

# CONSIDERATIONS FOR DESIGNATING MANAGEMENT CATEGORIES

## Alternative 5

### **A. Category 1 Prairie Dog Habitat**

One of the primary objectives for managing prairie dog habitat on the Thunder Basin National Grassland is to provide for suitable habitat to support the reintroduction of the Black Footed Ferret (cite grassland plan). The Conata Basin had approximately 10,000 acres of active prairie dog colonies at the beginning of reintroductions. Based on population studies and modeling efforts, this has been proposed as the minimum size necessary to support a successful reintroduction of black-footed ferrets in plague-free habitat. (Carnwath, 2005). Further the Black footed ferret recovery plan indicates that in order to support 30 individual ferrets, approximately 1200 hectares (3700 acres) of active prairie dog colonies are needed. (USFWS, 2006) In the presence of plague, periodic habitat reductions of more than 50 percent have been observed on the TBNG. Based on historical distributions and sizes of prairie dog colonies on the TBNG, one area of suitable size was identified.

#### **Category 1 Prairie Dog Habitat – Size and Spatial Configuration**

Documentation of historical population levels indicate that this area has ranged from approximately 14,000 acres to a modeled estimate of 23,000 acres (USFS, 2002). Based on these population estimates and available suitable habitat, it is reasonable to achieve an objective of 18,000 acres. It is anticipated that 18,000 acres will be sufficient habitat to allow ferrets the opportunity to persist through a plague epizootic and recover naturally along with the prairie dog populations. The acreage in Category 1 is not capped at 18,000 acres, but would be allowed to grow within the boundary of the MA 3.63. The 18,000 acre objective only serves as a potential trigger point if prairie dogs are expanding onto adjacent private lands. Alternatively, this should be a sufficient size to allow managers time to detect and hopefully contain an outbreak of plague before it critically alters habitat integrity (Carnwath, 2005).

Total Prairie Dog Habitat size, however, may be adjusted in the future depending upon success. Depending on the success of reintroduction efforts and the results of this analysis, the parameters defining a Category 1 Prairie Dog Habitat may change.

The exact spatial configuration of prairie dog colonies most conducive to maintaining and enhancing viable populations of black-footed ferrets is not completely known, particularly for an area known to experience periodic outbreaks of plague such as the TBNG. Data from the Conata Basin in South Dakota as well as experience from failed ferret reintroduction efforts have, however, demonstrated several critical attributes of viable black-footed ferret habitat. For example, prairie dog colonies must be located within a common dispersal distance of ferrets to facilitate movement between habitat patches. Therefore, colonies within a Category 1 Prairie Dog Habitat were delineated so

that each colony is no more than 1.5 km from another colony at the perimeter of the Prairie Dog Habitat (CBSG 2004).

### **Category 1 Prairie Dog Habitat - Location**

The location for the Category 1 Prairie Dog Habitat is based on the current and historical distribution of prairie dogs across the planning landscape as well as areas most suitable as prairie dog habitat as defined by slope, vegetation and soil characteristics. Secondly, Category 1 Prairie Dog Habitats were sited so as to utilize, to the maximum extent feasible, public lands such as Thunder Basin National Grassland. Natural barriers to prairie dog expansion such as large areas of unsuitable habitat were utilized to the maximum extent feasible to bound the Category 1 Prairie Dog Habitat.

### **Category 1 Prairie Dog Habitat - Control and Management**

Inside the Category 1 Area, prairie dogs will be allowed to disperse and colonize new areas naturally until they reach 18,000 acres of active colonies. At this point, rodenticide would be available within these boundaries manage prairie dog populations to reduce expansion onto adjacent private lands. The acreage in Category 1 is not capped at 18,000 acres, but would be allowed to grow within the boundary of the MA 3.63. The 18,000 acre objective only serves as a potential trigger point if prairie dogs are expanding onto adjacent private lands. In areas where no natural barriers exist, a buffer of ungrazed or lightly grazed areas will be used to discourage colonization out of the designated Prairie Dog Habitat.

However, if these management techniques prove insufficient, poisons could be used to control prairie dogs that disperse outside of the Prairie Dog Habitat. If and when control becomes necessary within the Category 1 area, selection of colonies to be controlled should be based on habitat values to black-footed ferrets.

While the objective in the Category 1 area is to provide approximately 18,000 acres of active colonies, the area is approximately 58,000 acres, this allows for prairie dogs to disperse and colonize into preferred habitats and provides more flexibility for prairie dogs to disperse and colonize new areas before they spread outside of the designated boundary at which point control would be necessary. It is reasonable to expect a natural tendency for prairie dogs to disperse outside of designated Prairie Dog Habitats, thus increasing the need of prairie dog control. This larger area is also expected to increase the ability for the colonies to survive and recover from an outbreak of plague.

Recreational shooting of prairie dogs will not be permitted within the Category 1 Prairie Dog Habitat. While shooting is not viewed as an effective control for prairie dogs, recent information indicates that it can reduce densities of prairie dogs within colonies. Further, shooting has been found to leave prairie dog carcasses that contain high levels of lead fragments. These fragments could lead to secondary poisoning of black-footed ferrets if consumed. (Pauli)

Translocation of prairie dogs may be used to augment a Category 1 Prairie Dog Habitat as needed. In the wake of a plague epizootic, for example, strategic translocations of new

individuals from other areas into the affected area could greatly increase the rate of recovery. If active prairie dog acreage falls below 10,000 acres within a Category 1 Prairie Dog Habitat (the minimum area necessary to support a reintroduction of black-footed ferrets), translocations will be considered.

### **A. Category 2 Prairie Dog Habitat**

Category 2 areas are intended to provide an adequate distribution of prairie dogs and their associated species across the landscape and provide some level of protection against a landscape-wide plague epizootic. Five Category 2 Prairie Dog Habitats will be maintained within the planning landscape. In the TBNG, each Category 2 Prairie Dog Habitat will contain a minimum of 1,500 acres of active prairie dog colonies within a defined area. Combined, Category 2 Prairie Dog Habitats should contain 9,000 acres of active prairie dog colonies. A minimum acreage of 1500 is within the scope of historical populations. Based on the suitable habitat available in these areas, it is reasonable to expect that the active prairie dog colonies could expand to 9,000 acres.

These Category 2 areas are known as 4W, Middleton, North 450, South Cellers and Piney Creek.

#### **Category 2 Prairie Dog Habitat – Size and Spatial Configuration**

There is no single size of prairie dog colonies which is considered *ideal* for prairie dogs and their associated species.

A full array of the range of colony sizes and configurations will be provided within the Category 2 designation to represent the variety of colony sizes represented historically. Mountain plover need larger prairie dog colonies (approximately 640 acres) for nesting (Ball, personal Communication). Based on the needs of mountain plover, burrowing owls and other associated species, the category 2 areas were designed to not only meet the minimum requirements for these species but also to withstand fluctuations in prairie dog populations and maintain viable populations of the associated species. Category 2 areas will be composed of relatively large colonies (>300 acres) while other Prairie Dog Habitats will be composed of smaller and more numerous colonies. Colony sizes and configurations which have been demonstrated to minimize the severity of a plague outbreak will be preferred and managed for.

#### **Category 2 Prairie Dog Habitat - Location**

Locations for Category 2 Prairie Dog Habitats are based on habitat suitability as well as the current and historical distribution of prairie dogs. Furthermore, areas that have a known presence of associated species were considered high value habitat for other reasons and are prioritized for Category 2 Prairie Dog Habitats. Habitat requirements and suitability of associated species such as mountain plovers (*Charadrius montanus*), burrowing owls (*Athene cunicularia*), ferruginous hawks (*Buteo regalis*), and swift fox (*Vulpes velox*) will be considered in locating and maintaining a Category 2. If information arises which suggests a specific colony configuration is more suitable for a desired species, Category 2's can be managed to provide such conditions.

At least one Category 2 will be located as far as possible from the Category 1 Prairie Dog Habitat to reduce and/or slow the spread of a plague epizootic and provide some redundancy in the system.

### **Category 2 Prairie Dog Habitat - Control and Management**

Translocations will be considered if any individual Category 2 Prairie Dog Habitat falls below 500 acres *or* total Category 2 acreage falls below 1,500 acres. In the event that Category acreage exceeds 9,000 acres, control of colonies within Category 2 areas would be appropriate. In such cases, newer colonies and colonies with lower habitat value for associated species would be prioritized. Rodenticide use may occur on Category 2 Prairie Dog Habitats in a manner that is consistent with the specified goals of each Category 2 Prairie Dog Habitat and with incentive agreements.

Regulated shooting could be allowed (private lands only) on Category 2 Prairie Dog Habitats so long as it is not found to compromise the ecological objectives of these areas. Use of full-metal jacket bullets is recommended to reduce possible secondary lead poisoning. Prairie Dog shooting would be prohibited on all NFS lands within the Category 1 and 2 areas.

The locations and boundaries of Category 2 Prairie Dog Habitats may change and shift depending on prairie dog activity, new information, or other management objectives.

Site specific decisions on the use of the management tools will be made following the Decision Screens as found in Appendix B2.

### **B. Category 3 Colonies**

Category 3 Prairie Dog Habitats are small isolated colonies which do not fall within the boundaries of Category 1 or 2 Prairie Dog Habitats and occur south of Highway 450 and east of R67W. They also fall within the TBGPEA potential CCAA area.

- Category 3 Prairie Dog Habitats are small isolated colonies which do not fall within the boundaries of Category 1 or 2 Prairie Dog Habitats.
- Two thousand acres of Category 3 Colonies strategically located across the planning landscape should be maintained. The primary purpose of Category 3 Colonies is to provide a source for natural dispersal to Category 1 and 2 Prairie Dog Habitats following a plague outbreak and to provide a widespread geographic distribution of prairie dog colonies and their associated species across the TBNG.
- Priority will be given to Category 3 colonies which can serve to recolonize Category 1 and 2 Prairie Dog Habitats as well as colonies with a documented presence of species of concern such as burrowing owls and mountain plovers.
- Ideally, these colonies should be located approximately 10-20 km from Category 1 and 2 Prairie Dog Habitats. An abundance of Category 3 colonies <7km from a

- Category 1 Prairie Dog Habitat should be discouraged to provide a buffer zone which could slow the spread of plague.
- A distribution of approximately 500-1,000 acres of Category 3 Colonies should be maintained in isolation from Category 1 and 2 Prairie Dog Habitats to provide additional protection from a landscape wide plague epizootic as well as insure wide geographic distribution of prairie dogs.
  - A colony will be considered isolated if it is >20km from a Category 1 or 2 Prairie Dog Habitat or separated by significant amounts of unsuitable habitat.
  - Management actions should be considered if Category 3 Colonies fall below 500 acres or above 2000 acres.
  - Regulated shooting could be allowed on all Category 3 Colonies.

### **C. Category 4 Colonies**

Category 4 Prairie Dog Habitats are small isolated colonies which do not fall within the boundaries of Category 1 or 2 Prairie Dog Habitats and are north of Highway 450 and East of R67W. They also fall outside the TBGPEA potential CCAA area.

- Two thousand acres of Category 4 Colonies strategically located across the planning landscape will be maintained.
- The primary purpose of Category 4 Colonies is to provide a source for natural dispersal to Category 1 and 2 Prairie Dog Habitats following a plague outbreak and to provide a widespread geographic distribution of prairie dog colonies and their associated species across the TBNG.
- Priority will be given to Category 4 colonies which can serve to recolonize Category 1 and 2 Prairie Dog Habitats as well as colonies with a documented presence of species of concern such as burrowing owls and mountain plovers.
- Ideally, these colonies should be located approximately 10-20 km from Category 1 and 2 Prairie Dog Habitats. An abundance of Category 4 colonies <7km from a Category 1 Prairie Dog Habitat should be discouraged to provide a buffer zone which could slow the spread of plague.
- A distribution of Category 4 Colonies should be maintained in isolation from Category 1 and 2 Prairie Dog Habitats to provide additional protection from a landscape wide plague epizootic as well as insure wide geographic distribution of prairie dogs.
- A colony will be considered isolated if it is >20km from a Category 1 or 2 Prairie Dog Habitat or separated by significant amounts of unsuitable habitat.
- Regulated shooting could be allowed on all Category 4 Colonies.

### **F. Colonies not in Category 1, 2, 3, or 4**

- Coal Mine Area-colonies will not be scheduled for control and do not count toward category goals but will be maintained until they are impacted by mining.
- New-colonies will be maintained until a review of their values are conducted and a determination of their designations is completed under the strategy
- Control-Colonies will be controlled on a priority basis as follows:

1. Colonies close to residences where health and safety are a concern
2. Colonies expanding onto private land not in categories 1, 2, 3 or 4
3. Colonies expanding onto private land near boundaries of categories 1, 2, 3 or 4
4. Colonies getting close to private land

### **General Management**

Chemical control of prairie dogs entails substantial investments in personnel and funding. Based on past management history, neither available personnel nor available budget are likely to be sufficient to address all complaints of unwanted prairie dog colonization. Because of this, priority should be given to new sites of unwanted colonization (a new site being defined as an area where unwanted colonization has not occurred within the previous 10 years). By focusing on new problem sites, there is a greater likelihood of “nipping the problem in the bud”. Sites with chronic problems of unwanted prairie dog colonization should be prioritized for land exchange, acquisition, or conservation easements.

Anytime that unwanted colonization occurs, vegetation management to encourage high structure vegetation should be implemented. This will typically require grazing regimes to be modified to prevent creation of low structure vegetation on or near the colonized site that would facilitate recolonization.