

Black-footed Ferret (*Mustela nigripes*)

Species Status Statement.

Distribution

Black-footed ferret historically occurred across the plains and intermountain regions of 12 US states, extreme southern Canada, and extreme northern Mexico (USFWS 2013). Currently, it lives in eight states. As this small mustelid relies on prairie dogs to provide both its food and habitat (in the form of burrows), its distribution is absolutely restricted to areas with prairie dogs.

Table 1. Utah counties currently occupied by this species.

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Abundance and Trends

Black-footed ferret was once abundant and widespread throughout areas hosting prairie dog colonies. The intentional destruction of millions of acres of prairie dog colonies throughout the 1900s, and the accidental introduction of exotic diseases such as sylvatic plague and canine distemper, together caused ferret distribution and abundance to drop dramatically. By the 1970s, managers believed the species to be extinct, until one small population was discovered near Meeteetse, Wyoming in 1981 (USFWS 2013). This wild population dropped to 18 individuals in 1986, at which point managers decided to capture all known wild black-footed ferrets and place them in a captive-breeding program. All living black-footed ferrets originated from this single depleted population of 18 individuals.

Since the initiation of the breeding program, managers have reintroduced the species to 30 sites in eight states. Approximately 300 individuals now live in the wild. In 1999, Utah managers reintroduced black-footed ferrets into the Coyote Basin/Snake John Reef area in Uintah County. Under the terms of the reintroduction, Utah's population is classified a nonessential, experimental population under the Endangered Species Act (UDWR 2007).

In order to meet delisting goals, the black-footed ferret recovery plan calls for 3,000 individuals in populations of 30 or more adults, with at least 10 populations of 100 or more individuals, and at least one population occurring in at least nine of the 12 states in the species' historical range.

Statement of Habitat Needs and Threats to the Species.

Habitat Needs

Black-footed ferret requires large prairie dog complexes to survive (Biggins et al. 1993). This species is dependent upon prairie dogs for both food and for burrows used for shelter. Prairie dogs make up 90% of the diet of black-footed ferret. In Utah, this species historically inhabited both white-tailed prairie dog and Gunnison's prairie dog colonies; there is no evidence it ever inhabited Utah prairie dog colonies (UDWR 2007). Healthy prairie dog populations are required to sustain black-footed ferret populations.

Threats to the Species

A major threat to black-footed ferret populations is the impact of disease on ferrets and prairie dogs (UDWR 2007). Sylvatic plague epizootics can dramatically decrease prairie dog populations. This influences the amount of prey available to black-footed ferret. In addition, sylvatic plague is always fatal to black-footed ferrets when they are exposed. Long-term persistence of black-footed ferrets will require management of disease outbreaks.

Another major threat is a result of the extremely low population level when the few remaining black-footed ferrets were brought into the captive-breeding program. Genetic diversity among remaining ferrets is very low (UDWR 2007). Black-footed ferrets now live in small, isolated populations scattered across several states. This makes it difficult to have genetic exchange within the overall population, and can compound impacts from low genetic diversity. However, the isolation helps with management of plague outbreaks.

Table 2. Summary of a statewide-scale threat assessment and prioritization completed in 2013 (UDWR 2015; Salafsky et al. 2008). Note that these threat rankings do not apply at the scale of local populations; a threat ranked medium at the overall, statewide level may be the most important threat to a local population. The threat assessment provides more information not presented here, including lower ranked threats, crucial data gaps, and definitions for all the threats and data gaps.

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| Black-footed Ferret |
| Very High |
| Disease – Alien Organisms |
| Medium |
| Oil and Gas Drilling |
| Roads – Energy Development |

Rationale for Designation.

All of the small, isolated black-footed ferret populations require ongoing active management of the impacts of disease and a genetic bottleneck. Black-footed ferret has been federally listed as endangered under the Endangered Species Act (ESA) since 1967 (USFWS 2013). The ferret population in Utah is considered nonessential and experimental under section 10j of the ESA

(UDWR 2007). The status and need for active management merit designation of black-footed ferrets as a Utah Sensitive Species. The national black-footed ferret recovery plan includes delisting criteria for the species. A state management plan guides management of the species in Utah, in cooperation with the United State Fish and Wildlife Service.

Economic Impacts of Sensitive Species Designation.

The single black-footed ferret population in Utah carries a 10(j) “nonessential, experimental” status. As such, both the take prohibitions and the consultation requirements of the ESA are relaxed. This provides the greatest flexibility to manage ferrets while addressing concerns regarding ESA regulation. Any further reintroductions in Utah would likewise require a 10(j) designation. In addition, the concerns of local governments, private landowners adjacent to reintroduction areas, and lessees would need to be comprehensively addressed.

Literature Cited.

Biggins, D.E., B.J. Miller, L.R. Hanebury, B. Oakleaf, A.H. Farmer, R. Crete, and A. Dood. 1993. A technique for evaluating black-footed ferret habitat, *in* J.L. Oldemeyer, D.E. Biggins, B.J. Miller and R. Crete, editors: Management of prairie dog complexes for the reintroduction of the black-footed ferret: U.S. Fish and Wildlife Service, Biological Report 13, p. 73-88. Washington, D.C., USA.

Salafsky, N., D. Salzer, A.J. Stattersfield, C. Hilton-Taylor, R. Neugarten, S.H.M. Butchart, B. Collen, N. Cox, L.L. Master, S. O’Connor, and D. Wilkie. 2008. A standard lexicon for biodiversity conservation: unified classifications of threats and actions. *Conservation Biology* 22: 897–911.

U.S Fish and Wildlife Service [USFWS]. 2013. Recovery plan for the black-footed ferret (*Mustela nigripes*). U.S. Fish and Wildlife Service, Denver, Colorado, USA. 157 pp.

Utah Division of Wildlife Resources [UDWR]. 2007. Northeastern Region Black-footed Ferret Management Plan. Utah Division of Wildlife Resources. Salt Lake City, Utah, USA. 22 pp.

Utah Division of Wildlife Resources [UDWR]. 2015. Utah Wildlife Action Plan: A plan for managing native wildlife species and their habitats to help prevent listings under the Endangered Species Act 2015-2025. Publication Number 15-14, 385 pp.