

**QUESTIONS AND ANSWERS ON REMOVAL  
OF THE BLACK-TAILED PRAIRIE DOG AS A  
CANDIDATE SPECIES**

**August 12, 2004**

**1. Why is the black-tailed prairie dog being removed as a candidate species?**

With new information from States and other entities about the range-wide impact of disease, chemical control and other lesser factors and the number of acres of occupied black-tailed prairie dog habitat, the Service determined that the black-tailed prairie dog no longer meets the Endangered Species Act's definition of "threatened."

**2. What is the definition of "threatened"?**

The term "threatened" means any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. Each of the three criteria specified in the "threatened" definition should be met before a "warranted" finding is appropriate. In the case of the black-tailed prairie dog, these criteria are no longer met.

**3. How did estimates of the acreage of occupied black-tailed prairie dog habitat change with the new data received by the States?**

State agencies now estimate approximately 1,842,000 acres of occupied black-tailed prairie dog habitat across the United States. An additional 51,589 acres also exist in Mexico and Canada. This estimate is substantially larger than the 676,000 acres across the United States estimated in the 12-month finding in 2000 or the estimated 364,000 acres in 1961.

**4. Where are black-tailed prairie dogs found?**

Black-tailed prairie dogs are found east of the continental divide in the states of Montana, Wyoming, South Dakota, North Dakota, Oklahoma, Texas, New Mexico, Colorado, Kansas, and Nebraska. They have disappeared in Arizona. They are also found in Canada and Mexico.

**5. What new information has the Service received?**

All 10 states with occupied black-tailed prairie dog habitat have provided the Service with comprehensive survey information. Since the 12-month finding in 2000 nine of the 10 states have completed additional statewide surveys. These efforts were systematically designed and implemented, although methodologies differed among states. We believe that the current statewide estimates are likely more accurate than those provided in the 12-month finding, which were also based at that time on the best available scientific data which included earlier data,

extrapolation of partial surveys, telephone surveys, and desktop exercises. More recent current estimates were derived directly from aerial surveys, field surveys and/or interpretations of recent remotely sensed data.

## **6. How do you estimate prairie dog populations?**

Estimates of prairie dog populations are not based on numbers of individual animals, but on estimates of the amount of occupied habitat. However, many people are interested in the estimated numbers of prairie dogs. The actual number of animals present depends upon the prevailing density of animals in that locality. Estimates of black-tailed prairie dog density vary depending upon the season, region, and climatic conditions, but typically range from 2 to 18 individuals per acre, with an average of 10 per acre. If 10 is used as an average number of black-tailed prairie dogs per acre, the estimated population of black-tailed prairie dogs in the U.S. would be 18,420,000.

## **7. How does recreational shooting of black-tailed prairie dogs affect population densities?**

It can reduce population densities at specific sites. In the case of the black-tailed prairie dog, extirpation may have occurred in isolated circumstances. However, the Service believes interest in recreational shooting is generally not high where populations are at low levels. Also black-tailed prairie dog populations can recover from very low numbers following intensive recreational shooting.

## **8. Is disease a threat to the continued existence of the black-tailed prairie dog?**

Although plague is likely the most important factor adversely influencing black-tailed prairie dogs, recent information indicates the populations are not as vulnerable to the disease as previously thought. Plague is an exotic disease foreign to the evolutionary history of North American species. Based on observations at numerous large colonies or complexes, in the 12-month finding the Service presumed that smaller black-tailed prairie dog populations had been and would be similarly or more adversely impacted. An approximate 50 percent decline per decade was predicted for the foreseeable future. Much better information is now available. Given recent population estimates across a majority of the species' range, it appears the previously hypothesized projections were invalid. While occupied habitat at specific large complexes may experience dramatic fluctuations due to plague, these fluctuations do not appear to be influencing the species' range-wide persistence. Recent data also indicate that in some portions of the species' range, some colonies may approach pre-plague population levels following plague.

Approximately one-third of the species' historic range has not been affected by plague.

**9. Is chemical control believed to threaten the black-tailed prairie dog's future existence?**

Recent range-wide data show little evidence of permanent impacts from chemical control over the past several decades. Recent chemical control efforts have often been less successful than historic efforts for a variety of reasons. These include the fact that years ago these efforts were federally directed and utilized more efficient toxicants. Chemicals available today to poison prairie dogs are less effective than early toxicants that are now banned. However, it is difficult to obtain accurate information regarding the use of toxicants to control black-tailed prairie dogs. Although use of chemical controls may have caused black-tailed prairie dogs to have been extirpated from some specific areas, site specific and range-wide data indicate the species' resiliency to the impacts of chemical control. With information available to the Service today, we believe that impacts on the black-tailed prairie dog due to chemical control are not a threat in a significant portion of the species' range in the foreseeable future such that the species could become endangered.

**10. What specifically do you look at to determine if a species needs to be listed as threatened or endangered?**

We consider the factors specified in the Endangered Species Act to determine whether a species meets the definition of "threatened" or "endangered" per the criteria stated in the Act. In order to be considered a threat, a substantial demonstrable effect should be shown to play a significant role in the population dynamics of the species such that it is likely to become an endangered species within the foreseeable future throughout all or a significant portion of the range. None of the five listing factors (present or threatened destruction, modification or curtailment of a species habitat or range; overutilization for commercial, recreational, scientific or educational purposes; disease or predation; inadequacy of existing regulatory mechanisms or other natural or manmade factors affecting a species' continued existence) meet this standard, thus the black-tailed prairie dog is not threatened or a candidate for listing.

**11. Why is the black-tailed prairie dog important?**

Prairie dogs are an integral part of the prairie grassland ecosystem and their presence increases both animal and plant diversity. The black-tailed prairie dog provides important habitat for and is prey for many species. The endangered black-footed ferret, mountain plover, burrowing owl, swift fox, badger, and ferruginous hawk are often found using black-tailed prairie dog habitat. Burrowing and grazing activities of prairie dogs affect many ecosystem functions and processes, including vegetation structure, plant composition, nutrients available in soil for plants, soil turnover, soil chemistry, energy flows, nutrient quality of plants, and plant succulence.

**12. What does a black-tailed prairie dog look like, and how does it live?**

The black-tailed prairie dog is approximately 14-17 inches long and weighs around 1-3 pounds. It is a small, stout ground squirrel with a short, black-tipped tail, large eyes, and a tan-brown pelt. It was named for its barking call. Although all five species of prairie dogs live in colonies, the black-tailed prairie dog is the most social of these. Within colonies, prairie dogs live in contiguous, territorial family groups called coterries. Some studies have shown that dense prairie dog colonies may be better adapted to protect against predators than sparse colonies.

**13. How many species of prairie dogs are there?**

There are five species of prairie dogs in North America--Utah (listed as a threatened species in 1973), Gunnison, white-tailed, Mexican (listed as an endangered species in 1970), and the black-tailed.

**14. Have the other species of prairie dogs experienced declines?**

The Mexican prairie dog is listed as endangered and the Utah prairie dog is listed as threatened on the list of Endangered and Threatened Wildlife and Plants.

**15. How are the burrowing owl, swift fox, mountain plover, pronghorn antelope, bison, ferruginous hawk, black-footed ferret and the golden eagle associated with the black-tailed prairie dog?**

Burrowing owls are most successful as colonial breeders in portions of large, active prairie dog colonies.

In some areas, swift fox use the burrows of black-tailed prairie dogs for shelter and to escape other predators. They probably also capitalize on the increased abundance and diversity of prey on active prairie dog towns.

Because prairie dogs keep the vegetation clipped, this creates a preferred nesting habitat for the mountain plover. In Montana, mountain plovers nest almost exclusively in black-tailed prairie dog towns.

Some studies have reported that antelope, bison, and deer will often prefer to graze in some seasons on prairie dog colonies. Constant digging and clipping of grasses by prairie dogs causes soil turnover that results in changes of the composition of vegetation on the prairie. These changes actually can improve the nutritional quality of existing grasses and encourage growth of high forage quality forbs.

Golden eagles and ferruginous hawks frequent black-tailed prairie dog towns for prey, as do many other species.

Black-footed ferrets are totally dependent on prairie dogs for their food and shelter. Large complexes of prairie dog towns are key to the survival and recovery of the endangered black-footed ferret.

**16. How prolific are black-tailed prairie dogs?**

Female black-tailed prairie dogs may occasionally breed in their first year, but generally do not breed until their second year and usually live 3-5 years. Prairie dogs produce a single litter annually, usually of 4-5 pups. Thus, depending on various reproductive factors such as habitat and nutritional quality, one female prairie dog produces from 3 to 20 young in its lifetime. However, in the absence of plague they can expand their colonies rapidly when overgrazing and drought provide that opportunity.

**17. Do prairie dogs rebound from adverse impacts such as disease, chemical control and recreational shooting?**

Yes. There are several reports of populations of black-tailed prairie dogs rebounding after being greatly reduced by chemical control. One of these reports involves the Pine Ridge Indian Reservation in South Dakota in the mid 1980s where chemical control was used to reduce the population to around 20,000-30,000 acres of occupied habitat. Today, occupied habitat is estimated at 90,000 to 100,000 acres on the Reservation. In addition, new information provided by states and other entities indicate that populations are not as vulnerable to plague as previously thought. Large black-tailed prairie dog complexes experience dramatic fluctuations in population due to plague, but these do not appear to influence the species' range-wide persistence.

**18. Do black-tailed prairie dogs migrate to other locations?**

Prairie dogs don't truly migrate like birds. However, individuals may disperse from the home colony. Typical dispersal is usually between established colonies and limited to approximately 3 miles or less, although occasional dispersal distances as high as 6 miles have been noted. Therefore, prairie dog towns isolated from other towns by great distances will not mix. As a highly social and colonial species, when separated prairie dogs are less able to depend on others for support in daily survival, such as defense against predators (both detecting them and deterring them by mobbing), cooperative rearing of young, and grooming, which removes parasites.

**19. What effect do black-tailed prairie dogs have on livestock and the land? Do they compete for forage with livestock?**

Prairie dog populations can significantly alter the landscape. Their burrowing, foraging, predator avoidance and other activities affect soils, water transport, vegetation, the occurrence of associated species, and other ecological processes.

Although direct dietary competition between prairie dogs and cattle for the same plants may not be significant, prairie dogs also indirectly compete with cattle by clipping vegetation without consuming it. This behavior maintains vegetation at a low height and likely improves predator detection by prairie dogs, as well as providing additional benefits for them and some other species. For example, in some instances bison, antelope and cattle have been observed to preferentially graze on prairie dog towns as compared to other areas.

In some situations clipping and forage consumption by prairie dogs may result in a smaller quantity of forage being available for livestock. However, the remaining vegetation often has a seasonally higher nutritional value than that on other areas. Some studies have found that cattle grazed in pastures occupied by black-tailed prairie dogs had no significant differences in weight gain compared to cattle grazed in pastures without prairie dogs. On the other hand drought and overgrazing may heighten competition for forage (whether consumed or clipped) between the species; these factors also encourage expansion of prairie dog colonies into new areas. Conversely, lush vegetation in wet years may mask competition between the species and restrict prairie dog expansion where dense vegetation acts as a barrier. These relationships are complex and not fully understood. Interpreting the economic impact that prairie dogs have on livestock production depends on many things, including the specific site, weather patterns, time of year and various other factors.