

# **DRAFT ENVIRONMENTAL ASSESSMENT**

## **BLACK-FOOTED FERRET REINTRODUCTION ON PRIVATE PROPERTY LOGAN COUNTY, KANSAS**

Prepared by U.S. Fish and Wildlife Service (Region 6)

**August 2007**

## TABLE OF CONTENTS

PURPOSE OF AND NEED FOR ACTION.....	4
PURPOSE.....	4
NEED.....	4
DECISION TO BE MADE BY RESPONSIBLE OFFICIAL .....	5
ADDITIONAL BACKGROUND INFORMATION .....	5
OBJECTIVES.....	5
Species Recovery Background.....	5
Figure 1. ....	6
ALTERNATIVES—INCLUDING THE PROPOSED/PREFERRED ACTION .....	8
ALTERNATIVE A - NO ACTION.....	8
ALTERNATIVE B – REINTRODUCTION OF BLACK-FOOTED FERRETS INTO LOGAN COUNTY VIA A SECTION 10A(1)(A) RECOVERY PERMIT (PROPOSED ACTION.....	9
Issues and Concerns .....	11
ALTERNATIVE C - DELAYED ACTION.....	11
AFFECTED ENVIRONMENT .....	12
PHYSICAL CHARACTERISTICS .....	12
BIOLOGICAL/ECOLOGICAL RESOURCES .....	12
Threatened, Endangered, and Candidate Species .....	12
Other Wildlife Species .....	12
Vegetation .....	12
CULTURAL/PALEONTOLOGICAL RESOURCES .....	12
RECREATION.....	13
MINERAL RESOURCES .....	13
LIVESTOCK GRAZING/RANCHING.....	13
RIGHTS-OF-WAY/REALTY ACTIONS .....	13
ENVIRONMENTAL CONSEQUENCES .....	14
PHYSICAL CHARACTERISTICS .....	14
BIOLOGICAL/ECOLOGICAL RESOURCES .....	14
Threatened, Endangered, and Candidate Species .....	14
Alternative A.....	14
Alternative B .....	14
Alternative C .....	15
Table 1 .....	15
Other Wildlife Species .....	15
Alternative A.....	15
Alternative B .....	15
Alternative C .....	16
Vegetation .....	16

Alternative A .....	16
Alternative B .....	16
Alternative C .....	16
CULTURAL/PALEONTOLOGICAL RESOURCES .....	16
Alternative A .....	16
Alternative B .....	16
Alternative C .....	16
RECREATION .....	16
Alternative A .....	17
Alternative B .....	17
Alternative C .....	17
MINERAL RESOURCES .....	17
Alternative A .....	17
Alternative B .....	17
Alternative C .....	17
LIVESTOCK GRAZING/RANCHING .....	17
Alternative A .....	17
Alternative B .....	17
Alternative C .....	18
RIGHTS-OF-WAY/REALTY ACTIONS .....	18
Alternative A .....	18
Alternative B .....	18
Alternative C .....	18
LOCAL SOCIO-ECONOMIC PARAMETERS .....	18
Alternative A .....	18
Alternative B .....	18
Alternative C .....	19
ENVIRONMENTAL JUSTICE (EXECUTIVE ORDER 12898) .....	19
IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES .....	19
Alternative A .....	19
Alternative B .....	19
Alternative C .....	19
LIST OF CONTRIBUTORS .....	19
LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THIS ENVIRONMENTAL ASSESSMENT WERE SENT OR CONTACTED .....	20
Table 2 .....	20
BIBLIOGRAPHY .....	21
Appendix 1: Intra-Service Section 7 Consultation .....	23

## **PURPOSE OF AND NEED FOR ACTION**

The U.S. Fish and Wildlife Service (Service) is striving to recover the endangered black-footed ferret (*Mustela nigripes*) by reestablishing wild populations throughout the historical range of the species. As part of this greater recovery effort, the Service is proposing an experimental cooperative reintroduction project with private landowners and other interested parties in Logan County, Kansas. This Environmental Assessment evaluates alternatives to achieve that goal.

### **PURPOSE**

The purpose of this action is to comply with the Endangered Species Act of 1973, as amended (Act), which directs Federal Agencies to take action to recover endangered species. Specifically, “It is the policy of Congress that all Federal departments and agencies shall seek to conserve endangered and threatened species.” (Section 2(c)), with the term “conserve” meaning to recover the species, i.e., “to use . . . all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided in this Act are no longer necessary,” (section 3(3)). The black-footed ferret is an endangered species, which may be extinct in the wild, except for reintroduced experimental populations.

Similarly, this action will further other requirements of the Act to establish policies and programs necessary to protect endangered species. This action will meet the requirements set forth by the Kansas Nongame and Endangered Species Conservation Act, which specifies “the use of all methods and procedures for the purposes of increasing the number of individuals within species and populations of wildlife up to the optimum carrying capacity of their habitat and maintaining such numbers. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, transplantation, regulated taking and, when and where appropriate, the periodic or total protection of species or populations of wildlife.” Because of the success of captive propagation efforts, the next step in the recovery of the black-footed ferret is to reestablish the species in the wild.

### **NEED**

The need for the proposed action is to:

1. Determine whether a free ranging wild population of black-footed ferrets can be established on private properties in Logan County, Kansas, and
2. Improve black-footed ferret (*Mustela nigripes*) reintroduction techniques.

Ultimately, information gained from conducting this action will be used to guide national recovery efforts for this endangered species, and help move closer to meeting the Service’s objective of establishing 10 or more viable, wild populations throughout the species’ historical range by 2010. If 10 or more wild populations are established, the species may be reclassified from endangered to threatened status.

The Service will be the lead agency for National Environmental Policy Act (NEPA) and Endangered Species Act Compliance, and for implementation and management of the proposed black-footed ferret reintroduction project in Kansas.

#### DECISION TO BE MADE BY RESPONSIBLE OFFICIAL

This EA will be used by the Service to decide whether or not an experimental reintroduction of black-footed ferrets in western Kansas, as proposed, requires refinement, or if further analyses are needed through preparation of an Environmental Impact Statement. If the Proposed Action alternative is selected as described, or with minimal changes, and no further environmental analyses are needed, then a Finding of No Significant Impact (FONSI) will be prepared.

#### ADDITIONAL BACKGROUND INFORMATION

The Service's Kansas Field Office was contacted in October 2005 by a small group of private landowners in Logan County, Kansas. These individuals were interested in maintaining existing acreages of black-tailed prairie dogs (*Cynomys ludovicianus*) on their property, and offered the use of these lands for reintroduction of the black-footed ferret. The Kansas staff and the National Ferret Recovery Coordinator visited some of the properties in November 2005 and preliminarily determined the potential suitability for a ferret reintroduction was good. In July 2006 the Service, with several university and nongovernmental partners, conducted ferret suitability assessments on the properties, confirming their value for a reintroduction trial. The subject properties and prairie dog complexes are depicted in Figure 1.

#### OBJECTIVES

Conduct experimental releases to determine whether it is possible to establish a breeding population of black-footed ferrets on small prairie dog complexes in Logan County, Kansas, using a Section 10a(1)A recovery permit to authorize the releases.

#### **Species Recovery Background**

The black-footed ferret is an endangered carnivore with a black face mask, black legs, and a black-tipped tail. It is approximately 18-24 inches long and 2.5 pounds. The black-footed ferret is the only ferret species native to North America, and is likely extinct as a naturally occurring species in the wild except where ferrets have been reintroduced. Black-footed ferrets prey primarily on prairie dogs and use their burrows for shelter and denning. There are specimen records of black-footed ferrets from ranges of three species of prairie dogs: black-tailed prairie dogs, white-tailed prairie dogs (*Cynomys leucurus*), and Gunnison's prairie dogs (*Cynomys gunnisoni*) (Anderson et al. 1986).

Widespread poisoning of prairie dogs, conversion of prairie dog habitat to agricultural cultivation, and sylvatic plague dramatically reduced prairie dog abundance and distribution by 95 to 98 percent over the last century (USFWS 1988). The severe decline of the prairie dog

resulted in the near extinction of the ferret, though the ferret's decline is also attributable to other factors, such as secondary poisoning from prairie dog toxicants or high susceptibility to canine distemper and sylvatic plague. The black-footed ferret was listed as endangered in 1967.

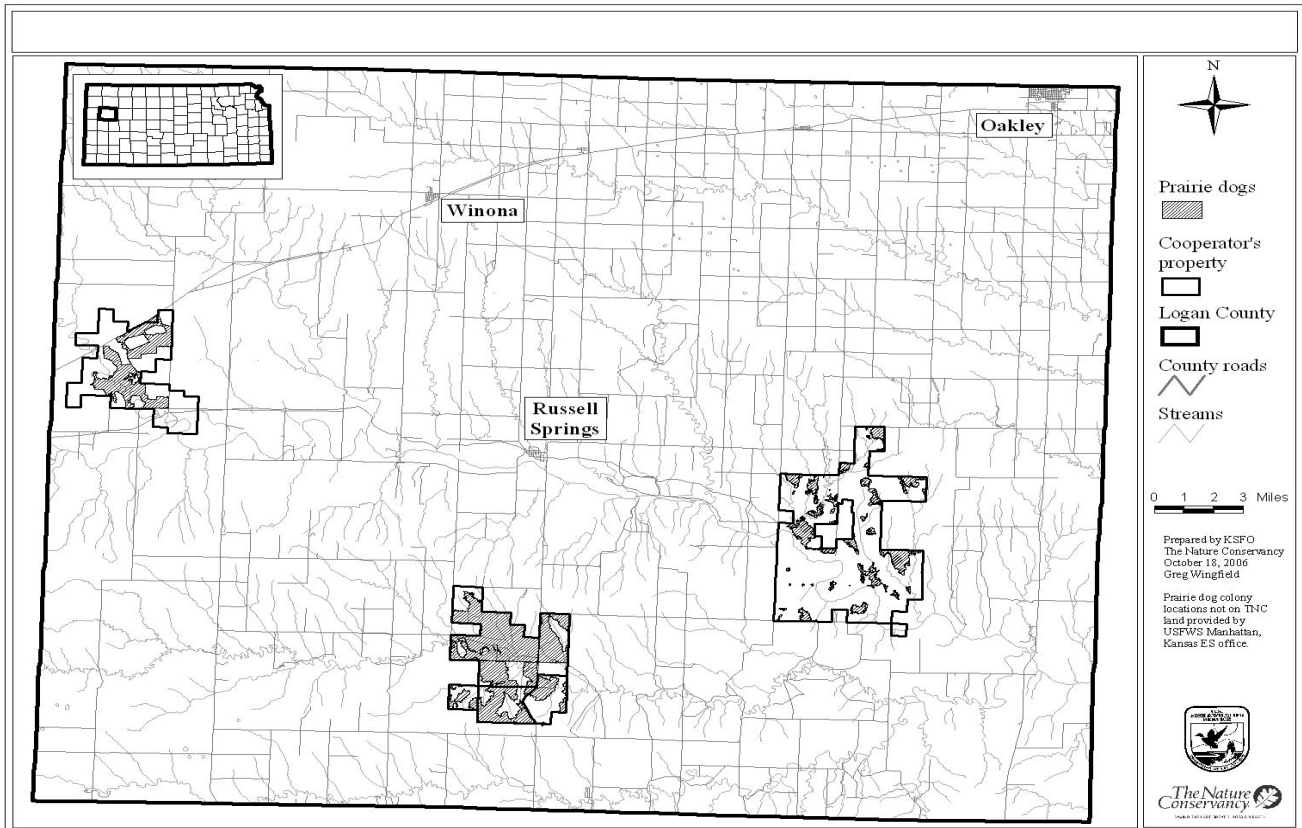


Figure 1. Private ranches with prairie dog colonies proposed for experimental reintroduction of black-footed ferrets in Logan County, Kansas.

Though the ferret was widespread, the historical abundance of the species was never clear due to its nocturnal and secretive habits. The species is well-documented historically from western Kansas, with at least 38 known specimens collected, and 28 of 82 specimens housed in the National Museum of Natural History originating from Kansas (Choate et al. 1982). A wild population was discovered in Mellette County, South Dakota, in 1964. This population was studied but disappeared by 1974, with the last member of this population dying in captivity in 1979. At that time, some scientists believed the species was extinct; however, another wild population was discovered near Meeteetse, Wyoming, in 1981. The Meeteetse population was extensively studied and underwent a severe decline in 1985-1986 due to canine distemper and sylvatic plague outbreaks, which are fatal to infected ferrets. Ultimately, eighteen survivors were taken into captivity in 1986-1987 to prevent extinction and to serve as founder animals for a captive propagation program aimed at eventually reintroducing the species into suitable habitat

in the wild. If current reintroduction efforts in several western states are not successful in the foreseeable future, the species will not be recovered in the wild as directed by ESA and outlined in the Black-footed Ferret Recovery Plan (USFWS 1988).

The 1978 Black-footed Ferret Recovery Plan was revised in 1988 to provide a blueprint for actions to recover the species (USFWS 1988). Among other changes, the species' recovery goal was updated as follows:

“To ensure immediate survival of the black-footed ferret by:

- (1) Increasing the captive population of black-footed ferrets to a census size of 200 breeding adults by 1991;
- (2) Establishing a pre-breeding census of 10 populations containing 1,500 free-ranging black-footed ferret with at least 30 breeding adults in each population by the year 2010; and,
- (3) Encouraging the widest possible distribution of reintroduced black-footed ferret populations.”

The black-footed ferret will be reclassified from endangered to threatened status if this goal is achieved (provided the extinction rate of established subpopulations remains at or below the rate that new subpopulations are established for at least 5 years).

The black-footed ferret captive breeding program was initiated in 1986 by the Wyoming Game and Fish Department and was transferred to the Service in 1996. The captive population increased from 18 to more than 400 animals by 1995. The original goal of a captive population of 200 breeding adults was achieved in 1991 and is currently managed at 240 adults of prime breeding age. Achieving captive breeding objectives facilitated the reintroduction of excess black-footed ferrets into selected sites within the species' historical range. Reintroduction efforts first began in 1991, and have expanded to several areas in North America with varying levels of success. Reintroduction efforts are considered essential to species recovery because:

- Reintroduction at the earliest possible time would ensure that the captive population does not become overly adapted to captivity and does not gradually lose important survival characteristics crucial to successful reestablishment.
- Reintroduction should proceed at multiple sites to minimize the chances of population loss (e.g., effects of canine distemper and plague) at any one site. By splitting reintroduced populations into several subpopulations, the chance of a single epizootic eliminating all reintroduced black-footed ferrets is minimized.
- Reintroduction techniques should continue to be evaluated and improved in order to ensure establishment of self-sustaining, wild populations.

To date, the Service has authorized thirteen specific ferret reintroduction projects within the species historical range (in six States and Chihuahua, Mexico). Ferrets have been reintroduced

into varying habitat and disease conditions and at sites occupied by three prairie dog species; the white-tailed prairie dog (*Cynomys leucurus*), the black-tailed prairie dog (*Cynomys ludovicianus*), and the Gunnison's prairie dog (*Cynomys gunnisonii*). Black-footed ferrets were first reintroduced into the Shirley Basin/Medicine Bow area in Wyoming in 1991.

Reintroduction efforts continued at Shirley Basin through 1994, but were suspended in 1995 due to a sylvatic plague epizootic and resulting impacts on area prairie dog populations. Recovery efforts at Shirley Basin were resumed in 1995. Releases of black-footed ferrets were initiated in Montana and South Dakota in 1994 and have been conducted at multiple sites in those states since that time.. Other black-footed ferret reintroduction programs were started in the Aubrey Valley of Arizona in 1996 and in northwestern Colorado/northeastern Utah in 1999. In 2000, ferrets were reintroduced to the Cheyenne River Indian Reservation in north-central South Dakota and in 2001 ferrets were reintroduced to prairie dog colonies in Mexico. Additional releases took place on the Rosebud Reservation, South Dakota in 2004, and on the Lower Brule Reservation and Wind Cave National Park, South Dakota, both in 2006.

The most successful reintroduction efforts have occurred in plague-free black-tailed prairie colonies in South Dakota. Disease-free and high density black-tailed prairie dog colonies, adaptive management techniques and experienced personnel have contributed to success at the South Dakota sites. The Service and the Black-footed Ferret Recovery Implementation Team have worked to identify remaining potential ferret recovery sites in North America (USFWS 1999). Each year, the Service's ferret allocation proposal process identifies likely new reintroduction sites. Of the new sites proposed for 2007, Logan County, Kansas ranked very high due to the quality and plague-free status of black-tailed prairie dog colonies.

This proposed/preferred action would attempt to reestablish a new ferret population in plague-free black-tailed prairie dog habitats on private lands in Kansas. Comparisons and adaptation of release techniques used at other reintroduction areas will help improve the chances of project success.

## **ALTERNATIVES—INCLUDING THE PROPOSED/PREFERRED ACTION**

This section describes the No Action Alternative, the Proposed/Preferred Alternative, and the Delayed Action Alternative, which are evaluated in detail. The Preferred and Delayed Action alternatives are consistent with, and could be accomplished within, the identified habitats. Both alternatives are consistent with management prescriptions described in the Service's recovery permit.

### **ALTERNATIVE A - NO ACTION**



Under Alternative A, black-footed ferrets would not be reintroduced into identified Logan County prairie dog complexes. Intensive monitoring of prairie dog populations or monitoring for sylvatic plague would not occur. The Kansas Department of Wildlife and Parks would continue managing furbearers in Logan County in accordance with furbearer trapping regulations. Black-footed ferret recovery prospects for western Kansas and the historic range would be diminished.

ALTERNATIVE B – REINTRODUCTION OF BLACK-FOOTED FERRETS INTO LOGAN COUNTY VIA A SECTION 10A(1)(A) RECOVERY PERMIT (PROPOSED ACTION ALTERNATIVE)

Under Alternative B, the Service and cooperating entities would reintroduce black-footed ferrets into Logan County as early as feasibly possible, with possible additional supplements for several years following, provided appropriate planning processes are complete and favorable biological conditions persist. Releases would be conducted under conditions approved on other reintroduction sites, would follow cooperative agreements between the Service and cooperating landowners, and would be approved through the Service’s annual ferret allocation processes. A summary of the major elements of the reintroduction proposal follows.

Provided habitat conditions remain stable and captive black-footed ferrets are available for this project, 20-60 black-footed ferrets (with an approximate sex ratio of 50:50) will be initially released. Captive animals selected for release would be as genetically redundant as possible with the captive essential population, which means there would be no loss of genetic material from the captive population resulting from the use of these animals for this experiment. All released animals which originate from the captive breeding facility would be implanted with individually identifiable passive integrated transponder chips and some may be fitted with radio transmitters. Both captive-raised and/or wild-born translocated ferrets (trapped from other authorized ferret reintroduction areas) would be released directly into targeted prairie dog complexes at about 18 - 24 weeks of age. Releases will occur between late summer and early winter when juvenile black-footed ferrets in the wild typically become independent, exhibit dispersal behaviors, and are more capable of killing their own prey, avoiding predators, and adjusting to environmental conditions.

Release techniques will be patterned after successful procedures used at other reintroduction sites. All captive-raised black-footed ferrets will be adequately “preconditioned” prior to release in the wild. Preconditioning is the process by which ferrets are allowed to live in large outdoor pens which have prairie dog burrow systems. Ferrets are transferred to pens between 60 and 90 days of age. Ferrets exposed to “natural” burrow systems and live prey survive in the wild at significantly higher rates than do ferrets released directly from indoor cages.

Captive environments can have a profound effect on behavioral development in individual animals. Young, developing animals targeted for reintroduction may be able to acquire survival skills in a semi-natural, pre-release environment providing stimuli similar to those encountered in nature. Presenting juvenile captive animals with stimuli resembling those that exist in their natural environment should help individuals retain efficient use of adaptive traits. Subsequently,

post-release survival may increase by reinforcing the inherent survival skill in natural ways and at natural periods of development.

A release of translocated wild-born black-footed ferrets would also occur if removal of wild-born ferrets at existing experimental reintroduction sites is determined compatible with overall ferret management goals. In such cases, wild-born ferrets would be captured, transported directly to specified Kansas reintroduction areas, and released immediately into prairie dog burrows.

Ferrets will be released in separate burrow systems within contiguous prairie dog colonies. Because all animals may not reach the proper age for release at once, black-footed ferrets may be released sequentially over a period of 3-8 weeks. Translocated ferrets would have minimal holding periods between capture and release.

Because mortality of released animals can be high, multiple releases over successive years are likely necessary to establish a population. In the future, some ferrets may be radio-collared to determine dispersal and short term survival. During the fall or winter immediately following the initial release of ferrets, spotlight surveys will be conducted to locate as many animals as possible. This will help determine initial survival of released animals and establish a baseline population. Subsequently, the population will be monitored annually to continue to track survival as well as to document any reproduction that may be occurring. Recruitment to the population will occur through natural reproduction or supplemental releases of additional animals from the captive program, with an annual accounting of the known population of animals on the ground. This will enable the Service to determine the number of animals that are being lost each year from the release sites, and surveys in adjacent areas will be used with landowner permission to attempt to enumerate animals lost to mortality versus those lost to dispersal off the target areas.

The Service and cooperating agencies and organizations would continue to seek advice and test alternative release and management strategies and may make minor adjustments in the proposed ferret program when warranted. In subsequent years, alternative reintroduction techniques could be tested as deemed necessary.

With landowner permission, reintroduced black-footed ferrets may be relocated by the Service if necessary to: (1) avoid conflict with human activities; (2) relocate a black-footed ferret that has moved outside the primary release area, and removal is deemed necessary to protect the ferret or is requested by the affected landowner; or, (3) improve black-footed ferret survival and recovery prospects. Black-footed ferret reintroduction efforts will be reevaluated should any of the following conditions occur:

- (a) Failure to maintain sufficient habitat to support at least 30 breeding adults after 5 years.
- (b) Failure to maintain suitable prairie dog habitat.
- (c) An active case of canine distemper or sylvatic plague is discovered in any animal on or near the reintroduction area within six months of the scheduled release.

- (d) Less than 20 captive or wild born translocatable black-footed ferrets are available for the first release.
- (e) Funding is not available to implement reintroduction efforts in Kansas.
- (f) Land ownership changes or cooperators withdraw from the project.

The Logan County ferret releases are specifically designed so black-footed ferret reintroduction and management in the experimental reintroduction area would be as compatible as possible with existing ranch and livestock operations. Incidental take would be recorded and monitored to ensure minimal take. Grazing is compatible with the reintroduction of black-footed ferrets, and black-footed ferret reintroduction would not require cattle number reductions in the release areas.

Cooperating landowners would manage prairie dog colonies on their own property to maintain suitable prairie dog habitat. Prairie dog management on lands adjoining designated cooperating reintroduction sites would continue as before; no restrictions on prairie dog control or other land uses would be imposed on non-participating landowners. Cooperating and neighboring landowners would be given information on the elements and purposes of the proposed recovery project, on black-footed ferret identification features, and project personnel and contact information.

If successful, the Proposed/Preferred Action would result in the establishment of a free-ranging, self-sustaining population of black-footed ferrets in the reintroduction area within five years of the initial release date, while not affecting the lifestyle and income potential of area private landowners.

Issues and Concerns — The Service met with cooperating and neighboring landowners and land managers to develop prairie dog control plans for areas surrounding proposed reintroduction areas. The Service is committed to continued coordination/cooperation with affected landowners to address and resolve any potential concerns regarding dispersal of prairie dogs off reintroduction areas onto adjacent areas where they are not wanted. If reintroduction efforts are continued beyond the initial five years of the experimental design, the Service would continue to ensure protection of landowners' rights to the use of their property; either through continuation of the incidental take statement of the biological opinion or other administrative process.

#### ALTERNATIVE C - DELAYED ACTION

Under Alternative C, the Service would not reintroduce captive-raised black-footed ferrets as soon as possible, but at a later date, possibly several years later. Such delay could be caused by a reported case of active canine distemper, a drastic decrease in prairie dogs, or other factors. The Service would continue to work with cooperating and neighboring landowners to address concerns and maintain suitable habitat for a ferret reintroduction. Ferret releases and management of black-footed ferrets would be as described under the Proposed Action.

## **AFFECTED ENVIRONMENT**

This section describes the environment that would be affected through implementation of the No Action Alternative, the Proposed/Preferred Action Alternative, and the Delayed Action Alternative. The following descriptions of the affected environment are restricted to Logan County, Kansas. As stated above, additional release sites within the proposed reintroduction area

may be identified in the future, but planning for additional sites has not been initiated, and would be contingent on willing landowners, suitable habitat, and sufficient staff and funding resources.

## **PHYSICAL CHARACTERISTICS**

The climate of Logan County is transitional to semi-arid, located in the central High Plains midway between the drainage basins of the Republican and Arkansas Rivers. Average annual precipitation is about 20 inches per year, and approximately three-fourths of this falls during one-half of the year. The climate is characterized by cool dry winters and hot summers. Average daily high temperatures range from 43° F (6° C) to 93° F (33° C) with extremes exceeding –5° F in winter and 100° F in summer. The elevation of the area ranges from 786 to 960 meters (2,580 to 3,150 feet). Topographically, the prairie dog complexes are characterized by a gently sloping prairie terrain that drains into the tributaries and mainstem of the Smoky Hill River. The prairie dog complexes occur on native grasslands primarily used for cattle grazing.

## **BIOLOGICAL/ECOLOGICAL RESOURCES**

Threatened, Endangered, and Candidate Species — The federally listed endangered whooping crane (*Grus americana*) and the federal candidate species lesser prairie-chicken (*Tympanuchus pallidicinctus*) may occur in the reintroduction area.

Other Wildlife Species — The species of primary interest in evaluating potential impacts of the Proposed/Preferred Action are prairie dogs and those species more commonly associated with prairie dogs, including pronghorn (*Antilocapra americana*), coyote (*Canis latrans*), badger (*Taxidea taxus*), swift fox (*Vulpes velox*), prairie falcon (*Falco mexicanus*), bald eagle (*Haliaeetus leucocephalus*), golden eagle (*Aquila chrysaetos*), burrowing owl (*Athene cunicularia*), ferruginous hawk (*Buteo regalis*), and great horned owl (*Bubo virginianus*). These species may occur in the Logan County prairie dog complexes.

Vegetation — The primary vegetation types found in Logan County prairie dog complexes are grasses, especially blue grama (*Boutela gracillis*) and buffalo grass (*Buchloe dactyloides*), with some occurrence of little bluestem (*Schizachyrium scoparium*) and other grasses. Yucca (*Yucca glauca*) and purple threeawn (*Aristida purpurea*) may occur in areas of heavier grazing.

## **CULTURAL/PALEONTOLOGICAL RESOURCES**

No historical, cultural, or paleontological resources have been documented in or near the reintroduction area.

## RECREATION

Each individual landowner controls access to their property on a permission basis. Hunters use the areas for deer, pronghorn and small game hunting, furbearer trapping and prairie dog shooting only with access permission from the landowners. Currently, the Bertrand ranch runs a commercial prairie dog shooting operation, and other landowners and invited guests shoot prairie dogs opportunistically on the other sites. Pre-reintroduction habitat assessments indicate the level of shooting does not adversely affect the prairie dog density for ferret support, and daytime shooting is not believed to significantly threaten nocturnal ferrets. If this is later determined to be a significant issue, the Service and cooperating landowners will discuss measures to minimize the threat of impacting ferrets.

The use of snares and trapping for furbearers and predators is minimal, and will conform to all Kansas Department of Wildlife and Parks regulations.

## MINERAL RESOURCES

Drilling for and pumping oil occurs in selected locations within Logan County, but is not occurring on any of the proposed release sites. No other mineral extraction is known or expected on release areas.

## LIVESTOCK GRAZING/RANCHING

All lands targeted in the release areas are subject to some livestock grazing. The release areas are utilized for cattle grazing by individuals on property they own or lease for this purpose. Grazing management projects which could impact black-footed ferret habitat include vegetation manipulation (burning or chemical), stock watering ponds, seeding, pipelines, windmills, and reservoirs. These projects will be located and timed to avoid or minimize adverse impacts to ferrets or ferret habitat, as warranted. Livestock grazing is generally considered to be compatible with ferret reintroductions.

## RIGHTS-OF-WAY/REALTY ACTIONS

U.S. Highway 40 borders one of the proposed release sites. Public demand would dictate future rights-of-way and realty actions, but are not expected at a scale that would appreciably impact the black-footed ferret reintroduction area.

The County Road Department maintains the road network in the reintroduction areas. This demand is expected to continue since maintenance of the road system is vital for residents and emergency vehicle use.

## LOCAL SOCIO-ECONOMIC PARAMETERS

All areas proposed for ferret reintroductions are rural. Based on recent population figures, the population of Logan County is about 3,500, with the most significant population center being Oakley (2,500), the county seat. The nearest population centers to the release areas are Russell

Springs and McAllaster (each with population <200). The nearest food, medical and financial services are located in Oakley. Livestock grazing and agricultural crop production represent major land uses in Logan County, and provide the major economic stability to the area.

## **ENVIRONMENTAL CONSEQUENCES**

This section evaluates the likely environmental consequences of implementing the No Action Alternative, the Proposed/Preferred Action Alternative, and the Delayed Action Alternative. The alternatives could affect wildlife resources, paleontological and cultural resources, recreation management, mineral resources, range and livestock management, lands and realty management, and local socio-economic parameters.

If a black-footed ferret disperses onto private lands outside the proposed reintroduction prairie dog complexes, affected landowners would have the option of requesting its removal. If the landowner does not request removal, but it became apparent that the black-footed ferret could not survive in the area, authorized personnel (with permission from the landowner) would relocate the black-footed ferret to better habitats (where its survival chances were improved) or to another reintroduction site. The reintroduction effort is unlikely to result in appreciable impacts outside the release locations as black-footed ferrets are unlikely to persist in these non-targeted areas. Black-footed ferrets which leave the release areas are considered lost to the recovery effort unless they can be recaptured and relocated.

Additionally, under the No Action Alternative, this Environmental Assessment assumes each landowner would manage their lands in accordance with their own plans for livestock production. The No Action Alternative is a “Business as Usual” scenario. The impacts of the Proposed/Preferred and Delayed Action alternatives that are described would be those different from and/or incremental to those of the No Action Alternative.

## **PHYSICAL CHARACTERISTICS**

The physical characteristics of the affected area would not change with implementation of any of the alternatives.

## **BIOLOGICAL/ECOLOGICAL RESOURCES**

### **Threatened, Endangered, and Candidate Species**

Alternative A - Taking no action to reintroduce the black-footed ferret into Logan County prairie dog complexes would result in no impacts to other listed or candidate species currently in the area. These species would continue to be protected through section 7 consultation. The decision not to reintroduce black-footed ferrets would negatively impact black-footed ferret recovery because the opportunity to reestablish a free-ranging population of black-footed ferrets in black-tailed prairie dog habitat would not occur.

Alternative B - The Proposed Action would reintroduce black-footed ferrets into prairie dog complexes in Logan County in northwestern Kansas. Section 7 of the Endangered Species Act

requires Federal Agencies to consult with the Fish and Wildlife Service to ensure any actions authorized, funded or carried out by such agency do not jeopardize the continued existence of any endangered species. The Service has conducted an Intra-Service Section 7 consultation to meet its Federal Agency responsibilities under the Endangered Species Act. The Intra-Service section 7 consultation conducted on the proposed action (Appendix 1), found the proposed action, if successful, will beneficially affect the black-footed ferret by establishing a population of 30 or more breeding black-footed ferrets in the wild. The Proposed Action would not affect other federally listed or candidate species.

Alternative C - This alternative would have the same impacts as the Proposed/Preferred Action, only black-footed ferrets would be reintroduced at a later date.

Table 1. Summary of Actions by Alternative.

ACTIONS	ALTERNATIVE		
	Alternative A No Action	Alternative B Proposed Action	Alternative C Delayed Action
Reintroduction of black-footed ferrets	Would not occur	A minimum of 20 ferrets would be reintroduced as early as possible, followed by additional releases in subsequent years	Same as proposed action, but at a later date
Monitoring of prairie dog populations	Only those activities normally carried out by the Kansas Department of Wildlife and Parks would occur	Monitoring would occur to determine the relationship between population levels of prairie dogs and sustainability of a BFF population	Same as proposed action, but at a later date
Monitoring of BFF populations	Would not occur	Spotlight and/or snowtrack monitoring would be scheduled upon release and continue for several years	Same as proposed action, but at a later date

### Other Wildlife Species

Alternative A - Taking no action to reintroduce the black-footed ferret in Kansas would result in no additional impacts to species commonly associated with prairie dog colonies.

Alternative B - The Proposed/Preferred Action authorizes release of ferrets and vehicular and pedestrian monitoring activities. However, there would be no significant impacts to wildlife from surface disturbing activities. Reintroducing black-footed ferrets would not result in any

significant impacts to predator populations in the release areas. Short term limited removal for disease studies and predator management of certain carnivores may be undertaken. Reintroducing ferrets will result in increased predation on prairie dogs, but not to the level of impacting population maintenance.

Alternative C - The impacts would be similar to the Proposed Action, but later in time.

## **Vegetation**

Alternative A - There would be no change to the vegetation community of the Logan County prairie dog complexes if black-footed ferrets are not released.

Alternative B - Release of black-footed ferrets requires pre-release and post-release monitoring activities using motor vehicles. Activities off designated roads (if required) may destroy individual plants. However, none of the activities should cause any long term, permanent modification of existing vegetation. There are no known federally listed plant species within the Logan County prairie dog complexes.

Alternative C - The effects would be similar to the Proposed Action but later in time.

## CULTURAL/PALEONTOLOGICAL RESOURCES

Alternative A - No impacts to cultural/paleontological resources would occur from black-footed ferret-related activities if no action is taken to reintroduce black-footed ferrets into the area.

Alternative B - If black-footed ferrets were reintroduced, some minor surface disturbing activities would occur from driving off trails, as described above. If significant surface disturbing activities occur, such as the need to excavate a prairie dog borrow system, then an on-the-ground pedestrian survey and inventory would be required for the purposes of locating and evaluating cultural resources, pursuant to the National Historic Preservation Act (NHPA) of 1966, as amended, and its implementing regulations (36 CFR 800). Compliance with section 106 of NHPA and the Archaeological Resource Protection Act of 1979 would also be required. The Service would assume the responsibility to conduct any needed surveys and inventories.

If surveys reveal cultural/paleontological resources at a site on private land, the landowners shall be notified. Any proposed surface-disturbing activity would be relocated to a site where surveys reveal no significant cultural/paleontological resources. Hence, no impacts to cultural or paleontological resources would result from the Proposed Action.

Alternative C - This alternative would have no impacts on cultural/paleontological resources for the same reasons as the Proposed Action Alternative.

## RECREATION



Alternative A - No change in the existing situation would occur.

Alternative B - No significant impacts to existing uses are likely to occur, although seasonal restrictions on prairie dog shooting will be considered if shooting pressure is determined high enough to pose a risk to juvenile ferrets. If this is determined necessary, the Service will work with the landowners to arrange a mutually acceptable plan, which will include education for all involved shooters.

Alternative C - Impacts similar to Proposed Action, but later in time.

## MINERAL RESOURCES

Alternative A - No change in the existing situation would occur.

Alternative B - Presently, no mineral extraction operations are occurring within the Logan County prairie dog complexes and opportunities for this type of operation appear to be limited. Future operations, if any, would be required to comply with restrictions associated with several resources such as wildlife, livestock calving grounds, etc. It is not expected that oil or natural gas extraction operations would occur on a scale to impact ferret reintroduction efforts.

Alternative C - The impacts would be the same as the Proposed Action, but later in time.

## LIVESTOCK GRAZING/RANCHING

Alternative A - No change in the existing situation would occur.

Alternative B - There are no plans or known reasons to decrease or restrict livestock grazing by landowners in the Logan County prairie dog complexes as a direct result of black-footed ferret reintroduction efforts. Some structural range improvements, such as stock watering ponds or windmill construction, would not be disallowed, but as necessary, discussions would be undertaken with cooperating landowners in an attempt to relocate or otherwise avoid direct conflicts between management of prairie dogs and black-footed ferrets.

There has been some lethal control of prairie dogs on reintroduction sites in the primary release areas in the last 10 years. The Service is coordinating with cooperating and neighboring landowners to implement management techniques, including lethal control, to deal with prairie dogs that disperse from reintroduction sites onto lands where they are not wanted. Some examples of such techniques include: removal of black-footed ferrets prior to control; prairie dog control methods that pose a low risk to black-footed ferrets; use of visual or vegetative barriers; or some combination of these measures. As a result of these measures, and the fact that competition between grazing cattle and prairie dogs will not increase, there would be no impact to livestock grazing management from the proposed action.

Black-footed ferret reintroduction does not supersede or reduce the right of private landowners to manage their properties. Management actions on private lands would be implemented only with landowner approval. Cooperative management of prairie dogs on private rangelands would

be encouraged. However, prairie dog habitat on private lands outside the release sites is not considered necessary for the proposed black-footed ferret reintroduction to succeed in Kansas. Black-footed ferrets that disperse to private lands outside the release areas would be captured and returned to the project site, if requested by those landowners.

Any rodent control deemed appropriate within the prairie dog complexes identified as part of the proposed reintroduction project would be reviewed by the Service to ensure the proposed method would not kill or injure black-footed ferrets, or significantly impact their required prey base. Prairie dog control within release areas would be managed with cooperating landowners to help ensure protection of black-footed ferrets. Rodent control would only be conducted by authorized individuals, with oversight provided by the Service.

Alternative C - The impacts would be the same as the Proposed Action.

#### RIGHTS-OF-WAY/REALTY ACTIONS

Alternative A - No change in the existing situation would occur.

Alternative B - Decisions on rights-of-ways, including transportation and utility, would reside with the individual landowners. The Service and cooperating agencies would provide advisory recommendations to avoid or minimize negative impacts to black-footed ferrets or black-footed ferret habitat. Prairie dogs could be controlled on rights-of-way and various activities would continue to be authorized on private lands.

Alternative C - The impacts on rights-of-way would be the same as in the Proposed Action.

#### LOCAL SOCIO-ECONOMIC PARAMETERS

Alternative A - No change to existing socio-economic conditions would occur under the No Action Alternative.

Alternative B - The impacts of the Proposed Action on livestock grazing, recreation, mineral resource development, and animal damage control activities were discussed previously. The voluntary participation of private landowners in Logan County is an important element of this proposal. To the extent they could be identified and located, potentially affected landowners within Logan County have been contacted. Issues and concerns identified by landowners were and are being addressed by the Service's ongoing coordination with them. The issues and concerns identified by the public during the planning process have been addressed, where possible. Some parties may remain opposed to any reintroduction of black-footed ferrets into the wild.

If new conflicts or problems are identified in the future, management strategies (as identified by cooperating agencies and organizations) would be cooperatively agreed upon and implemented on private lands only with landowner approval.

Some increase in visitor use of Logan County may be anticipated as black-footed ferrets are reintroduced. The primary increase would occur from researchers and members of the public interested in observing or photographing black-footed ferrets, with landowner access permission. The level of this increase cannot be determined, nor the potential consequences to the local economy, but the overall impact is anticipated to be small.

The Proposed Action is unlikely to have a major impact on local socio-economic parameters in the area.

Alternative C - The impacts would be the same as the Proposed Action except the following listed impacts would be delayed until black-footed ferrets are reintroduced-- increases in visitor use, and modifications to animal damage control methods which may be determined to adversely affect black-footed ferrets on reintroduction sites.

### ENVIRONMENTAL JUSTICE (EXECUTIVE ORDER 12898)

Federal agencies are required to “identify and address disproportionately high and adverse human health or environmental effects” of their programs and actions on minority populations and low-income populations, as directed by Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations). This assessment has not identified any adverse or beneficial effects unique to minority or low-income human populations in the affected areas.

As a result of the extensive coordination with affected landowners, the residents of Logan County, or any adjoining counties, will not be adversely impacted by the reintroduction of black-footed ferrets on private property within the County. Cooperating landowners have requested that their lands be included in an experimental black-footed ferret reintroduction program.

### **IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES**

Alternative A - A decision not to use this Kansas site could negatively affect the long-term conservation of the black-footed ferret to an undetermined degree, perhaps significantly, as very few suitable reintroduction areas exist in North America today. Failure to implement this project or develop a similar project elsewhere in Kansas will substantially diminish the ability to meet an objective of the Black-footed Ferret Recovery Plan to provide the widest possible distribution of wild populations across the historical range of the species.

Alternative B - No irreversible or irretrievable commitment of resources will occur due to the reintroduction of black-footed ferrets and/or issuance of a section 7a(1)A recovery permit.

Alternative C - No irreversible or irretrievable commitment of resources will occur due to the reintroduction of black-footed ferrets and/or issuance of a section 7a(1)A recovery permit.

### **LIST OF CONTRIBUTORS**

MIKE LEVALLEY  
 Field Supervisor  
 U.S. Fish and Wildlife Service  
 2609 Anderson Avenue  
 Manhattan, Kansas 66502  
 785-539-3474, extension 105

DAN MULHERN  
 Fish and Wildlife Biologist  
 U.S. Fish and Wildlife Service  
 2609 Anderson Avenue  
 Manhattan, Kansas 66502  
 785-539-3474, extension 109

MIKE LOCKHART  
 Black-footed Ferret Recovery Coordinator  
 U.S. Fish and Wildlife Service  
 P.O. Box 190  
 Wellington, Colorado 80549  
 970-897-2730, extension 24

**LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THIS ENVIRONMENTAL ASSESSMENT WERE SENT OR CONTACTED**

The following individuals, organizations, and public agencies will receive copies of the final Environmental Assessment.

FEDERAL AGENCIES

Department of Agriculture  
 Natural Resources Conservation Service  
 Department of the Interior  
 Fish and Wildlife Service

STATE AGENCIES

Office of the Governor  
 Kansas Department of Wildlife & Parks  
 Kansas Department of Agriculture

FEDERAL CONGRESSIONAL DELEGATION

Office of Senator Roberts  
 Office of Senator Brownback  
 Office of Representative Moran

STATE CONGRESSIONAL DELEGATION

Office of Senator Ostmeyer  
 Office of Representative Beamer

LOGAN COUNTY COMMISSIONERS

Commissioner Doug Mackley  
 Commissioner Carl Urich  
 Commissioner Nick Scott

Table 2. Summary of Impacts by Alternative.

IMPACTS	ALTERNATIVES		
	Alternative A No Action	Alternative B Proposed Action	Alternative C Delayed Action

Physical Characteristics of Management Areas	None	None	None
Biological/Ecological Resources: Endangered, Threatened and Candidate Species	No change to existing situation would occur	Black-footed ferret recovery will benefit	Same as Proposed Action but at a later time
Other Wildlife Species	No change to existing situation would occur	Limited numbers of other carnivores may be collected for disease studies; no long-term impacts are anticipated	Same as Proposed Action but at a later time
Vegetation	No change to existing situation would occur	None to little - caused by some off-trail driving	Same as Proposed Action but at a later date
Cultural/Paleontological Resources	No change to existing situation would occur	None	None
Recreation	No change to existing situation would occur	If necessary, and with landowner approval, restrictions may be imposed on prairie dog shooting on colonies where ferrets are released	Same as Proposed Action but at a later time
Mineral Resources	No change to existing situation would occur	None to little - may require project modification	Same as Proposed Action but at a later time
Livestock Grazing/Ranching	No change to existing situation would occur	No changes anticipated	No changes anticipated
Rights-of-Way/Realty Actions	No change to existing situation would occur	Cooperators would make recommendations to avoid impacts to prairie dog and ferrets	Same as Proposed Action but at a later time
Local Socio-economic Parameters	No change to existing situation would occur	A small increase in visitor use of the reintroduction areas is anticipated	Same as Proposed Action but at a later time

## BIBLIOGRAPHY

Anderson, E., S.C. Forrest, T.W. Clark, and L. Richardson. 1986. Paleobiology, biogeography, and systematics of the black-footed ferret (Mustela nigripes) (Audubon and Bachman) 1851. Great Basin Nat. Mem. 8:11-62.

Choate, J.R., E.K. Boggess, and F.R. Henderson. 1982. History and status of the black-footed ferret in Kansas. Trans. Kansas Acad. Sci. 85(3):121-132.

U.S. Fish and Wildlife Service. 1988. Black-footed ferret recovery plan. U.S. Fish and Wildlife Service, Denver, Colorado. 154 pp.

U.S. Fish and Wildlife Service. 1999. National Black-footed Ferret Conservation Center August 3, 1999, letter to the Black-footed Ferret Recovery Implementation Team, Executive Committee and Conservation Subcommittee Members. 22 pp.

## **Appendix 1: Intra-Service Section 7 Consultation**