

## Gunnison's Prairie Dog (*Cynomys gunnisoni*)

### Species Status Statement.

#### Distribution

Gunnison's prairie dog occurs in Utah, Colorado, New Mexico, and Arizona. While the historical range for this species includes large portions of these states, it is now primarily restricted to the Four Corners region. Utah contains an estimated 3% of the species' total range, with active colonies east and south of the Colorado River (Seglund et al. 2006, Lupis et al. 2007). Recent genetic work has split Gunnison's prairie dog into two subspecies: *Cynomys gunnisoni gunnisoni* and *C. g. zuniensis* (U. S. Fish and Wildlife Service 2013). Subspecies *zuniensis* occurs in the lower-elevation, "prairie" southwestern portion of the range (including all of the Utah animals), while subspecies *gunnisoni* occurs in the higher-elevation, "montane" northeastern portion of the range.

Table 1. Utah counties currently occupied by this species.

<b>Gunnison's Prairie Dog</b>
GRAND
SAN JUAN

#### Abundance and Trends

Gunnison's prairie dog populations are cyclical. The species is highly susceptible to sylvatic plague outbreaks, and populations often increase before crashing as the result of the disease (summarized in Seglund et al. 2006). Despite these local fluctuations in abundance, occupancy surveys in Utah, New Mexico, and Arizona in 2007 and 2010, and Colorado in 2005, 2007 and 2010, showed stable population trends. These results allowed the U. S. Fish and Wildlife Service to determine that the species did not warrant protection under the Endangered Species Act in 2013 (USFWS 2013). The UDWR has since conducted occupancy surveys in 2013 and 2016, and found stable occupancy across years with a substantial increase in 2016 (UDWR Files).

### Statement of Habitat Needs and Threats to the Species.

#### Habitat Needs

Gunnison's prairie dog generally occupies grasslands and semi-arid desert and montane shrublands, on flat terrain or terrain with low-variability slopes (Seglund et al. 2006, Lupis et al. 2007). These habitats have low and unpredictable precipitation, limited vegetation, and short growing seasons. Additionally, due to their dependence on burrows, prairie dogs require deep,

well-drained soils that allow them to hibernate below the frost line, especially at high elevations (Seglund et al. 2006, Lupis et al. 2007). In Utah, Gunnison's prairie dog occurs in loose colonies marked by mounds around burrows in open rangeland that is not excessively brushy, and where soils are not extremely sandy or rocky. Farmers like similar soils; consequently, prairie dogs also live in agricultural areas, and in moist meadows, around the La Sal Mountains.

### Threats to the Species

Sylvatic plague, an introduced pathogen, is the largest threat to Gunnison's prairie dog. Because of this species' highly social and colonial nature, plague outbreaks can kill more than 99% of the animals in a colony, and can result in the loss of entire populations in a single season (Lechleitner et al. 1968, Cully and Williams 2001). Plague persists at low levels throughout the range of Gunnison's prairie dog, with periods of high and low intensity that vary based on environmental conditions and host susceptibility. The factors affecting outbreaks remain poorly understood.

In addition to plague, other threats to Gunnison's prairie dog include droughts, loss of habitat through development, conifer encroachment, recreational shooting, and poisoning. Although generally not widespread, the effects of poisoning as a control method are largely unknown. As is likely the case with recreational shooting, poisoning seems more likely to affect the species on a localized level. At a minimum, both threats introduced a level of uncertainty to Gunnison's prairie dog population demographics. Similarly, although Gunnison's prairie dog has evolved in arid, drought-prone environments, it is likely that all the other threats have an additive effect atop those of prolonged drought.

Table 2. Summary of a Utah threat assessment and prioritization completed in 2014. This assessment applies to the species' entire distribution within Utah. For species that also occur elsewhere, this assessment applies only to the portion of their distribution within Utah. The full threat assessment provides more information including lower-ranked threats, crucial data gaps, methods, and definitions (UDWR 2015; Salafsky et al. 2008).

<b>Gunnison's Prairie Dog</b>
<b>High</b>
Disease – Alien Organisms
<b>Medium</b>
Droughts
Problematic Plant Species – Native Upland
Wind Power Facilities

### **Rationale for Designation.**

Although recent occupancy surveys across its range have shown that Gunnison's prairie dog population trends are stable, the susceptibility to rapid and steep declines as the result of sylvatic plague is ever-present. Repeated plague outbreak could increase population isolation and result in the loss of genetic diversity and range contraction. Given this ongoing threat, other potential threats, and the expectation that groups may re-petition Gunnison's prairie dog for listing under the Endangered Species Act, the state should continue monitoring and managing this species.

### **Economic Impacts of Sensitive Species Designation.**

Sensitive species designation is intended to facilitate management of this species, which is required to prevent Endangered Species Act listing and lessen related economic impacts. Gunnison's prairie dog is currently managed both as a non-game wildlife species, and as an agricultural pest species. As such, private landowners can control nuisance prairie dogs year-round. Recreational shooting is also permitted from June 16 to March 31. ESA listing could complicate efforts to control nuisance prairie dogs on private lands. Recreational shooting would likely be prohibited. On BLM lands, an ESA listing of Gunnison's prairie dog could trigger environmental review, and potential mitigation and land-use restrictions for a wide variety of other activities and uses including habitat treatment, grazing management, OHV use, and construction and maintenance of utility rights-of-way.

### **Literature Cited.**

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