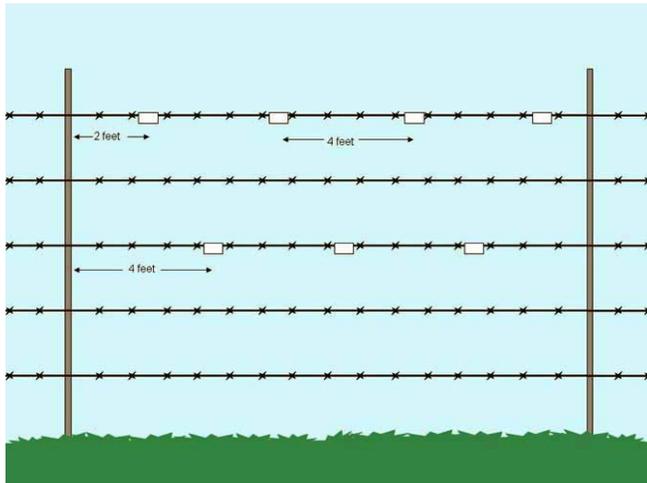
Researchers have been working to develop a low-cost method to increase the visibility of fences to LPCs as one way to reduce adult mortality and improve nesting and brood-rearing success. Fence markers are cut from strips of vinyl house siding trim (undersill) into pieces that are 3 inches long and 1.5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



Fence markers.

Photos: Sutton Avian Research Center

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. Approximately 2,000 markers are needed to mark each mile of fence and the material for the markers costs approximately \$300 per mile in New Mexico.



Schematic of fence marker placement. Sutton Avian Research Center.

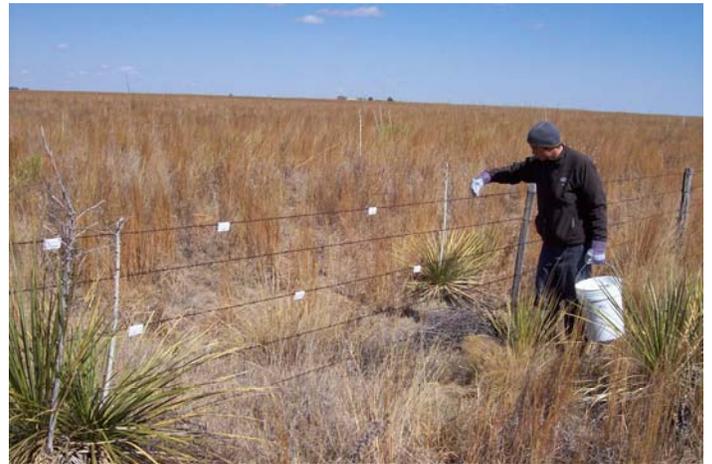
An initial study of this technique found no dead birds due to fence collisions along marked fences and an estimated collision-reduction benefit that extended outward from the fence approximately 0.5 mile in either direction. Therefore, for every mile of fence that is marked, approximately 640 acres of LPC habitat are enhanced, assuming no other unmarked barbed wire fences occur within that area.



Lesser prairie-chicken chick.
Photo: Dawn Davis,
NMDGF

Priority for Fence Marking

- Fences within 3 mile of active breeding sites (leks)
- Fences that enclose areas of occupied and suitable habitat less than 320 acres in size
- Fences on the boundaries of New Mexico State Prairie Chicken Areas.
- Fences with 1 mile of LPC release sites.



Installing fence markers in Roosevelt County, New Mexico.

Photo: Nancy Riley, USFWS



Marked fences just north of Milnesand, New Mexico.

Photo: Nancy Riley, USFWS