

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

UPLAND WILDLIFE HABITAT MANAGEMENT

(acre)
CODE 645

Texas Supplement, Zone 1

BLACK-TAILED PRAIRIE DOG

HABITAT REQUIREMENTS

GENERAL

The black-tailed prairie dog (*Cynomys ludovicianus*) is widely distributed throughout the Trans-Pecos, Southern High Plains, and Rolling Plains Major Land Resource Areas (MLRA's) in Texas as well as the Western, Southern, and much of the Central Edwards Plateau MLRA's. In the High Plains, Rolling Plains, and Edwards Plateau, habitat is typically short-grass prairie with low brush densities. The Trans-Pecos habitat is restricted to alluvial fans at the mouths of draws, hard pan flats where brush is sparse or absent, and the edges of shallow valleys. Prairie dogs also inhabit uncultivated edges of playas in the High Plains. Across their range, they rarely inhabit land with greater than 10 percent slope. Prairie dogs also avoid sandy soil due to its inability to form sturdy burrows. The area currently occupied by prairie dog colonies is approximately 1 percent of historical range. This reduction is due to several factors including habitat conversion, poisoning efforts, plague, uncontrolled shooting, and lack of adequate regulatory mechanisms.

FOOD

The prairie dog's diet consists primarily of grasses, however forbs and invertebrates are also eaten. Preferred grasses include little bluestem, grama spp., buffalograss, western wheatgrass, and sedges. Scarlet globe mallow, tansyleaf aster, peppergrass, and woolly plantain are important forbs. Forbs are most important in fall when nutritional quality of grasses is declining.

COVER

Prairie dogs need open habitat for detection of predators. Shrubs and tall herbaceous cover

decreases habitat suitability for prairie dogs due to the increased visual obstruction and decreased ability to detect potential predators. Vegetation is not necessary for escape cover as burrows are used for this purpose. Feeding and courtship occur within or on the edges of the colony. Nesting occurs in the burrow and does not require special vegetative cover. Prairie dogs often clip vegetation to maintain this short vegetative structure. Occasionally, clipped vegetation is left on the ground. However if not eaten, most clipped vegetation is carried into the burrow to be used as bedding. Constant clipping and grazing initially favors grazing-tolerant shortgrass species. Eventually, vegetative composition will favor early-successional grasses and forbs.

WATER

Prairie dog's water requirements are met from food consumed as well as from the retention of metabolic water.

HABITAT ARRANGEMENT AND SIZE

Prairie dogs live in groupings called colonies or "towns". These colonies can range in size from less than 1 acre to several thousand acres. Colonies are divided into wards that are usually separated from each other by geographic or vegetative features. Wards are further divided into coteries which consist of an adult male, several related adult females and offspring less than 2 years of age. Juvenile males disperse out of their natal coterie before breeding for the first time. Dispersal usually occurs within wards however, occasional dispersal to a different ward has been documented. Two or more colonies within 4.3 miles of each other are considered to be members of the same complex. Occasional movement of prairie dogs between colonies within a complex helps to reestablish colonies

that have been decimated by plague or poisoning.

Prairie dogs need areas without significant tree, shrub, or tall grass cover on flat to gently sloping non-sandy soils. The minimum area necessary to sustain a breeding population of prairie dogs is as small as an acre, however most healthy colonies are much larger. Furthermore, small percentages of tree, shrub, and tall grass cover outside the colony is preferred to create a buffer and potential areas for colony expansion.

HABITAT MANAGEMENT TECHNIQUES

BRUSH MANAGEMENT, Code 314

Complete brush removal will improve prairie dog habitat. Common invasive brush species in areas where prairie dogs are present in Texas include honey mesquite, cholla, prickly pear, and yucca.

Chemical control of mesquite alone will not be as effective as chemical control of other brush species due to the visual obstruction created by the standing dead mesquite. However, individual plant treatment (IPT) of seedlings, saplings, and cut stumps may be effective. For seedlings and saplings, use 5 percent Triclopyr in diesel fuel oil from May through August. For cut stumps, increase to 15 percent and apply during any season. Cholla can be controlled with a 1 percent IPT of Picloram during any season. The most effective IPT for prickly pear is to apply 1 percent Picloram or 2 percent Picloram and 2,4-D during late summer or fall. For broadcast application, the most efficient method is cool season prescribed burning followed by Picloram at the 1/8# to 1/4# rate. Yucca can be controlled by IPT with 2 percent Triclopyr mixed with diesel fuel oil during any season or IPT with 2 percent Triclopyr mixed with 1:5 diesel fuel oil and water emulsion from May through September.

Mechanical brush control is likely the preferred method for improving habitat for prairie dogs as it removes the visual obstruction rather than merely killing it. Mesquite can be removed by root plowing, power grubbing, and chaining with subsequent seeding or sprigging. If root plowing or grubbing, plow or grub to at least 14 inches to assure complete removal of the bud zone from the soil. If chaining, chain 2 ways and use naval

anchor chain with a minimum weight of 50 pounds per link. Chaining is only applicable if necessary prior to root plowing or grubbing to remove heavy brush. Chain only when there is good soil moisture to a depth of at least 12 inches. Chaining should not be done in areas with high densities of prickly pear. Cholla and prickly pear can be grubbed, piled, and burned. However, be careful not to leave any pads scattered on the ground.

CONSERVATION COVER, Code 327

This practice is generally applied to land enrolled in the Conservation Reserve Program. It has the potential to improve overall black-tailed prairie dog habitat. Seeding mixtures should be native shortgrass species with a component of quality forbs. Desirable species include buffalograss, blue grama, western wheatgrass, and sideoats grama.

PRESCRIBED BURNING, Code 338

Prescribed burns can improve prairie dog habitat in 2 ways. First they can improve forage quality and quantity and stimulate seed production in warm season grasses. Secondly, they can help control prickly pear. For both objectives, prescribed burns should be conducted between late winter and green-up. Prescribed burns can be conducted whenever fuel loads are sufficient to carry a fire. All burns must be carried out according to an approved NRCS burn plan.

PRESCRIBED GRAZING, Code 528A

High intensity, short duration grazing is the preferred method of grazing for areas with existing prairie dog colonies, provided that plant damage does not occur during intensive grazing periods. This type of grazing mimics historical disturbance patterns caused by grazing of large native ungulates. Prairie dogs should be included in the calculation of animal units. It can be assumed that 256 prairie dogs equal 1 animal unit. If colony expansion is desirable, cattle can be used to decrease plant height and improve habitat for prairie dogs. Deferment of an area for extended periods of time may increase plant height and make an area less suitable for prairie dogs. Prairie dogs have abandoned areas where mid- and tallgrass species were not kept short by cattle grazing.

RANGE PLANTING, Code 550

Range planting may be necessary to improve degraded rangeland and improve forage for prairie dogs and/or cattle. Seeding mixtures should be native and from a local seed source. Species selection should be climax species adapted to the site and include shortgrass prairie species, such as buffalograss, blue grama, western wheatgrass and sideoats grama.

POPULATION CONTROL TECHNIQUES*GENERAL*

It may be desirable to control prairie dog densities and/or acreage expansion. Prairie dogs generally expand their colonies when resources inside the colony no longer support their population needs. Therefore, reducing densities within colonies may eliminate the need for colony expansion. Several methods are available to reduce population density. Other methods are effective for controlling acreage expansion.

TREE/SHRUB ESTABLISHMENT, code 612

Directional colony expansion can be controlled by installing visual barriers. Visual barriers can be constructed of native shrub species planted in parallel rows between the prairie dog colony and the area where colony expansion is inappropriate. For detailed instructions on visual barrier construction, contact zone biologist.

RAPTOR PERCHES

Raptor perches are vertical poles with a horizontal cross bar. They provide perches for raptors that often feed on prairie dogs. Increasing this natural form of predation can serve as a population density control mechanism.

CONTROLLED SHOOTING

Controlled shooting can be effective in reducing population numbers within a colony without seriously affecting population viability. If used on smaller colonies, limits should be set so as to not shoot a sufficient number to risk elimination or abandonment of the colony. Controlled shooting should not be done during breeding, which occurs from January through March in Texas. Effectiveness may decline as the prairie dogs become gun-shy.

RELOCATION

Densities can be reduced by live capture and relocation. Contact local relocation specialists for information on live trapping and relocation.

USE EXCLUSION, code 472

Exclusion of livestock can decrease habitat suitability on fringes of the colony and may discourage colony expansion. This, however, may affect population density in 2 ways. It may increase density as the population grows without acreage expansion. This would increase the likelihood of acreage expansion in the future. It could also decrease the density by lowering the detectability of predators that could hide in the taller grasses while hunting on a colony.

PESTICIDES

Pesticides can be used to decrease density or control acreage expansion. Selective poisoning throughout the colony can reduce numbers of prairie dogs whereas complete poisoning of areas of recent expansion can be effective for acreage control. Presence of burrowing owls (protected under the Migratory Bird Treaty Act) must be considered before any poisoning can occur. For information on pesticide use on prairie dog colonies, contact USDA APHIS Texas Wildlife Services at (806) 651-2880.

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APPROVAL

Gary Valentine
State Wildlife Biologist
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