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**BLACK-FOOTED FERRET SURVEY REPORT
ROCKY MOUNTAIN ARSENAL**

SEPTEMBER 1987

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BLACK-FOOTED FERRET SURVEY REPORT
ROCKY MOUNTAIN ARSENAL
September 1987

1.0 INTRODUCTION

Black-footed ferret surveys were initiated at Rocky Mountain Arsenal (RMA) in response to U.S. Fish and Wildlife Service (USFWS) comments on the proposed land development and pest management programs at RMA, and concerns regarding contamination and cleanup at RMA. This report addresses black-footed ferret surveys in all black-tailed prairie dog towns within the boundaries of RMA. Surveys were conducted in accordance with the USFWS guidance for conducting such surveys (Black-Footed Ferret Guidelines for Compliance with the Endangered Species Act, USFWS, March, 1986). This report summarizes the results of all surveys, and is submitted to the U.S. Fish and Wildlife Service in order to provide a basis for evaluating actions related to the cleanup of RMA and to evaluate proposed pest control programs on RMA.

To determine the historical occurrence of black-footed ferrets in eastern Colorado, experts from the Colorado Division of Wildlife (CDOW) and the USFWS were contacted. The last confirmed record of a black-footed ferret in eastern Colorado is from a ferret live-trapped in the Green Mountain vicinity in 1949 or 1950 and kept in captivity by the USFWS until 1955 (Besser, pers. comm). Other unconfirmed sightings are noted from:

- o End of Stapleton International Airport runways, late 1970's;
- o Nunn (Weld County), 1979;
- o Pawnee National Grassland, 1976; and
- o Buckley Air National Guard Base (probably domestic ferrets)
Schroeder, pers. comm).

The CDOW had no other sightings of black-footed ferrets on record (Sheppard, pers. comm).

2.0 SURVEY METHODOLOGY

Recent aerial photography (October 1986) at a scale of 1 in = 500 feet (ft) of RMA was obtained. Prairie dog towns were mapped, and the maps

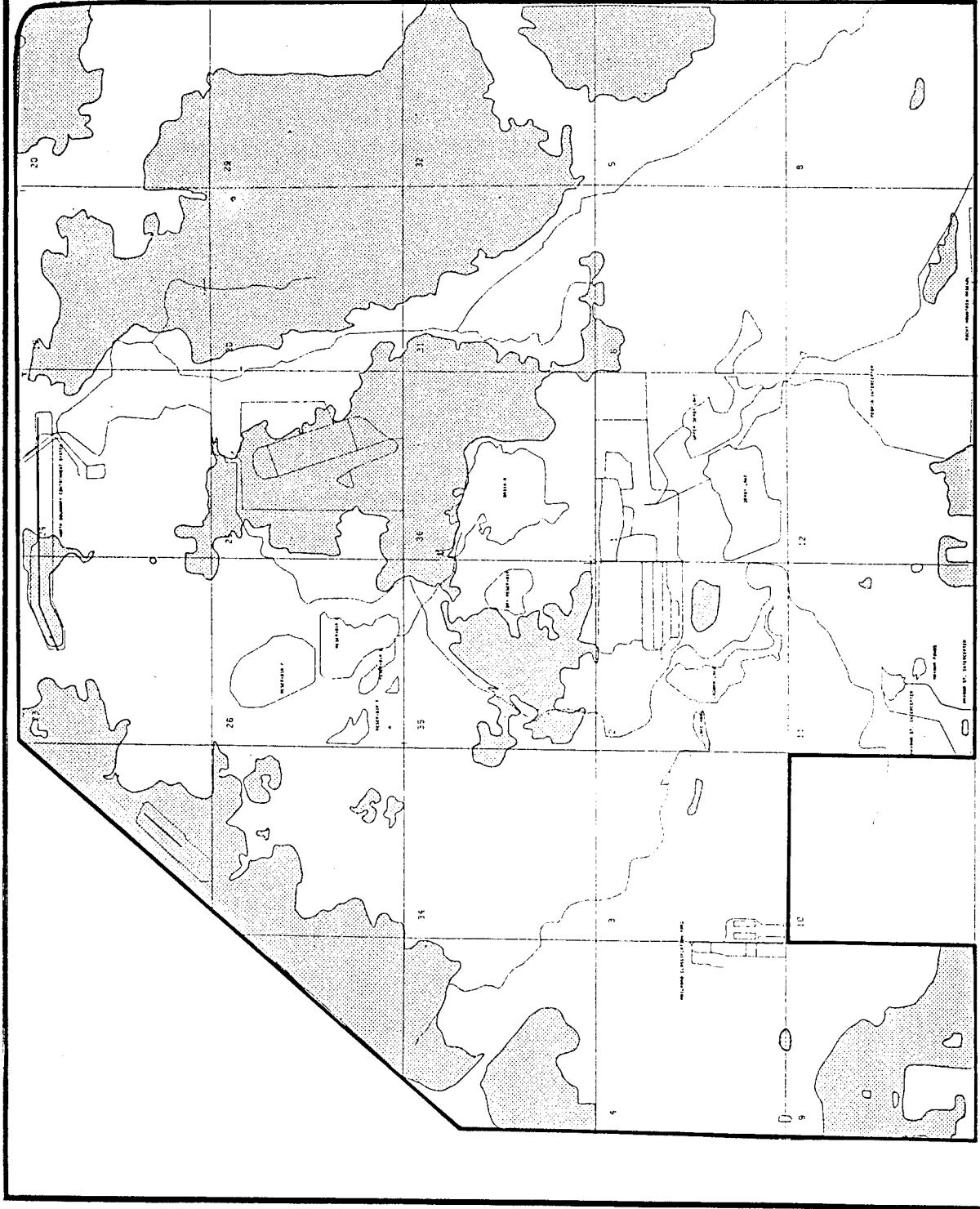
subsequently ground-truthed to verify the distribution of prairie dog towns prior to conducting surveys. Prairie dog town locations and areas surveyed are shown in Figure 1.

Black-footed ferret surveys were conducted between July 1 and September 10, 1987. Surveys took place between dusk and dawn, the times for which varied through the season. Starting and ending times per area surveyed are shown in Table 1.

Areas to be surveyed were divided into tracts of approximately 300 acres. Each team was responsible for one tract over a three night period. Total time of spotlight search varied from 5 to 8 hours, depending on the time required to complete one search of each \pm 300-acre tract. Abbreviated daytime surveys of each tract were made to flag tract areas and look for ferret sign prior to commencement of nighttime survey work. These surveys served the additional purpose of locating any obstacles which could cause damage to vehicles and/or injury to survey personnel. Potential obstacles were flagged in order to be visible at night.

Each tract was surveyed during three shifts per night: shift 1 began at dusk (2000 to 2100 hours), shift 2 began between 0000 and 0100 hours, and shift 3 began around 0230 hours. Searches of each tract took an average of 2 to 2 hours to complete. Every search began at different starting points during the night in order to maximize coverage of the area during different time periods. Two survey teams were used each night to maximize nightly coverage and for safety reasons. Each team consisted of two people, at least one of which had completed the USFWS Black-footed Ferret Certification Course.

Each team was equipped with at least two 200,000 candle power lamps which were operated from the vehicles' specially modified electrical system. Sealed batteries were carried as back-up power sources. One vehicle was equipped with four 200,000 candle power lights mounted on a overhead rack. The team in the other vehicle used a 400,000 candle power lamp as one of their light sources. By using two lamps per vehicle, the width of transects



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FIGURE 1 AREAS SURVEYED 1987

Table 1. Rocky Mountain Arsenal Black-footed Ferret Survey Times and Areas
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Date	Time Begun	Time Ended	Area Surveyed
07/01/87	2140	0400	SW $\frac{1}{2}$ Section 33
07/01/87	2145	0400	NE $\frac{1}{2}$ Section 33
07/02/87	2130	0410	SW $\frac{1}{2}$ Section 33
07/02/87	2150	0400	NE $\frac{1}{2}$ Section 33
07/03/87	2130	0400	SW $\frac{1}{2}$ Section 33
07/03/87	2130	0350	NE $\frac{1}{2}$ Section 33
07/06/87	2140	0350	Section 27
07/06/87	2130	0330	Section 28
07/07/87	2130	0400	Section 27
07/07/87	2130	0330	Section 28
07/08/87	2125	0410	Section 27
07/08/87	2130	0330	Section 28
07/14/87	2200	0530	Section 22, NW $\frac{1}{4}$ Section 23
07/14/87	2200	0430	Section 9
07/15/87	2120	0430	Section 22, NW $\frac{1}{4}$ Section 23
07/15/87	2120	0420	Section 9
07/16/87	2130	0415	Section 22, NW $\frac{1}{4}$ Section 23
07/16/87	2100	0420	Section 9
07/27/87	2115	0430	Section 25 and Margins
07/27/87	2115	0430	Section 35 and Margins
07/28/87	2115	0500	Section 25 and Margins
07/28/87	2115	0500	Section 35 and Margins
07/29/87	2130	0445	Section 25 and Margins
07/29/87	2130	0500	Section 35 and Margins
08/05/87	2120	0500	North Plants, NE $\frac{1}{4}$ Section 31
08/05/87	2120	0500	Section 30
08/06/87	2100	0445	North Plants, NE $\frac{1}{4}$ Section 31
08/06/87	2100	0445	Section 30
08/07/87	2100	0500	North Plants, NE $\frac{1}{4}$ Section 31
08/07/87	2100	0500	Section 30
08/12/87	2120	0440	Section 19 +
08/12/87	2120	0440	NE $\frac{1}{4}$ Section 5, SE $\frac{1}{4}$ Section 32

Table 1. Rocky Mountain Arsenal Black-footed Ferret Survey Times and Areas
(Continued, Page 2 of 2)

Date	Time Begun	Time Ended	Area Surveyed
08/13/87	2105	0500	Section 19 +
08/13/87	2105	0500	NE $\frac{1}{4}$ Section 5, SE $\frac{1}{4}$ Section 32
08/14/87	2100	0500	Section 19+
08/14/87	2100	0500	NE $\frac{1}{4}$ Section 5, SE $\frac{1}{4}$ Section 32
08/25/87	2030	2300	Section 36, Margins of Section 31
08/27/87	2030	0400	Section 36, Margins of Section 31
08/29/87	0130	0440	Section 36, Margins of Section 31
09/01/87	2030	0600	Scattered towns on RMA- Post Office, Section 29
09/02/87	2000	0530	Scattered towns on RMA- Post Office, Section 29
09/03/87	2030	0530	Scattered towns on RMA- Post Office, Section 29
09/08/87	2035	0530	Section 32
09/08/87	2035	0530	Section 20
09/09/87	2000	0300	Section 32
09/09/87	2000	0300	Section 20
09/10/87	2200	0530	Section 32
09/10/87	2200	0530	Section 20

Source: ESE, 1987.

10/06/87

illuminated was approximately 0.1 mile. A compass was used to maintain course where distant stationary light sources were not available to use as navigation points.

3.0 RESULTS AND CONCLUSIONS

No black-footed ferret sign was observed and no ferrets were seen during the course of preliminary daytime and more intense nighttime surveys. It is therefore presumed that no black-footed ferrets will be impacted by proposed activities within the boundaries of RMA.

4.0 SOURCES CONSULTED

Besser, J. July 27, 1987. Personal Communication to K. Cushman. U.S. Fish and Wildlife Service.

Sheppard, J. July 27, 1987. Personal Communication to K. Cushman. Colorado Division of Wildlife

Shroeder, M. July 24, 1987. Personal Communication to K. Cushman. U.S. Fish and Wildlife Service.