

FINAL REPORT

**STATEWIDE PROGRAMMATIC
BLACK-TAILED PRAIRIE DOG
(*Cynomys ludovicianus*)
BIOLOGICAL EVALUATION**

Submitted to:

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U.S. Fish and Wildlife

TABLE OF CONTENTS

1.0	INTRODUCTION	1-1
	Purpose.....	1-1
	Report Organization.....	1-1
	Methods	1-2
2.0	SPECIES INFORMATION	2-1
	Listing Status	2-1
	Federal.....	2-1
	State.....	2-1
	Ecology Description of Species.....	2-2
	Habitat Use	2-2
	Distribution	2-2
	Threats	2-4
	Habitat Loss.....	2-4
	Over-Utilization.....	2-4
	Sylvatic Plague.....	2-4
	Inadequate Regulatory Mechanisms.....	2-5
	Other Natural or Man-made Factors: Chemical Control.....	2-5
	Other Natural or Man-made Factors: Synergistic Effects	2-6
	Environmental Baseline	2-6
	Buffalo Field Office	2-6
	Casper Field Office	2-6
	Cody Field Office.....	2-7
	Lander Field Office	2-7
	Newcastle Field Office.....	2-7
	Rawlins Field Office	2-7
	Worland Field Office.....	2-7
3.0	ANALYSIS OF GENERAL PROGRAM DESCRIPTIONS	3-1
	Access.....	3-1
	Air Quality.....	3-2
	Areas of Critical Environmental Concern	3-3
	Cultural Resources	3-4
	Fire	3-5
	Forest Resources.....	3-6
	Hazardous Materials.....	3-7
	Lands and Realty	3-8
	Livestock Grazing	3-10
	Geology and Minerals Resources.....	3-11
	Off-Highway Vehicles	3-15
	Paleontological Resources.....	3-15
	Recreation Resources	3-16
	Riparian Areas	3-17
	Sensitive Plants.....	3-18
	Soils.....	3-19
	Surface Disturbance Restriction Decisions	3-20
	Threatened, Endangered, and Candidate Species Protection	3-22
	Vegetation Resources	3-23
	Visual Resources	3-24
	Watershed and Water Resources.....	3-25

	Wild and Scenic Rivers	3-26
	Wild Horses	3-27
	Wilderness Resources	3-28
	Wildlife Habitat	3-29
4.0	CONSERVATION STRATEGIES	4-1
	Existing Protections in the RMPs	4-1
	Conservation Measures Committed to by BLM	4-2
	Best Management Practices	4-2
5.0	REFERENCES	5-1

TABLES

Table 1-1	RMPs Analyzed in BTPD Biological Evaluation	1-2
Table 3-1	Summary of BTPD Determinations	3-32

MAPS

Map 1	Historic Distribution of Black-tailed Prairie Dogs in Wyoming	2-3
Map 2	Northeastern Wyoming Black-tailed Prairie Dog Locations and Habitat	2-8
Map 3	Southeastern Wyoming Black-tailed Prairie Dog Locations and Habitat	2-9
Map 4	Distribution of Black-tailed Prairie Dogs on the Thunder Basin National Grasslands	2-10
Map 5	Northwestern Wyoming Black-tailed Prairie Dog Locations and Habitat	2-11

ACRONYMS AND ABBREVIATIONS

ACEC	Area of Critical Environmental Concern
BA	Biological Assessment
BAER	Burned Area Emergency Rehabilitation
BLM	Bureau of Land Management
BTPD	Black-tailed prairie dog
BUP	Biological Use Proposal
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FO	Field Office
IMP	Interim Management Policy
MLA	Mineral Leasing Act
MLAAL	Mineral Leasing Act for Acquired Lands
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO ₂	Nitrogen Dioxide
NPS	National Park Service
NRHP	National Register of Historic Places
NSO	No Surface Occupancy
OHV	Off-Highway Vehicle
ORV	Off-Road Vehicle
PM ₁₀	Particulate Matter
PSD	Prevention of Significant Deterioration
PUP	Pesticide Use Proposal
R&PP	Recreation and Public Purpose
RMP	Resource Management Plan
ROD	Record of Decision
ROW	Right-of-Way
SDA	Surface-Disturbing Activity
SO ₂	Sulfur Dioxide
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
WAAQS	Wyoming Ambient Air Quality Standards
WDEQ	Wyoming Department of Environmental Quality
WGFD	Wyoming Game and Fish Department
WWHMA	Wild Horse Herd Management Area
WSA	Wilderness Study Area
WSR	Wild and Scenic River
WGFD	Wyoming Game and Fish Department
WyGIS	Wyoming Geographic Information Science Center
WYNDD	Wyoming Natural Diversity Database

1.0 INTRODUCTION

PURPOSE

The purpose of this programmatic biological evaluation (BE) is to assess the potential effects to the black-tailed prairie dog (*Cynomys ludovicianus*) (BTPD) from management actions included in five Resource Management Plans (RMPs) approved by the Wyoming Bureau of Land Management (BLM). Specific objectives of this BE include the following:

- Summarize the biology of the BTPD, including its known and potential distribution in Wyoming;
- Review pertinent RMPs, RMP amendments, and RMP maintenance actions and identify management actions with the potential to affect the BTPD or its habitat;
- Assess the potential effects of management actions proposed in the RMPs on the BTPD and its habitat; and
- Prepare an effects determination for the BTPD for each management identified in the RMPs; and
- Recommend conservation measures to reduce or eliminate adverse effects on the species.

The analysis area for each management action is based on the activities specified in the individual RMPs. These activities are described in the analysis section for each RMP. The determination is based on the nature of each management action as described in the RMPs, and on the available data for the BTPD in the area that is affected by the management action.

REPORT ORGANIZATION

This report is organized into five sections, including the following:

- 1.0 Introduction – describes the purpose of the analysis, the scope of the BE, the action area, and the methods.
- 2.0 Species Information – summarizes the current listing status, species ecology, abundance and distribution in Wyoming, and threats to the BTPD.
- 3.0 Analysis of Resource Management Plans – presents a summary of all the management actions at the front of the chapter, thus eliminating the need to repeat this information in the discussion of each FO; existing impact minimization measures; a description of BTPD occurrence within the area affected by each RMP; an analysis of effects from each of the management prescriptions; and a determination specific to each management action for each RMP.
- 4.0 Conservation Strategies – provides conservation measures that BLM has agreed to adhere to and that may further reduce potential effects to the BTPD, as well as proactive steps for the recovery effort. These measures were prepared in coordination with the U.S. Fish and Wildlife Service (USFWS) office and the Wyoming Game and Fish Department (WGFD).
- 5.0 References - provides a list of documents reviewed for the preparation of this report.

METHODS

Literature was reviewed to gather information on the ecology, occurrence, listing status, and habitat of the BTPD. Biologists from various Field Offices (FOs) of the BLM and USFWS personnel in the Cheyenne, Wyoming office were contacted as part of this review. Listing status documents such as, Endangered and Threatened Wildlife and Plants; Finding for the Resubmitted Petition to List the Black-Tailed Prairie Dog as Threatened were also reviewed (USFWS 2004).

After the information on distribution for the BTPD was reviewed, seven RMPs were identified as having the potential to affect the BTPD (**Table 1-1**).

TABLE 1-1 RMPs ANALYZED IN BTPD BIOLOGICAL EVALUATION

Field Office	Resource Management Plan (Year Implemented)
Buffalo	Buffalo Resource Management Plan (1985)
Casper	Platte River Resource Management Plan (1985)
Cody	Cody Resource Area Resource Management Plan (1990)
Newcastle	Newcastle Resource Management Plan (2000)
Rawlins	Great Divide Resource Management Plan (1990)

BTPD information was evaluated and potential effects from the management actions were analyzed. Management actions were evaluated for their potential to directly and indirectly affect the BTPD. State, private, local, and tribal activities were also evaluated to assess their potential to cumulatively affect the BTPD.

The results of the effects analysis were used to establish an effects determination for each general program description. Each determination was based on the management prescription described in the RMPs and any measures intended to minimize the effects to the BTPD. Potential effects of proposed activities, as well as the Conservation Measures presented in the Conservation Strategies section of this BE, were included in the determination analyses.

Determination categories considered as part of this analysis, and consistent with BLM policy language (BLM Manual 6840: Special Status Species Management) included the following:

- **No impact (NI); or**
- **May impact, but the overall impacts are beneficial (BI)**
- **May detrimentally impact, but is not likely to contribute to the need for Federal listing (MI-NLC)**
- **May detrimentally impact and is likely to contribute to the need for Federal listing (MI-L)**

2.0 SPECIES INFORMATION

LISTING STATUS

Federal

Petitions to list the BTPD as a threatened species under the Endangered Species Act (ESA) of 1973 were filed by the National Wildlife Federation in July 1998 and by the Biodiversity Legal Foundation, the Predator Project, and Jon C. Sharps in August 1998 (USFWS 2000). In February 2000 the USFWS determined that the listing of this species was warranted, but precluded by other higher priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants, and placed the BTPD on the ESA Candidate List (USFWS 2000).

Being placed on the ESA Candidate List requires an annual review of the species' status. In 2002 the USFWS reported that various threats were continuing to cause local extirpations that could lead to the species becoming vulnerable in a significant portion of its range, and concluded that the 2000 projection of population trends remained generally appropriate, although new information indicated that the magnitude of some threats to the species may have been less than previously determined (USFWS 2002).

In 2004 the USFWS reassessed the petition to list the BTPD as threatened, and determined that it is not likely to become an endangered species within the foreseeable future and no longer meets the ESA definition of threatened (USFWS 2004). Therefore, in August 2004, the BTPD was removed from the ESA Candidate List (USFWS 2004). Primarily influencing this decision was the conclusion that plague no longer appears to be as significant a threat as previously thought (USFWS 2004). This conclusion was based on (1) new information regarding the biological and ecological relationships between prairie dogs and sylvatic plague; and (2) more accurate estimates of species abundance that were obtained through recent statewide surveys of occupied habitat (Wyoming included) (USFWS 2004). The BTPD is a BLM Wyoming Sensitive Species and is a U. S. Forest Service (USFS) Region 2 Sensitive Species, meaning that it is sensitive in the Bighorn, Black Hills, Medicine Bow, and Shoshone National Forests, and the Thunder Basin National Grassland (WYNDD 2003).

State

The Wyoming Natural Diversity Database (WYNDD) lists the BTPD as a Wyoming Species of Concern (WYNDD 2003). It has a Heritage Rank of G4/S2, indicating that it is apparently secure rangewide, although it may be quite rare in parts of its range, and that it is imperiled at the state level because of factors making it vulnerable to extinction in Wyoming (WYNDD 2003). It has a Wyoming Contribution Rank of High because the Wyoming populations are thought to contribute substantially to the taxon's rangewide persistence (WYNDD 2003). Also, it has a WGFN Native Species Status rank of NSS3, based on the level of restriction of the species' numbers and habitat (WYNDD 2003).

The BTPD is classified as a nongame wildlife species by the Wyoming Game and Fish Department (WGFN) and as a pest by the Wyoming Department of Agriculture (WDOA) (Corbett 1998). Thus, under Section 6 of the Nongame Wildlife regulations (Corbett 1998) and under Statute W.S. 11-5-101 through 11-5-119 of the Wyoming Weed and Pest Control Act (1973), the species may be taken at any time during the calendar year without securing a permit.

ECOLOGY DESCRIPTION OF SPECIES

The BTPD is a diurnal, burrowing rodent, within the squirrel family (*Sciuridae*) (USFWS 2000). It weighs from 1 to 3 pounds and is 14-17 inches in length, including a 2½-inch, black-tipped tail. Individual appearances within the species vary in mixed colors of brown, black, gray, and white (USFWS 2000).

HABITAT USE

The BTPD inhabits short- and mixed- grass prairies (Luce 2001) and upland areas, which provide an adequate intra-colony spatial distribution and an adequate visual range of defense (BLM 2004).

The BTPD is a highly social species. A family group, or coterie, is composed of an adult male, one to four breeding females, and their offspring younger than two years of age (BLM 2004). Numerous family groups are closely associated and occur in colonies, or towns (USFWS 2000), which cover from one acre to thousands of acres of grassland habitat (BLM 2004). Colonies are often distributed across the landscape in a loose association with other colonies, which is referred to as a complex (BLM 2004).

Black-tailed prairie dogs are herbivores, and feed on a variety of vegetation including grasses and forbs and to a lesser extent seeds and insects (BLM 2004). Short-grass species commonly eaten by prairie dogs include buffalo grass (*Buchloe dactyloides*) and blue grama (*Bouteloua gracilis*) (BLM 2004).

DISTRIBUTION

Historically, the BTPD ranged from Canada to Mexico throughout the Great Plains states and west to southeastern Arizona (BLM 2004). Range contractions have occurred within the southwestern portion of the species' range (USFWS 2004), and the species now occurs from extreme south-central Canada to northeastern Mexico and from approximately the 98th meridian west to the Rocky Mountains (USFWS 2004).

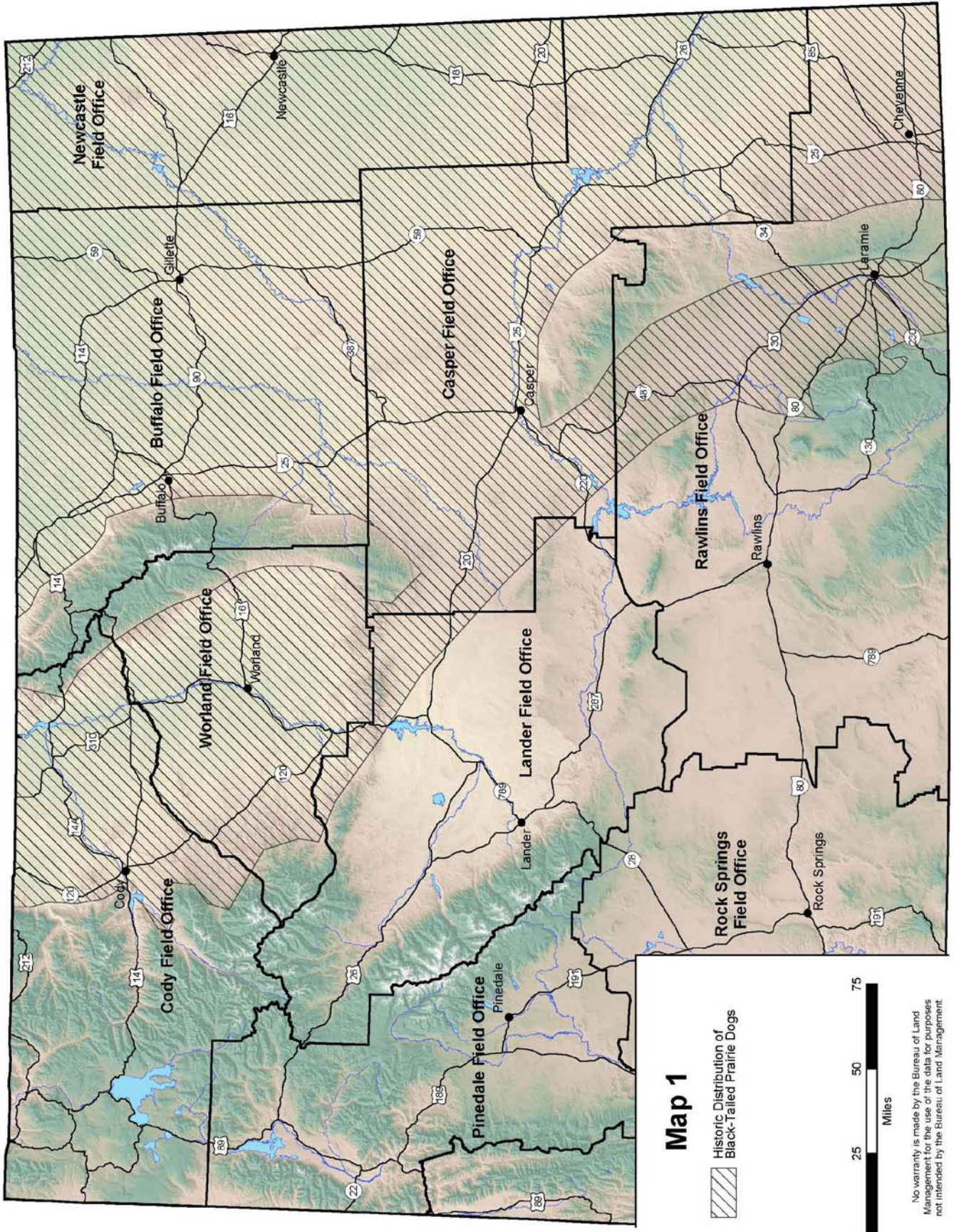
Approximately the eastern third of Wyoming was included in the BTPD's historical range, including suitable habitat east of the Rocky Mountain foothills below approximately 5,500 feet elevation (**Map 1**). Presently, the species appears to be scattered throughout the same area (USFWS 2000).

The BTPD is somewhat unique among species proposed for ESA listing in that several million individuals currently exist over a large acreage in the wild. However, although widespread, the species occurs only in remnant, highly segregated populations, and may have limited potential for long-term persistence (Luce 2001). Therefore, most estimates of prairie dog population trends are not based on numbers of individuals, but on the amount of occupied habitat for the species (USFWS 2000).

The U. S. Geological Survey estimated that the BTPD may occupy less than 0.5 percent of its original range and has experienced an estimated 98 percent decline in population abundance throughout North America (USFWS 2000). It noted that the amount of occupied habitat has declined from approximately 100 million acres in the late 1800s to less than 1 million acres at present; a decline of over 99 percent. A reduction of approximately 94 to 99 percent in the amount of occupied habitat within this range has occurred since about 1900 (USFWS 2000).

Statewide estimates of occupied habitat for Wyoming indicate a significant decline in range, from 16 million acres historically (USFWS 2000) to 125,000 acres in 2003 (USFWS 2004). However, the BTPD appears to be widely distributed throughout most of its historic range in Wyoming; more than 75

Map 1 - Historic Distribution of Black-tailed Prairie Dogs in Wyoming



percent of the counties within the historic range of the species contain prairie dogs (USFWS 2004). Also, one of the seven remaining large BTPD complexes is in the Thunder Basin National Grassland, in Wyoming (USFWS 2000). Finally, the Interstate Conservation Team identified approximately 19.5 million acres of potential BTPD habitat in Wyoming (BLM 2004).

THREATS

The following threats to the BTPD were identified in the USFWS 12-month finding (USFWS 2000). Explanations are provided, as well as more recent alterations to the perspectives regarding these threats.

Habitat Loss

Past population declines of the BTPD related to the loss of habitat across its range have been due to conversion of prairie grassland to cropland, urbanization, habitat modification (invasion of woody species into grassland and savanna), and habitat fragmentation (USFWS 2000). The USFWS (2000) 12-month finding rated habitat loss as a moderate threat to the BTPD. However, in the 2002 reassessment (USFWS 2002) it was concluded that the present or threatened destruction of habitat from agricultural conversion and other factors was no longer a threat. In eastern Wyoming, conversion of native rangeland to cropland is estimated as occurring at a negligible rate (about 25,000 acres of rangeland over the past 30 years) (Luce 2001).

Over-Utilization

Over-utilization of the BTPD occurs in the form of recreational shooting. Recreational shooting of prairie dogs takes place throughout the range in Wyoming. No license is required to hunt prairie dogs, and no seasons, bag limits, or restrictions on method of take have been established (Corbett 1998, Wyoming Weed and Pest Control Act 1973). Shooting may contribute to population fragmentation and reduction in colony productivity and health, and may preclude or delay recovery of colonies reduced by other factors such as sylvatic plague (Luce 2001).

Sylvatic Plague

Plague is the major disease affecting the BTPD. Approximately 66 percent of the species' range has been affected by plague (USFWS 2000). In 2000 it was reported that populations may demonstrate nearly 100 percent mortality when exposed (USFWS 2000), and that there was no treatment for plague in prairie dogs, nor a known effective preventative measure (Luce 2001). Therefore, the USFWS (2000) 12-month finding rated sylvatic plague as a moderate threat to the BTPD and identified it as an important factor in recent reductions of many BTPD populations throughout a significant portion of the range of the species.

The 2002 reassessment of BTPD populations incorporated new information that indicated the apparent magnitude of the disease threat may be mitigated to some degree (USFWS 2002). Most recent data indicate that prairie dog populations are less vulnerable to the disease than previously thought because (1) High exposure doses of plague bacilli may be necessary for disease contraction in some individuals; (2) limited immune response has been observed in some individuals; (3) a population dynamic may have been developed in low-density, isolated populations that contributes to the persistence of these populations; (4) the apparent ability of some sites to recover to pre-plague levels after a plague episode; and (5) approximately one-third of the species' historic range has not been affected by plague (USFWS 2004).

While the USFWS recognizes that an individual prairie dog exposed to plague is at high risk due to a combination of low resistance and high sociality, and that it is predicted that the plague will continue to influence BTPD populations to a degree, they now conclude that the plague is not likely to cause the BTPD to become an endangered species within the foreseeable future (USFWS 2004).

Inadequate Regulatory Mechanisms

The USFWS (2000) 12-month finding rated the lack of adequate regulatory mechanisms as a moderate threat to BTPD populations. They reported that many states, tribes, and Federal agencies have jurisdiction to participate in some form of prairie dog management, but few use available regulatory mechanisms to conserve the species, and at least one government entity in most States promotes their reduction (USFWS 2000).

During the past few years some states and tribes have made substantial progress in initiating management efforts for the BTPD (USFWS 2004). However, the USFWS currently takes the position that while these efforts are important to BTPD management, the most recent distribution, abundance, and trends data indicate that inadequate regulatory mechanisms are not limiting BTPD populations at present, nor are they likely to within the foreseeable future, and thus concerns do not rise to the level of a threat (USFWS 2004).

Other Natural or Man-made Factors: Chemical Control

Extensive poisoning was conducted throughout most of the BTPD's range from 1912 to 1972 in order to reduce forage competition between prairie dogs and domestic livestock (USFWS 2000). Control efforts have limited BTPD populations, especially large-scale, well-organized efforts conducted early in the century (USFWS 2000). Also, while current control efforts are limited compared to historic efforts, they still impact a significant portion of occupied habitat annually (USFWS 2000). The most extensive control efforts in recent years have been conducted in the Northern Great Plains (USFWS 2000). With the listing as a pest species and under the control and regulation of the Animal and Plant Health Inspection Service (APHIS), eradication of the BTPD continues on private lands in areas where it is seen as being detrimental to the livestock industry, and has been determined to be a direct threat to the continued existence of the species (BLM 2004). Chemical control was considered a threat of moderate magnitude to the prairie dog in the 2000 and 2002 assessments (USFWS 2000, USFWS 2002).

However, the USFWS (2004) recently stated that the level of threat associated with this factor is difficult to assess due to a lack of information regarding the use of toxicants and the response of prairie dogs to this type of control. Although the USFWS acknowledges extant and potentially significant local effects on some populations, it now concludes that impacts on the BTPD due to chemical control are not a threat to the extent that the species could become endangered in the foreseeable future (USFWS 2004).

Currently, USDA-Wildlife Services is the primary Federal agency contributing to prairie dog control either through assistance to private landowners, direct control programs, or grants-in-aid to states (Luce 2001). In some states, county weed and pest districts or the state department of agriculture provide financial or extension assistance to landowners for control of prairie dogs (Luce 2001). However, since the BTPD was added to the candidate species list in 2000, control by poisoning on USFWS, BLM, National Park Service (NPS), and USFS lands has been allowed only for protection of human health (USFWS 2000).

The BLM and the USFS have restricted poisoning (BLM 2000). Also, in 2000 the BLM proposed to ensure that BTPD conservation is addressed on all livestock permit renewal evaluations and associated environmental assessments (BLM 2000).

Other Natural or Man-made Factors: Synergistic Effects

Many factors, alone, in combination with each other, and synergistically, have influenced and continue to influence BTPD populations. Historically, large BTPD populations successfully coped with various depressant factors (except plague) on a different scale; populations were large and robust, while threats were few with only short-term effects. Presently, most populations are significantly reduced and must cope with many persistent influences that depress populations both temporally and permanently. The vulnerability of the BTPD to population reductions is likely related less to its absolute numbers than to the number of colonies in which it exists, their size, their geospatial relationship, existing barriers to immigration and emigration, and ultimately the number and nature of the remaining direct threats to the species (USFWS 2000). The USFWS (2000) 12-month finding concluded that the overall magnitude of synergistic threats to the BTPD throughout its range was moderate and imminent. However, in 2004 the USFWS reported an inability to adequately describe and quantify these effects, precluding an inference that these effects will influence the status of the BTPD such that it meets the ESA's definition of a threatened species (USFWS 2004).

ENVIRONMENTAL BASELINE

The environmental baseline describes past and current factors in the area that may have contributed to the current status of the species and protective measures that are currently in place.

Habitat for BTPD occurs primarily in the eastern half of the state. The majority of this habitat occurs in the Casper, Buffalo, and Newcastle FOs. The easternmost third of the Rawlins FO also contains large areas of BTPD habitat. Worland, Lander, and Cody FOs contain predominantly secondary habitat with some very small patches of primary habitat. All of these FOs except Cody and Worland have active BTPD colonies in varying degrees of size and health (WyGISC 2004). Lands in the Cody and Worland FOs historically contained limited BTPD colonies, although elevation and vegetation define the species' boundary on the western edge. It is estimated that in Wyoming the BTPD had decreased by 80 percent prior to the 1900s when poisoning became common nationwide (Van Pelt 1999).

Buffalo Field Office

To date, at least 382 BTPD colonies greater than 80 acres in size have been identified within the Powder River Basin in this FO (**Maps 2 and 4**). Additional colonies are likely present due to the vast aerial extent of short-grass and mixed grass prairie within the Buffalo FO, but are often difficult to assess due to their occurrence on private lands (85% of the surface ownership of lands within the Buffalo FO are private).

Casper Field Office

Both species of prairie dog occur in this FO, primarily on private lands due to the very fragmented land ownership (**Maps 3 and 4**).

Cody Field Office

Although this FO historically had both white-tailed and small populations of BTPDs, only three small remnant populations of black-tailed prairie dogs are present now (Seville 2004) and are believed to have been introduced by the Buffalo Bill Wild West Show in the 1880s (**Map 5**).

Lander Field Office

There are no confirmed BTPD locations or sightings from this FO area. However, the extreme southeastern portion of the FO in southwestern Natrona County may have BTPDs, but none have been documented as of yet. The possibility of BTPDs occurring there will not be ruled out, but no further analysis will be discussed for this FO in this BE.

Newcastle Field Office

This FO contains approximately 24,000 acres of BTPD habitat (**Maps 2 and 4**). Also, portions of the Thunder Basin National Grassland are located within this FO. This area contains one of the seven remaining large BTPD complexes in Wyoming.

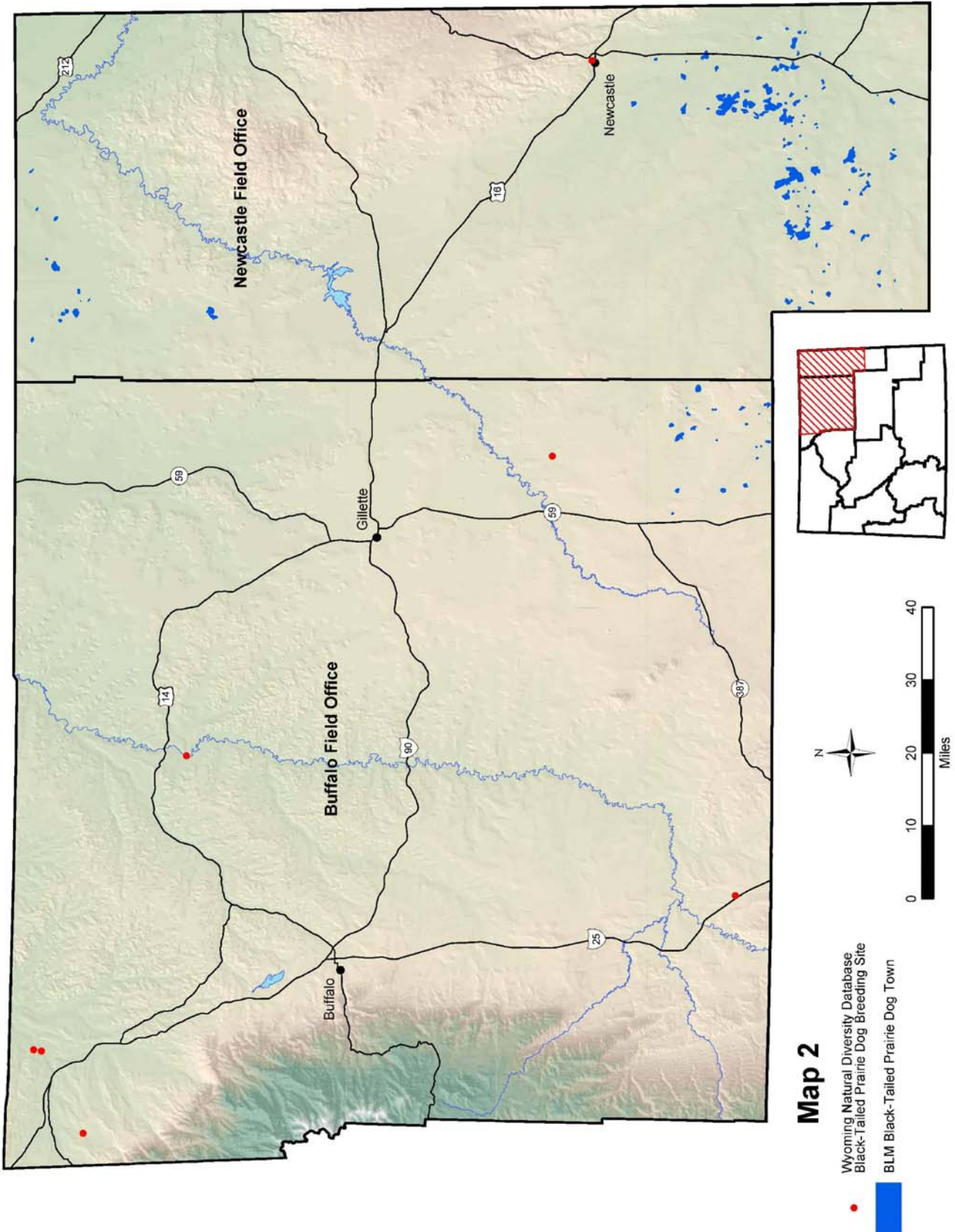
Rawlins Field Office

Both species of prairie dog occur in the Rawlins FO, the BTPD occurs only within Laramie County (**Map 3**). WGFD mapping did locate one complex of BTPDs on private land with Federal subsurface rights near Cheyenne (Blomquist 2004), but those data are not available.

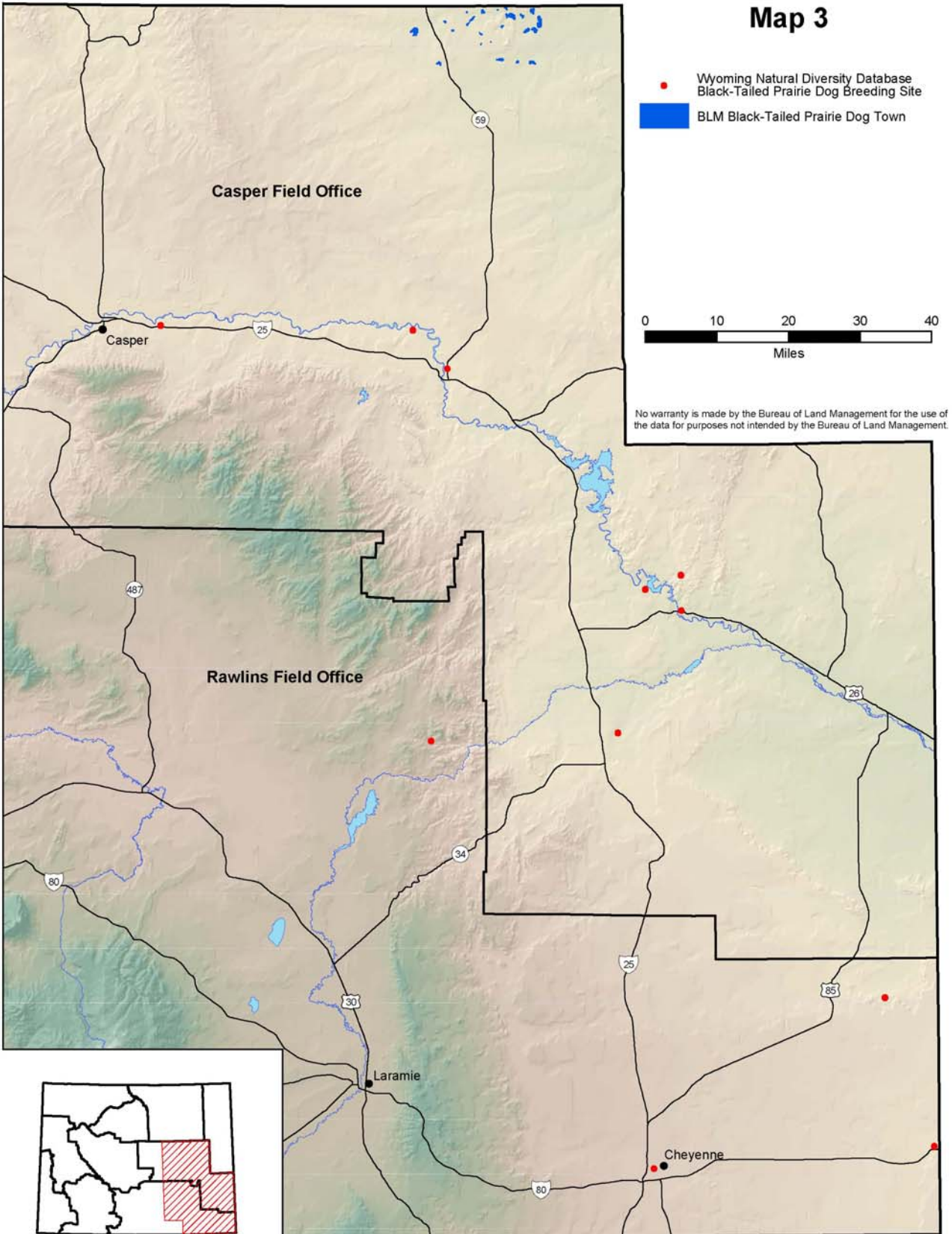
Worland Field Office

Although both species of prairie dogs possibly occurred in the FO historically, recent survey and mapping work have revealed that BTPDs are presently absent from the Worland FO, and have been since extensive mapping was conducted in 1977 and in the mid-80s (Stephens 2004). No further analysis will be discussed for this FO in this BE.

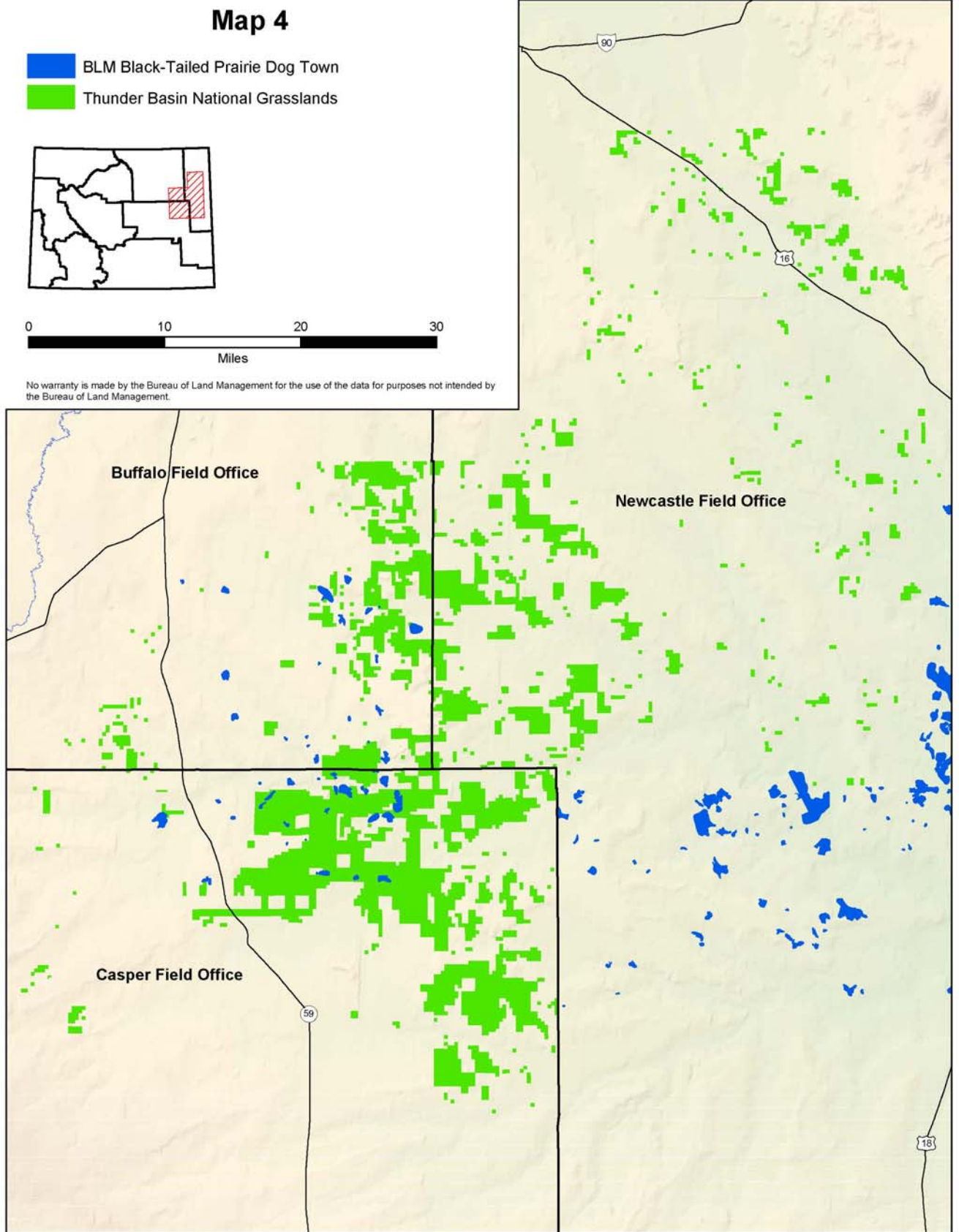
Map 2 - Northeastern Wyoming Black-tailed Prairie Dog Locations and Habitat



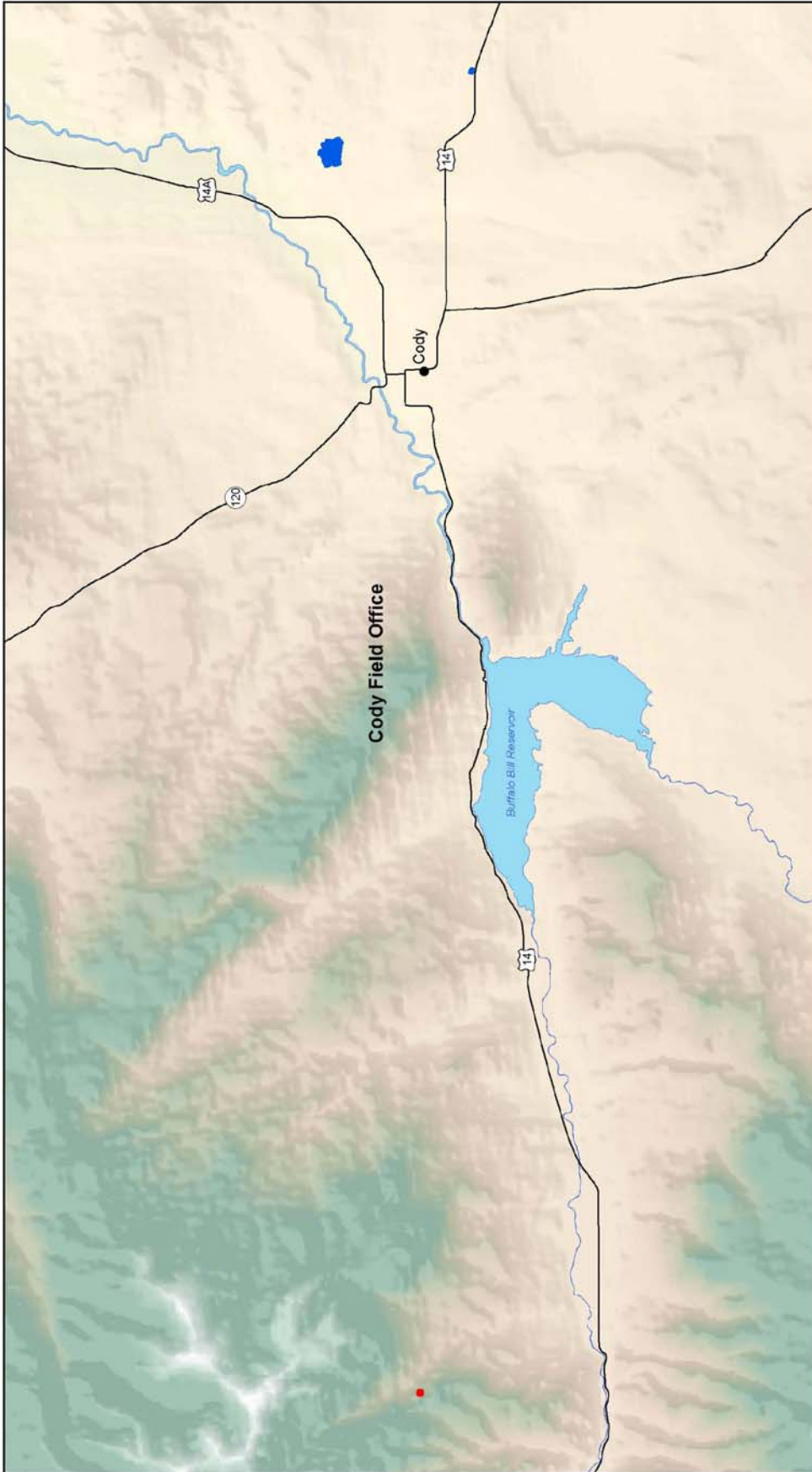
Map 3 Southeastern Wyoming Black-tailed Prairie Dog Locations and Habitat



Map 4 Distribution of Black-tailed Prairie Dogs on the Thunder Basin National Grasslands

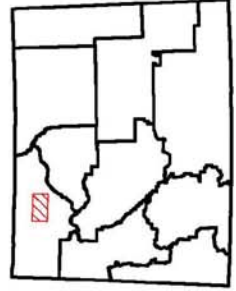


Map 5 Northwestern Wyoming Black-tailed Prairie Dog Locations and Habitat



Map 5

- Wyoming Natural Diversity Database Black-Tailed Prairie Dog Breeding Site
- BLM Black-Tailed Prairie Dog Town



No warranty is made by the Bureau of Land Management for the use of the data for purposes not intended by the Bureau of Land Management.

3.0 ANALYSIS OF GENERAL PROGRAM DESCRIPTIONS

The proposed actions for the seven RMPs, covering all seven FOs, are summarized below. The management actions have been combined across FOs in this section to more efficiently discuss the general types of activities and management actions that occur programmatically throughout the Wyoming BLM field offices. For specific management program information, please refer to each RMP. These RMPs can currently be reviewed online by accessing the BLM Resource Management Plans website (http://www.blm.gov/nhp/spotlight/state_info/planning/wy/index.htm). Following the descriptions and determinations is a table (**Table 3-1**) which separately summarizes the determinations for all programs under each FO.

Access

Management Actions

The objective for access management is to provide suitable public access to BLM-administered public lands. This may include acquiring new access where needed, maintaining and expanding existing access facilities, or abandoning and closing access where it is not compatible with resource values and objectives.

Access across private lands will be pursued as needed through a variety of methods including, but not limited to, purchase of rights-of-way or easements, land exchange, reciprocal rights-of-way, and other statutory authorities. Specific routes and acquisition procedures for securing access are determined through route analyses and environmental analyses as part of specific project and activity planning. Access acquisition needs (typically for roads) are most commonly identified for public access for recreational use, timber harvests, grazing, etc. This may be for hunting, sightseeing, rockhounding or general exploring. Acquisition of access to public lands has been identified in locations that would provide the public with an opportunity to utilize resources that have previously been unavailable because the public lands had no public access. An increase in access could result in an increase in human activity in an area that previously had little activity, development of roads, trails, parking areas and other facilities to enhance the public's use of the area. The construction of access roads, trails, parking areas, and other associated facilities would require the use of heavy equipment and machinery, as well as surface disturbance at the site. Where appropriate, land exchanges or cooperative agreements are considered to provide access needs.

Areas with high road densities may be evaluated to determine needs for specific road closures or rehabilitation. Specific mitigation measures and design requirements for roads are developed through environmental analyses as part of specific projects or activity planning. Access closure, abandonment, and acquisition are considered and established through activity planning and environmental analysis processes. Road or trail closure and abandonment is based on desired road or trail densities, demands for new roads, closure methods (e.g., abandonment and rehabilitation, closures by signing, temporary or seasonal closures), type of access needed, resource development or protection needs, and existing uses.

Effects Analysis

The construction of new access roads, that intersect BTPD colonies, will create a surface disturbance.. Any new access roads through BTPD colonies may destroy habitat, increase mortality by vehicles, and could provide access for recreational shooters. However, applying the conservation measures (section 4.0), will minimize or eliminate effects to BTPD colonies.

Determination

Implementation of access management actions **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the potential to alter BTPD suitable habitats through road construction. However, direct or indirect effects to the BTPD will be minimized through implementation of conservation measures (section 4.0).

Field Offices

None of the RMPs analyzed addressed access issues, but the potential for impacts is possible.

Air Quality

Management Actions

The objective of air quality management is to maintain or enhance air quality, protect sensitive natural resources and public health and safety, and minimize emissions that cause acid rain or degraded visibility. Typical air quality management includes dust control, weather monitoring, and air quality data monitoring. The air quality management program may evaluate or restrict surface development. The BLM requires that operators cover conveyors at mine sites, restrict flaring of natural gas, limit emissions, and restrict spacing on projects.

BLM-initiated actions or authorizations are planned in accordance with Wyoming and national air quality standards. This is accomplished through coordination with the Wyoming Department of Environmental Quality (WDEQ) and the U.S. Environmental Protection Agency (EPA). Laws controlling air pollutants in the United States include the Clean Air Act of 1970 and its amendments, and the 1999 Regional Haze Regulations. The concentrations of air contaminants in the planning area need to be within limits of Wyoming ambient air quality standards (WAAQS) and national ambient air quality standards (NAAQS). Both WAAQS and NAAQS are legally enforceable standards for particulate matter (PM₁₀), nitrogen dioxide (NO₂), ozone, sulfur dioxide (SO₂), and carbon monoxide (CO). Air quality stations used to monitor particulates, if located in BTPD habitat, could cause disturbances through the building/construction of the station and associated access roads, maintenance and upkeep, and equipment reading and repair. No known monitoring stations are currently in BTPD habitat on BLM lands in Wyoming, although additional Federal and state funded stations are being placed in Wyoming annually.

In addition to NAAQS and WAAQS, major new sources of pollutants or modifications to sources must comply with the New Source Performance Standards and Prevention of Significant Deterioration (PSD). The PSD increments measure PM₁₀, SO₂, and NO₂. The PSD program is used to measure air quality to ensure that areas with clean air do not significantly deteriorate while maintaining a margin for industrial growth.

Effects Analysis

Air quality management actions are typically associated with limitation, reduction, and monitoring of pollutants and dust during other BLM management actions. It is possible that activities associated with dust abatement (water trucks, etc.) could occur on BTPD colonies and result in BTPD mortality by vehicles. These effects would be only in localized areas, and the effects to the colony would be minimal. Most air quality management actions would result in secondary beneficial effects due to decreased particulates in the air in and around BTPD colonies. Any direct or indirect negative effects to the BTPD will be minimized through implementation of conservation measures (section 4.0).

Determination

Implementation of air quality resource management actions **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the limited potential for BTPD colonies to be included in dust abatement activities, and the limited effects the activities could have on this species because of the localized nature of these activities, no monitoring stations within BTPD colonies and the implementation of the BTPD conservation measures (section 4.0).

Field Offices

All five RMPs include Air Quality Management programs, either as a stand-alone activity or in conjunction with soil and water resource management.

Areas of Critical Environmental Concern

Management Actions

The objectives of special management areas, such as Areas of Critical Environmental Concern (ACECs), are to ensure continued public use and enjoyment of recreation activities while protecting and enhancing natural and cultural values. They offer opportunities for high-quality outdoor recreation. Other objectives include improving visitor services related to safety, information, and interpretation as well as developing and maintaining facilities. The designation of ACECs in an RMP is simply a designation, and does not automatically convey specific management or protections, although with designation, some resource management protections are spelled out and implemented. If access roads or other types of facilities are specifically required, then these will be described within the appropriate activity section in this document. Generally, ACEC status is a beneficial impact on wildlife and plant species.

Under the Special Areas Management program, which includes ACECs, the BLM closes areas where accelerated erosion is occurring, applies restrictions on ground-disturbing activities, and implements restrictions on and the use of heavy equipment. Recreational trails and improvements could be built as well as pursuing land exchanges. ACECs also ensure protection of petroglyphs, artifacts, and cultural deposits from weathering and vandalism. The BLM evaluates noxious weed and grasshopper control measures. Significant sites and segments along Natural Historic Trails are generally designated as ACECs.

Effects Analysis

No BTPD prairie dog complexes are known within any designated or proposed ACECs. Smaller towns may occur on ACECs. Furthermore, BLM management restricts ground disturbance and generally protects ACEC sites by maintaining them in a natural condition. Activities in each of the ACECs will be similar to those contemplated under the various other management actions in this RMP, except that additional restrictions on ground-disturbing activities will be applied. Special restrictions will be applied to management actions in ACECs that include cultural and paleontological resources, minerals, fire, off-road vehicles (ORV), vegetation and soils, and wildlife habitat. None of these additional restrictions is specifically directed toward protecting habitat for the BTPD, but they may indirectly benefit potential habitat by preventing some disturbances and by minimizing impacts to BTPD habitat.

Determination

Implementation of ACEC resource management **may impact, but is not likely to contribute toward the need for Federal listing** of the BTPD. This determination is based on the absence of any extensive BTPD prairie dog complexes within ACECs in Wyoming, minimization of direct or indirect negative effects to the BTPD through implementation of restrictions placed within ACECs by limiting or restricting other ground disturbing activities, and implementation of the BTPD conservation strategies (section 4.0). ACEC designation would likely provide **beneficial** affects to BTPDs and their habitat by limiting or restricting other ground disturbing activities.

Field Offices

Buffalo and Cody FOs do not have specific ACEC Management programs. For these FOs, the determination stated here will apply to their ACEC management actions under any program they are managed.

Cultural Resources

Management Actions

The objective of cultural resource management is to protect, preserve, interpret, and manage significant cultural resources for their informational, educational, recreational, and scientific values. Site-specific inventories for cultural resources would be required before the start of surface disturbance or if BLM-administered lands were proposed for transfer out of Federal ownership.

The BLM performs inventories as well as land management. During inventory activities, the BLM inventories, categorizes, and preserves cultural resources, conducts field activities, performs excavations; maps and collects surface materials, researches records, and photographs sites and cultural resources. Inventory data collection is used for documentation and development of mitigation plans before other resource program surface disturbance. Inventory activities commonly entail the use of hand tools, power tools, or heavy machinery. These inventories are divided into Class I, Class II, and Class III. The BLM normally completes cultural resource inventories in response to surface-disturbing projects. Survey intensity varies among inventories, which may involve two to seven individuals and trucks, and may last from one day to several weeks.

Cultural resource land management involves managing sites for scientific, public, and sociocultural use by developing interpretive sites and preparing interpretive materials. Use limiting activities include restricting certain land uses, closing certain areas to exploration and prohibiting some surface-disturbing activities. This program also allows the collection of certain invertebrate fossils. Archeological collections are authorized through a permit system. The cultural resource program may authorize installation of fencing to protect trail segments, stabilize deteriorating buildings, acquire access to sites when necessary, perform certain surface-disturbing activities, pursue land withdrawals, explore and develop locatable minerals, designate avoidance areas, pursue cooperative agreements, and identify and interpret historic trails. Cultural resource interpretive sites, such as historic trails or rock art sites, may be developed to provide public benefits such as scenic overlooks, signs, and walking trails.

Adverse effects on significant cultural resources are mitigated by avoiding surface disturbance in culturally-rich areas, as well as by managing sites and structures for their cultural importance. Surface disturbance is avoided near significant cultural and paleontological resource sites and within ¼ mile or the

visual horizon of significant segments of historic trails and canals. Sites listed on, or eligible for, the National Register for Historic Places (NRHP) are protected and would be managed for their local and national significance in compliance with the National Historic Preservation Act, the Archaeological Resources Protection Act, the American Indians Religious Freedom Act, and the Native American Graves Protection and Repatriation Act, as appropriate.

Effects Analysis

Most activities associated with cultural resource inventories, including surface surveys, record searches, and artifact characterization would have little effect on the BTPD or their habitat. More intensive excavation efforts and development of interpretive sites have the potential to disturb BTPD colonies if such activities occurred in occupied habitats. As with any surface disturbing activity, a pre-construction assessment of BTPD presence would be conducted in potentially suitable habitats prior to excavation. Direct and indirect effects to BTPD habitats would be avoided as much as possible. Development of interpretive sites will, of necessity, occur where the cultural objects and sites themselves are located. If such a site were discovered or occurred in a BTPD colony, it could create a conflict. However, the likelihood of this event is very low. Additionally, given the BTPD conservation strategies (see section 4.0), effects to BTPD colonies will be minimized.

Determination

Implementation of cultural resource management actions **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the avoidance of occupied habitats for surface disturbing cultural resource activities when possible, the measures BLM currently has in place regarding implementation of cultural resource inventories, the low likelihood that an interpretive site would occur or be developed in a BTPD complex, and implementation of the BTPD conservation strategies (see section 4.0).

Field Offices

All five RMPs analyzed in this BE contain Cultural Resource Management programs.

Fire

Management Actions

The objectives of fire management are to restore the natural role of fire in the ecosystem and to protect life, property, and resource values from wildfire. The two major activities involved with the BLM's fire management are prescribed burning and wildfire suppression.

Prescribed fire objectives are to restore natural fire regimes and enhance rangeland habitats for livestock and wildlife. The prescribed fire program authorizes fire plans, firebreaks, prescribed burns, and coordination with necessary parties on a case-by-case basis. Some prescribed fires are conducted to dispose of slash and residue from timber sales, improve wildlife habitat and grazing potential, or to reduce hazardous fuel loads.

Wildfires threatening valuable resources, including commercial timber areas, developed recreation sites, and areas of wildland/urban interface, or fires with potential to spread to private, state, or other Federal lands, are suppressed. Fire suppression methods vary with the intensity of the wildfire and are conducted on an emergency basis. Fire lines are constructed to contain the wildfire. Water is withdrawn from

nearby sources to suppress fires. Chemical fire suppression agents containing chemical dyes may be used, if needed. The use of aerial fire retardant is restricted near water resources. After a fire is extinguished, the BLM may use rehabilitation techniques to restore a burned or suppressed area to its previous vegetative cover.

Activities authorized by this program include tree thinning, construction of roads and fire lines, manual and aerial application of fire-suppressing chemicals, and revegetation and mulching stream banks for rehabilitation. These activities often employ the use of off-road vehicles, hand tools, and heavy equipment such as bulldozers.

Fire and suppression impacts are evaluated through the Burned Area Emergency Rehabilitation (BAER) program on all burned areas. This process evaluates the potential for impacts on the ecosystems involved and proposes stabilization and rehabilitation actions.

Effects Analysis

Wildland fires are not expected to directly affect the BTPD because such fires typically do not occur on towns where vegetation and fuels to support a fire are limited. For these reasons, prescribed burns are also not common in these types of habitats.

Heavy machinery associated with fire suppression and prescribed fires could potentially destroy habitat and burrows and rarely could crush a BTPD. However, because wildland fires and prescribed burns are considered rare events in these habitats, this type of impact is unlikely to occur. Fire may also provide beneficial effects to the BTPD by creating bare areas for colonization and increased vigor and nutrition of reestablishing plants. Also, implementation of the BTPD conservation strategies (section 4.0), would help to minimize effects of fire management actions on BTPD colonies.

Determination

Implementation of fire management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the low potential for fires (both wildland and prescribed) to occur in habitat for the species and the low probability that fire equipment would be used in BTPD habitat, implementation of the BTPD conservation strategies (section 4.0) would help to minimize effects of fire management actions on BTPD colonies, and the secondary impacts would be beneficial to BTPDs and their habitat.

Field Offices

All five RMPs analyzed in this BE contain Fire Management programs.

Forest Resources

Management Actions

The objectives of forest management are to maintain and enhance the health, productivity, and biological diversity of forest and woodland ecosystems and to provide a balance of natural resource benefits and uses, including opportunities for commercial forest production. The BLM manages forests for multiple uses, such as recreation, livestock grazing, and wildlife habitat.

The program allows the treatment of diseased trees by spraying, cutting, and removal; herbicidal spraying of grasses and shrubs; and pre-commercial thinning, chaining, and shearing. Clearcuts, slash disposal, logging, helicopter logging, and skidder-type and cable yarding are allowed during timber harvest. Non-commercial timber harvest involves collection and cutting of firewood, Christmas trees, posts, poles, and wildlings. The BLM ensures that site regeneration and stand replacement follow timber harvest. Forest management may include conducting surveys, obtaining easements, pursuing legal access, allowing road development, and installing drain culverts and water bars.

Timber harvesting occurs on commercial forestlands with slopes less than 45 percent. Forest products are sold by permit. Individual authorized clearcuts may not exceed 20 acres. Areas within 200 feet of surface water are prohibited from harvest. Slash is to be lopped and scattered, roller chopped, or burned. Regeneration areas are often fenced to prevent wildlife and livestock from damaging seedlings. Private and state land may be accessed for forest management purposes through acquisition of easement.

Currently, cottonwood and willow trees are not harvested by the BLM in Wyoming. Non-commercial woodlands (e.g., riparian areas) are managed to optimize cover, enhance habitat for wildlife, and protect the soil and watershed values.

Effects Analysis

Activities associated with forest resources generally occur on forested lands. The BTPD occurs on lower-elevation short-grass prairie and semi-desert shrublands, and therefore would not be disturbed by activities associated with forest resource management. If access roads are developed in or near BTPD complexes in order to gain access to adjacent forestland, there could be impacts on prairie dogs from mortality from vehicles, habitat fragmentation, and access for recreational shooting of BTPDs. However, it is very unlikely that any new access roads would be constructed to gain access to forested lands, especially through BTPD towns or complexes, for timber management activities as existing roads are currently in place to access forested areas. BTPD conservation strategies mandate that no new access roads will be allowed in an active BTPD town (section 4.0) when possible.

Determination

Implementation of forest resource management actions will have **no impact** on the BTPD or its habitat. This determination is based on the absence of the species in forested areas and conservation strategies mandating no new access roads through active BTPD towns (section 4.0).

Field Offices

All five RMPs analyzed in this BE contain Forest Resource Management programs.

Hazardous Materials

Management Actions

The primary objective of hazardous materials management is to protect public and environmental health and safety on lands administered by BLM. Hazardous materials management also seeks to comply with Federal and state laws to prevent waste contamination caused by BLM-authorized actions, and to minimize Federal exposure to the liabilities associated with waste management on public lands.

Hazardous materials and waste management policies are integrated into all BLM programs. Public lands contaminated with hazardous wastes are reported, secured, and cleaned according to Federal and state laws, regulations, and contingency plans. Warnings are issued to potentially affected communities and individuals if hazardous material is released on public land.

Effects Analysis

In the event that hazardous material contamination or disposal were required, it is extremely unlikely that such activity would occur within or near a BTPD town.

Activities associated with hazardous material handling and management would typically occur in developed administrative settings that do not include suitable BTPD habitat or during an unplanned release. If an unplanned release occurred in suitable BTPD habitat and required a major emergency response, there would be the potential to BTPDs and to destroy suitable BTPD habitat. Although an accidental spill could be detrimental if it occurred, such an event is very unlikely to occur within BTPD habitat.

Determination

Implementation of hazardous material management actions **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the low potential for an accidental spill and those response actions necessitated by such an unplanned release directly impacting BTPDs and their habitat and on the minimization of any direct effects to the plover through implementation of the conservation strategies (section 4.0) in an area that contains a BTPD town.

Field Offices

The Platte River (Casper FO) and Great Divide (Rawlins FO) RMPs did not address Hazardous Material Management programs, although they would respond to an unplanned hazardous materials release or spill. For all five FOs with BTPDs, the determination stated here will apply to all hazardous material management actions.

Lands and Realty

Management Actions

The objectives of the lands and realty management program are to support multiple-use management goals of the BLM resource programs; respond to public requests for land use authorizations, sales, and exchanges; and acquire and designate rights-of-way access to serve administrative and public needs.

Public land tracts that are not critical to current management objectives will be disposed of through the realty management program. Non-Federal lands may be acquired through exchange in areas with potential for recreation development or in areas containing important wildlife, cultural, scenic, natural, open space, or other resource values. Protective withdrawals may be established to protect and preserve important resource values, but require extensive mineral investigations.

Realty management authorizes occupancy of public lands for roads, power lines, pipelines, communication sites, and irrigation ditches authorized by granting a right-of-way. Rights-of-way management actions respond to public requests for access, land authorizations, sales, and exchanges. These rights-of-way may be temporary or extend two years or longer.

The program pursues cooperative agreements, develops recreation site facilities, considers offsite mitigation, minimizes access in wildlife habitat, fences revegetation sites, blocks linear rights-of-way to vehicle use, considers temporary-use permits, considers new withdrawals, and leases acres for landfills.

Access management generally supports other resource management programs and is authorized under the Realty Management Program. The BLM rehabilitates access roads that are no longer needed, proposes easement negotiations, pursues access across private lands, acquires rights-of-way or easements, and exchanges lands.

Cases are considered individually in mineral exchanges. Public lands can be considered for sale or disposal on a case-by-case basis when a definite need for the land is identified and the proposal meets the requirements of the Recreation and Public Purpose (R&PP) Act and local land use plans. Leasing public lands for landfills is allowed under the R&PP Act, and sanitary landfilling is a common method of solid waste disposal.

All BLM-administered public lands will be open to consideration for utility and transportation systems, but these systems will be located next to existing facilities whenever possible. Areas with important resource values will be avoided where possible when planning for placement and routes of new facilities. Effects will be intensively mitigated if it becomes necessary to place facilities within avoidance areas.

Effects Analysis

BTPDs that occur in areas subject to development for utility and transportation projects may be harassed, injured, or killed by these activities, and suitable BTPD habitat may be degraded or destroyed. Roads issued through rights-of way may provide travel corridors for BTPD predators. Avoidance of important BTPD habitat and implementation of the conservation strategies (section 4.0) would minimize potential impacts to BTPDs from utility and transportation projects.

Land exchanges and other disposal methods may negatively impact BTPDs and their habitat. If lands supporting prairie dogs are exchanged away from the BLM to private landowners, management of these areas for prairie dogs would no longer be possible. However, the BLM rarely conveys properties with high resource value, in particular, those that support special status species. Conversely, if areas occupied by BTPDs are received by the BLM in exchange for unoccupied lands, the increased focus on prairie dog management could benefit the species.

Increased access to BLM lands may increase the potential for harassment, injury, and mortality from activities that occur on the newly accessible lands. The potential for negative impacts to BTPDs may increase where recreational activity occurs in suitable prairie dog habitat (primarily recreational prairie dog shooting). Land withdrawal will slightly reduce the number of activities that impact plovers on any withdrawn lands that supports suitable BTPD habitat.

Determination

Implementation of actions associated with lands and realty **may impact, but is not likely to contribute to the need for the species to become listed**. This determination is based on the low potential for land disposal of BTPD habitat, the existing safeguards in the conservation strategies (section 4.0) for protection and avoidance of prairie dog towns, and the low potential for other land management activities to disturb or remove habitat.

Field Offices

All five RMPs analyzed in this BE contain Lands and Realty Management programs.

Livestock Grazing

Management Actions

The management objective of livestock grazing management is to maintain or improve forage production and range condition as a sustainable resource base for livestock grazing on the public lands while improving wildlife habitat and watershed condition.

Management actions on grazing allotments are prioritized by and classified into one of three management categories: maintain (M), improve (I), and custodial (C). Certain areas may be closed to livestock grazing because of conflicts with other resource uses including, but not limited to, re-harvesting timber sale areas, crucial wildlife or endangered species habitat, developed recreation sites, or education areas. Range management activities include using prescribed fire, vegetation manipulation projects, changing the composition of existing vegetation, controlling noxious weeds, using mechanical or biological vegetative treatments to improve forage production, using heavy equipment, and herbicidal spraying of sagebrush.

Fencing activities authorized by the livestock grazing management program may include fence construction and repair, designing and implementing grazing systems, and building livestock enclosures for important riparian habitat. Water management activities associated with range management may include the development of reservoirs, springs, pipelines, and wells, and providing access to these developments. Lease management activities include conducting monitoring studies, enhancing and improving riparian zones, designating stock trails, managing leases, developing management plans and agreements, and canceling or adjusting livestock driveways.

Permanent increases in available forage are considered for wildlife and watershed protection before additional livestock use is authorized. Livestock management includes converting to new types of livestock; authorizing livestock grazing; and adjusting season of use, distribution, kind, class, and number of livestock. Salt or mineral supplements may be provided to help manage livestock.

Effects Analysis

The use of vehicles or ORVs in livestock management could result in prairie dogs mortality by being run over. Fences used in livestock grazing could provide additional perches for raptors, which could prey on BTPDs. The development of new stock ponds, corrals, stock tanks, etc., if they occur on a prairie dog town, could reduce prairie dog habitat. However, disturbance to BTPD habitat from these circumstances would be localized. In addition the conservation strategies (see section 4.0) mandate precluding prairie dog towns from these activities. Livestock grazing can benefit BTPD habitat if managed correctly (Luce 2004). Grazing reduces vegetation height, thereby improving habitat for the BTPD.

Determination

Implementation of livestock grazing management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the small number of prairie dogs that would be susceptible to direct or indirect effects from livestock grazing management actions. In addition, conservation strategies (section 4.0) would help to minimize any direct or indirect effects from livestock grazing management actions on the BTPD and its habitat. Livestock grazing may also benefit BTPD habitat by reducing vegetation height.

Field Offices

All five RMPs analyzed in this BE contain Livestock Grazing Management programs.

Geology and Minerals Resources

Management Actions

The lands administered by the Wyoming BLM contain some of the most prolific oil, gas, coal and trona producing areas in the Rocky Mountain region. Mineral development is subject to leasing, location, or sale based on the Federal mineral law (such as the Mineral Leasing Acts and amendments) covering that particular commodity. Conditions under which the development of these minerals can occur are determined through land use planning. The planning area will be open to consideration for exploration, leasing, and development of leasable minerals including oil, gas, coal, oil shale, and geothermal.

The objective of minerals management actions is to make public lands and Federal mineral estate available for orderly and efficient development of mineral resources. BLM's mineral program is divided into salable minerals, leasable minerals and locatable minerals.

Salable Minerals

Deposits of salable minerals are scattered throughout Wyoming. Salable minerals include sand, gravel, sandstone, shale, limestone, dolomite, and granite rock. These materials were historically used for building, road surfacing, and tools. Today, salable minerals are mainly used for maintaining roads and activities associated with the oil and gas industry.

BLM provides sand, gravel, and stone from Federal mineral deposits as necessary to meet the need for Federal, state, and local road construction and maintenance projects in the planning areas. Before issuing contracts or free use permits for salable minerals, the BLM conducts the appropriate environmental analyses including special studies or inventories of cultural resource values, threatened or endangered plant and wildlife species, and other resources. Stipulations or conditions may be included in the terms of the contract to ensure protection of the natural resource and reclamation of the land following project completion. Sand and gravel, scoria, flagstone, moss rock, and other minerals are available for free use or sale, but are subject to conditions and stipulations developed on a case-by-case basis.

Site reclamation is required following any surface-disturbing activity by mining for salable minerals. Reclamation includes removing all surface debris, recontouring, reducing steep slopes, and planting vegetation. All reclamation proposals must conform to state agency requirements and must be approved by the BLM.

Salable minerals are disposed of under the Materials Act of 1947, as amended, and as such are discretionary actions.

Leasable Minerals

Leasable minerals include fluid (oil, gas, geothermal) and solid minerals such as coal, trona, and phosphate. Bentonite and uranium are leasable on acquired lands.

Current use of coal is primarily for electric generation. Coal in Wyoming is most generally extracted using surface mining methods although in the past some coal was mined underground. Underground mining method is proposed for some future operations. Surface mining requires a Federal coal lease from the BLM, mining permits from the State, mine plans approved by OSM. Surface mining involves the use of large equipment such as draglines, shovels, haul trucks, etc. Small drill rigs are used for exploration to determine the location and thickness, and obtain cores (for determining quality). Extracting coal using surface mining methods often results in large areas of surface disturbance from road construction, removal of topsoil and overburden, and stock piling of these materials. Once an area is mined out, reclamation begins and includes recontouring as closely to the original landscape as possible, reconstruction of drainages, and reseeding and monitoring to assure the habitat is useable. Coal is leased under the Mineral Leasing Act of 1920 and the Federal Coal Leasing Amendments Act of 1976.

Current uses of trona include baking soda, in paints, glass, toothpaste, soaps, ceramic tiles, porcelain fixtures, paper, water softeners and pharmaceuticals. Wyoming is the largest producer of trona in this country and has the largest known reserve of trona in the world. Trona is generally mined underground with the long wall mining method. Surface facilities are generally processing plants, offices, and maintenance buildings along with associated roads.

Current uses of uranium are as a nuclear fuel for generation of electricity, nuclear explosive, in medicine, agriculture and industry as radiation for diagnostic tools, to detect welding problems, in the manufacture of steel products, or used to reduce the spoilage of certain foods. Uranium is generally categorized as a locatable but becomes leasable on acquired lands. Surface facilities include processing plants, equipment maintenance buildings and offices.

Leasable bentonite also occurs on acquired lands. Bentonite is surface-mined with shovels, haul trucks, etc. Drilling is used to locate the bentonite. Large areas of surface disturbance occur through removal of the overburden, overburden stockpiles, surface facilities and roads. Surface facilities include processing plants, equipment maintenance buildings and offices.

Fluid leasable minerals include oil, gas, and geothermal steam. Leasing of oil and gas resources is under the authority of the Mineral Leasing Act of 1920 as amended. Leasing is administered by the BLM through a competitive and non-competitive system. BLM receives nominations of lands to be put up for sale at the bimonthly competitive oil and gas sales. These nominations gathered together into a parcel list and are sent to the respective field offices for the attachment of stipulations. These stipulations are derived from the Land Use Plan. The parcel list is returned to the state office and once verified are put together into the Notice of competitive oil and gas sale booklet. This Notice must be posted for the public 45 days before the lease sale is held. Once the parcel is sold, it is then issued into a lease.

Initial exploration for oil and gas resources is often conducted using geophysical methods. Geophysical exploration involves the use of ATVs and vehicles to lay the geophones, drill the shot holes for charges, or as “thumpers” to create the sound wave instead of using charges and then the removal of the geophones and reclamation of shot holes if used. Exploration for oil and gas (including coal bed natural gas) may also include the drilling of one or more wells to test for the reservoir and its productive viability. During the exploration phase of drilling, surface disturbing activities include the construction of roads, well pads, reserve pits, and other facilities.

Development of oil and gas fields includes construction of the same types of facilities used during exploration, but in addition it may be necessary to obtain Federal rights of ways for product pipelines and power lines. Other surface uses associated with oil and gas development include construction of storage tank batteries and facilities to separate oil, gas and water. Compressor engines (can be gas powered or electric) may be required to move gas to a pipeline, and diesel, gas, or electric pumps and other related

equipment may be needed to lift the oil, gas, or water from the well to the surface. Generally, there are an average of 3 acres for each drill site, 1 mile of road and 1 mile of pipeline for each drill site. This can vary widely with each project. Directional drilling requires a bigger pad than one well. Size is dependent on the number of wells drilled from each pad.

Water is often produced concurrently with oil and gas production and disposal methods can range from subsurface re-injection to direct surface discharge to discharge into a containment pond or pit. Some fields may have large volumes of water or very little water. Water that cannot be discharged to the surface because of its chemical makeup may be treated before surface discharge or may be reinjected. Roads may be two track unimproved roads to crown and ditched roads designed by an engineer. One day to over a month may be required to drill the well depending on the type of well (vertical or directional), depth and types of rocks encountered. Reclamation involves reseeding and the recontouring of unneeded roads and unneeded portions of the well pads.

Geothermal resources are available for exploration, development, and production and are subject to the same surface disturbing and other restrictions applied to oil and gas exploration, development and production. Similar to oil and gas leasing, the BLM administers geothermal leases through a competitive and non-competitive system. The Geothermal Steam Act of 1970 authorizes leasing. There are currently no geothermal leases authorized within Wyoming.

Locatable Minerals

Locatable metallic minerals include silver, gold, platinum, cobalt, and other precious and base minerals. Bentonite and uranium are also locatable except on acquired lands.

Minerals are locatable under the 1872 Mining Law. Most public lands are open to location with the exception of withdrawn lands. The Mining Law of 1872 sets the requirements for lode claims, placer claims, and mill sites as well as discovery, location, annual filings, assessment work, and mineral examinations to establish validity.

Effects Analysis

There is a large amount of present and future minerals development throughout the state. Although an individual well may not take up a large footprint, the combined surface area of thousands of wells adds substantially to the potential loss of BTPD habitat. Both BLM and USFWS would be involved in project design to control the location of roads, pipelines, and other sundries that would be needed for exploration or development to help avoid these impacts.

The white-tailed prairie dog Conservation Assessment (Seglund et al. 2004) has indicated concern that the BLM has not addressed the impact of oil and gas road development with its potential for increased shooting of white-tailed prairie dogs. Though this report focuses on the white-tailed prairie dog, it could apply to the BTPD as well. Although oil and gas fields typically do not offer the most desirable environment for them, recreational prairie dog shooters may still access prairie dog towns from roads built to access oil and gas wells or fields.

The following actions are likely to increase human activity, which may result in displacement and mortality of prairie dogs, loss of BTPD habitat in the footprint of the disturbance, fragmentation of prairie dog towns and complexes, and potential increased recreational shooting of prairie dogs through mineral development access roads: Development, construction, and initial reclamation of oil and gas wells, well pads, access roads, and reserve pits; compressor stations, product enhancement and disposal facilities; power lines and pipelines; and development and construction of coalbed methane sites. Increased traffic

could cause mortality of prairie dogs by vehicles. Well pads are most frequently located or moved so as to avoid prairie dog towns; sometimes their sheer numbers or size of the prairie dog complex makes this impossible. Although attempts are made to locate the pipelines outside of prairie dog colonies, the length of the pipelines and the size of prairie dog complexes may make this impossible. Undeveloped roads may be created by unauthorized users in powerline and pipeline right-of-ways (ROWS) without concern for prairie dog colonies. This may result in vehicle mortality. Energy development infrastructure may also create perches for raptors and thus increase prairie dog predation.

Geophysical exploration may affect prairie dogs by destroying habitat, collapsing tunnel systems, causing auditory impairment and disrupting social systems (Seglund et al. 2004). Three-dimensional geophysical exploration, is a large-scale activity that does not provide the opportunity for avoidance of large prairie dog complexes. It may cause significant damage to vegetation and provide access to recreational prairie dog shooters who could use these linear corridors for unauthorized access.

As with other BLM sensitive species, the BTPD is actively avoided by projects. However, recent work has shown that prairie dogs must be managed on a landscape scale (Seglund et al. 2004), meaning that complexes can die off at one end and expand at another end and that large areas (greater than 5,000 acres) may be involved. Avoidance of existing colonies cannot protect against this landscape factor, because a project could be approved for an area presently absent of prairie dogs, but that would otherwise have been colonized at some future time.

Conservation strategies (section 4.0), would help to minimize effects to the BTPD and its habitat from geology and mineral resource management actions.

Determination

Implementation of mineral management actions **may impact, but is not likely to contribute to the need for Federal listing** for the BTPD for all RMPs except the Buffalo RMP (1985). This determination is based on the potential for new or existing BLM-approved energy and mineral development to impact BTPD colonies and the likelihood that these effects would be minimized through implementation of BTPD conservation strategies (section 4.0).

Implementation of energy and mineral resource management actions **may impact and is likely to contribute toward the need for Federal listing** of the BTPD within the Buffalo RMP (1985) planning area. This determination is based on the limited ability for the BLM to provide minimization of direct effects of coal bed natural gas development to the BTPD through implementation of the conservation strategies (section 4.0) and the potential to damage or destroy suitable occupied and unoccupied BTPD habitat on private land surface ownership with Federal mineral estate. There is one major large-scale gas project, the Powder River Basin which, in its various stages of development, has the potential to affect BTPDs in the Buffalo FO.

Field Offices

All five RMPs analyzed in this BE contain Geology and Mineral Resources Management programs.

Off-Highway Vehicles

Management Actions

The objective of off-highway vehicle (OHV) management is to offer outdoor recreational opportunities on BLM-administered public land while providing for resource protection, visitor services, and the health and safety of public land visitors. Using motorized OHVs requires no fee and no permit, but use is restricted depending on whether the area has been designated as closed, limited, or open.

Off-highway vehicle management designates closed, limited, or open areas for OHV use, posts signs, maps, or brochures, permits OHV rallies, cross-country races, and outings, monitors OHV use, and performs necessary tasks requiring OHV use. Off-highway vehicle use (including over-the-snow vehicles) on BLM-administered lands is limited to existing roads and trails. Some areas are closed to OHV use.

Until signing has occurred, OHV use in “limited” areas will only be permitted on existing roads and vehicle routes. OHV travel will be prohibited on wet soils and on slopes greater than 25% if damage to vegetation, soils, or water quality would result. Seasonal restrictions may be applied in crucial wildlife habitats as needed.

Effects Analysis

If OHV use were to occur in a BTPD colony, there is the possibility of direct vehicle mortality. OHV users gain access to remote areas including prairie dog complexes. This access may result in recreational shooting of prairie dogs, which can have an additive effect with plague, and slow recovery of prairie dog complexes. Off-highway vehicle use (including over-the-snow vehicles) on BLM-administered lands is limited to existing roads and trails. This would limit disturbance to the BTPD and its habitat. Additionally, given the conservation strategies (section 4.0), effects to BTPD colonies will be minimized.

Determination

Implementation of OHV resource management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the limited potential for OHV use to impact suitable BTPD habitats. While some of these actions may impact individuals, the implementation of the conservation strategies (section 4.0) will serve to protect the species sufficiently to ensure that no actions authorized, funded, or carried out by the BLM will contribute to the need for this species to become listed.

Field Offices

All five RMPs analyzed in this BE contain OHV Resource Management programs.

Paleontological Resources

Management Actions

The objective of paleontological resources management is to manage paleontological resources that are part of the BLM-administered public land surface estate for their informational, educational, scientific, public, and recreational uses.

Using the land for scientific purposes, such as paleontological exploration, is authorized through a permit system. Fossils are part of the surface estate, such that whoever owns the surface consequently owns the fossils. A paleontological collecting permit is required before collecting any fossil vertebrates, significant fossil invertebrates, and plants on BLM-administered public lands.

Potential effects on paleontological resources found on BLM-administered public lands will be considered in site-specific environmental analyses before authorizing surface disturbance. Site-specific inventories will be required where significant fossil resources are known or are anticipated to occur. Hobby collection of invertebrate fossils and petrified wood are allowed except in specified areas. The closing of BLM-administered public lands or restricting uses to protect paleontological resources are evaluated on a case-by-case basis.

Effects Analysis

Paleontological resource management is unlikely to affect the BTPD or its habitat where management actions are implemented. Potential impacts depend on several factors, including the type of each field effort, the time of year, the duration of field activities, use of heavy machinery versus hand tools, and the type of habitat affected. Surface disturbance associated with paleontological investigations may result in disturbance to BTPD or its habitat if large-scale excavations take place in areas of known occurrence or potential habitat. Potential loss of primary and secondary habitats is difficult to quantify, but is not expected to limit the range-wide availability of these habitats. Inventories will be completed in accordance with conservation strategies (section 4.0) to verify the presence or absence of BTPD before any ground disturbance. In the event that an occurrence of the BTPD is identified, surface disturbance would be modified to ensure that this species and its habitat are protected.

Determination

Implementation of paleontological resources management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the unlikely chance that paleontological resources management actions would occur within prairie dog complexes and inventories will be completed in accordance with conservation strategies (section 4.0) identifying the presence or absence of BTPDs if surface disturbance is planned in suitable habitat.

Field Offices

The Buffalo and Great Divide (Rawlins FO) RMPs analyzed in this BE contain Paleontological Resource Management.

Recreation Resources

Management Actions

The objective of recreation resources management is to offer outdoor recreational opportunities on lands administered by BLM while providing for resource protection, visitor services, and the health and safety of public land visitors.

Recreation management includes allowing recreational access and use by the public, developing recreational areas, imposing restrictions, acquiring recreational access, and assessing effects of recreational use to the environment. The BLM monitors recreational use, develops management plans, and evaluates and updates recreational potential.

Recreational activities allowed by the BLM include hiking, hunting, mountain biking, boating, and fishing, OHV use (including snowmobiles), horseback riding, and camping. Casual use of BLM-administered public land for hiking, bicycling, hunting, fishing, and similar uses are allowed without charge. Large recreational events may include organized group hikes, motocross competitions, or horse endurance rides. The BLM develops recreational and camping sites. This development includes maintaining or developing recreational sites and facilities, developing campgrounds, providing fishing and floating opportunities, maintaining developed and undeveloped recreation sites, adding developments as opportunities arise, adding interpretive markers, and constructing roads and interpretive sites.

The recreation program may place boundary signs, identify hazards on rivers, restrict recreational uses, limit motorized vehicles to existing trails, designate road use and recreation areas, require facilities to blend with the natural environment, and conduct field inventories. Recreation areas may impose specific restrictions to protect other important resources. Development and enforcement of stipulations and protective measures include designating OHV use, enforcing recreation-oriented regulations, patrolling high-use areas, and contacting users in the field.

Effects Analysis

Recreational sites and activities do not typically occur in prairie dog complexes. OHV use and recreation may compact or erode soil; however, these activities are generally dispersed over large areas. BLM staff regularly field questions from the public about locations for shooting prairie dogs. BLM staff no longer provides locations of prairie dog towns for prospective shooters, and BLM philosophy is that prairie dog shooting is not encouraged (Roberts 2002). Recreational shooters use roads to access prairie dog complexes, and their shooting activity can have an additive effect in slowing recovery of prairie dog populations that have been impacted by plague and other disturbances (Seglund et al. 2004). However, implementing the BTPD conservation strategies (section 4.0) would moderate effects to the BTPD and its habitat from recreation resource management actions.

Determination

Implementation of recreation resource management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the potential for recreation activities to impact suitable BTPD habitats. While some of these actions may impact individuals, the implementation of the conservation strategies (section 4.0) will serve to protect the species sufficiently to ensure that no actions authorized, funded, or carried out by the BLM will contribute to the need for this species to become listed.

Field Offices

All five RMPs analyzed in this BE contain Recreation Resource Management programs.

Riparian Areas

Management Actions

The objective for riparian areas management is to maintain, improve, or restore riparian value to enhance forage, habitat, and stream quality. Priority for riparian areas management will be given to those areas identified as Colorado River cutthroat trout habitat. Laws and guidelines followed during riparian management include Executive Orders 11990 (wetland) and 11988 (floodplain), and section 404 of the Clean Water Act.

Riparian areas management is an integral part of all resources and related management programs. Management actions may include reductions in livestock numbers, adjustments in grazing distribution patterns, fencing, herding, and livestock conversions. Those activities that affect or are affected by riparian values will account for the riparian areas management objectives and direction. Resource values and uses that affect or are affected by riparian values include wildlife and fisheries habitat, forest resources, livestock grazing, OHV use, visual resources, cultural and historical resources, minerals exploration and development, lands and realty activities, watershed and soils resources, recreation uses, fire management, and access.

Effects Analysis

Riparian areas management will not have detrimental effects on the BTPD or its habitat. Though the BTPD may occasionally use areas adjacent to river valleys, it does not use riparian areas.

Determination

Implementation of riparian areas management will have **no impact** on the BTPD. This determination is based on the BTPDs avoidance of riparian areas.

Field Offices

None of the five RMPs analyzed in this BE have stand-alone Riparian Management programs.

Sensitive Plants

Management Decisions

The objective for sensitive plants management is to maintain and enhance known populations of sensitive plant species within BLM-administered public lands. As habitats or sites for any future listed species are identified within a resource area, protective measures will be developed in consultation with the USFWS.

The known populations of sensitive plant species will be protected from disturbance by maintaining or establishing fencing around the populations, and by intensively managing surface disturbance in adjacent areas that could affect the populations. Any proposed surface disturbance will be examined on a case-by-case basis to determine potential adverse effects and appropriate mitigation to minimize those effects. Developments, uses, and facilities will be managed temporally and spatially to avoid damage to the sensitive plant species.

Effects Analysis

Sensitive plant species management actions would not affect the BTPD. Prairie dogs are not noted for foraging on rare or sensitive plant foods. Rather, they forage on typical plants of shortgrass prairie and semi-desert shrublands. If a population of rare plants were discovered within a BTPD colony, protection of the plants, such as fencing and other protective measures, would have very limited negative impact on prairie dogs, with impacts primarily due to avian BTPD predators using fence posts as perches for hunting.

Determination

Implementation of sensitive plants management will have **no impact** on the species. This determination is based on the fact that prairie dogs occur over large areas that are unlikely to harbor rare plants, protective measures for sensitive plants would have no impact on prairie dogs, and the extremely unlikely occurrence that BTPDs would be subject to impacts from avian predators through sensitive plant management.

Field Offices

The Newcastle and Great Divide (Rawlins FO) RMPs are the only FOs with a Sensitive Plant Management program listed separately. This determination will apply to any management actions that address sensitive plant management issues in the other FOs.

Soils

Management Actions

The objectives for soil resources management are to maintain soil cover and productivity and improve areas where soil productivity may be below potential on surface lands administered by BLM.

Activities associated with soil mapping/sampling may include surveying, core drilling, use of pick-up truck mounted soil augers and core samplers (1 ½" to 2" in diameter) and back-hoes (usually around 12-24" in width and pits may be up to 6' deep) for digging soil characterization pits and trenches, using hand held shovels to dig holes or pits, and associated human and vehicle disturbances. These trenches are backfilled and revegetated/reseeded when surveys are complete. Disturbances are usually very small of short duration in nature and will reclaim to the native terrain/vegetation quickly. Surface soil erosion studies may also be conducted. These soil resource related activities in the planning area are mainly in support of other programs. Soil mapping and identification may require the digging of trenches to identify and measure soil horizons below the surface. Formal soil surveys are conducted under a contract with the Natural Resource Conservation Service (NRCS).

Other activities associated with soil resources may include reclamation of abandoned mine lands (AML) and open shafts, removal of waste rock in floodplains or streams, or cleanup of tailings. These reclamation programs are covered under the hazardous materials section of this document.

Timber harvest will be limited to slopes of 45 percent or less to protect water quality and to keep soil from eroding. OHV travel will be prohibited on wet soils and on slopes greater than 25 percent if unnecessary damage to vegetation, soils, or water quality would result. Roads and trails will be closed and reclaimed if they are heavily eroded, washed out, or if access roads in better condition are available. Unless waived, no surface disturbance or occupancy is allowed in areas of severe erosion between March 1 and June 15.

Effects Analysis

Soil resources management would have minimal impact on BTPDs and their habitat and the secondary benefits from improving habitats through revegetation, reseeded, or other rehabilitation would be beneficial. This program prohibits soil-damaging activities when soils are moist. Protective measures for soils, should they occur in or near prairie dog complexes, would have a beneficial impact on BTPDs and

could be positive by preventing compaction and rutting from surface-disturbing activities. Most soils inventories are short-term in duration and surface-disturbing activities are very minimal and reclaimed quickly. Protective measures for soils, should they occur in or near BTPD complexes, are not likely to impact the BTPD with implementation of conservation strategies (section 4.0).

Determination

Implementation of soil management actions **may impact, but is not likely to contribute toward the need for Federal listing** for the BTPD. This determination is based on the fact that the actions associated with soils management are of short duration, will be subject to surface disturbance conservation measures and will provide an overall secondary benefit to the soils and vegetation on which BTPDs occur. Implementation of the conservation strategies (section 4.0) would minimize potential impacts to BTPDs from soil management.

Field Offices

The Great Divide (Rawlins FO) and Platte River (Casper FO) RMPs manage soils jointly with the air and watershed (soil/water/air) management programs. The determination for Soils Management stated here will apply to that activity under any management program that manages soils.

Surface Disturbance Restriction Decisions

Management Actions

Surface disturbance restrictions are necessary to protect certain sensitive resources and areas from adverse effects of surface disturbance and human presence, and include the various management actions developed in and analyzed for the approved RMP. These restrictions apply to all types of activities involving surface disturbance or human presence impacts, and are applied in accordance with the guidelines described in the Wyoming BLM Standard Mitigation Guidelines for Surface-Disturbing Activities (SDA Guidelines). The SDA Guidelines include, where applicable, proposals for waiver, exception, or modification, based on analysis for individual actions. This would allow for situations where a surface-disturbing activity may actually benefit sensitive resources, and allow for those occasions when analysis determines that an activity will not affect those resources.

The SDA Guidelines will be used, as appropriate, to guide development in all programs where surface disturbance occurs and where the objectives of the RMP include the protection of important resource values. On a case-by-case basis, activities will be conditioned by any one or more of the mitigations in the SDA Guidelines to avoid or minimize impacts to other important resource values and sensitive areas. Use restrictions (e.g., dates and distances) may be made more or less stringent, depending on the needs of specific situations. The restrictions identified under the various resource programs are complementary to the standards in the SDA Guidelines and are not all-inclusive. They represent actual requirements applicable to specific circumstances, and examples of requirements that will be considered and applied, if necessary. Surface-disturbing activities may be further restricted as necessary.

The mitigations identified in a particular RMP serve to protect affected resources, not to unnecessarily restrict activities. The RMP provides the flexibility for modifications or exceptions to restrictions in specific circumstances where a restriction is determined not to apply or is not needed to achieve a desired objective.

Surface disturbance is characterized by the removal of vegetative cover and soil materials. Where actual excavation does not occur, activities may be allowed to occur with less stringent limitations provided that the objectives and purpose for the surface disturbance restrictions are met. Examples of less stringent application of the SDA Guidelines would be timber harvesting within 500 feet of streams or riparian areas and on slopes greater than 25 percent. This would apply to those timber harvest activities, such as tree cutting, skidding, and slash disposal, which do not fully remove vegetative cover and soil materials. In the past, allowing these activities with a 100-foot streamside buffer distance and on slopes greater than 25 percent did not produce detrimental effects. However, road construction or staging/loading areas for logging equipment would not meet the less stringent definition and would be subject to the standard requirements of 500 feet and 25 percent slope.

The mitigations prescribed for Federal mineral development on split-estate lands (Federal minerals beneath a non-Federal surface) apply only to the development of the Federal minerals. These mitigations do not dictate the surface owner's management of their lands. The mitigations present restrictions on only those surface activities conducted for purposes of developing the Federal minerals and that are permitted, licensed, or otherwise approved by the BLM.

When the BLM considers issuing a mineral lease, the agency has a statutory responsibility under the National Environmental Policy Act (NEPA) to assess the potential environmental impacts of the Federal undertaking. It also has the statutory authority under the Mineral Leasing Act (MLA) of 1920, the Mineral Leasing Act for Acquired Lands (MLAAL), and the Federal Land Policy and Management Act (FLPMA) of 1976 to take reasonable measures to avoid or minimize adverse environmental impacts that may result from Federally authorized mineral lease activities. This authority exists regardless of whether or not the surface is Federally owned.

The MLA, the MLAAL, and the FLPMA are not the only statutes that establish such authority. Other statutes that may be applicable include the Clean Water Act, the Clean Air Act, the National Historic Preservation Act, the Endangered Species Act of 1973 (ESA), the Federal Coal Leasing Amendments Act of 1976, and the Surface Mining Control and Reclamation Act of 1977. Moreover, the recently enacted Federal Onshore Oil and Gas Leasing Reform Act of 1987 specifically requires the BLM to regulate surface disturbance and reclamation on all leases.

Effects Analysis

Implementation of the surface disturbance restriction management would minimize direct effects to prairie dogs and their occupied habitats by restricting surface disturbing activities. Potential benefits would include conservation of potentially suitable habitats and minimization of actions that would damage suitable habitats.

Determination

Implementation of surface disturbance restriction management **may impact, but is not likely to contribute toward the need for Federal listing** of the BTPD. This determination is based on the minimization of direct or indirect negative effects to the BTPD through implementation of restrictions limiting or restricting other ground disturbing activities, and implementation of the BTPD conservation strategies (section 4.0). Implementation of surface disturbance restriction management would likely provide **beneficial** affects to BTPDs and their habitat by limiting or restricting other ground disturbing activities.

Field Offices

None of the RMPs analyzed addressed surface disturbance restriction management issues, but the potential for the reduction of impacts from other ground disturbing activities utilizing surface disturbance restriction management would have a beneficial effect on BTPDs .

Threatened, Endangered, and Candidate Species Protection

Management Actions

The management objectives of threatened, endangered and candidate species protection are to maintain biological diversity of plant and animal species by supporting WGF D strategic plan population objective levels to the extent practical and consistent with BLM multiple-use management requirements. It maintains and improves forage production and quality of rangelands, fisheries, and wildlife habitat and provides habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the ESA and approved recovery plans.

Although only USFWS can list a species as endangered, threatened, or a candidate for listing, the ESA requires BLM to protect known populations of threatened or endangered species. The BLM's threatened and endangered species management activities include protecting habitat and known populations, enforcing timing stipulations, conducting surveys, and closing known locations of sensitive populations or habitat to surface-disturbing activities.

Effects Analysis

Habitat improvement projects may result in temporary damage or destruction of non-occupied BTPD habitat. However, it is likely that these same projects would result in lasting improvements to conditions that would benefit the BTPD. Threatened, endangered, and candidate species protection management actions would likely benefit the BTPD because of the protections afforded to other species that use BTPD habitat, such as the black-footed ferret. Prior to the implementation of any improvement projects from management actions associated with threatened, endangered, and candidate species protection that involve disturbing BTPD habitat, the conservation strategies (section 4.0) would be implemented in order to minimize direct effects to BTPDs and their occupied habitats. Improvement projects may result in temporary damage or destruction of BTPD habitat. However, it is likely that these same projects would result in lasting improvements to conditions that would benefit the BTPD.

Determination

Implementation of threatened, endangered, and candidate species protection actions **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the possibility of short-term damage or destruction of BTPD habitat. However, it is likely that these same projects would result in long-term improvements that would benefit the BTPD and the conservation strategies (section 4.0) would be implemented in order to minimize direct effects to BTPDs and their occupied habitats. Additionally, threatened, endangered, and candidate species protection management actions would likely **benefit** the BTPD because of the protections afforded to other species that use BTPD habitat, such as the black-footed ferret.

Field Offices

The Buffalo RMP is the only RMP analyzed in this BE addressing Threatened and Endangered Species Management programs. However, the other four FOs do implement Threatened and Endangered Species Management projects and the above practices will apply to this action under any RMP management program where it is administered.

Vegetation Resources

Management Actions

The objectives of vegetation resource management are to maintain or improve the diversity of plant communities to support timber production, livestock needs, wildlife habitat, watershed protection, and acceptable visual resources. It also enhances essential and important habitats for special-status plants species on BLM-administered public land surface and prevents special-status plant species from the need to be listed as threatened and endangered; and to reduce the spread of noxious weeds.

Vegetation treatments, including timber harvesting and sagebrush spraying or burning, will be designed to meet overall resource management objectives. Cooperative integrated weed control programs implement work on adjoining deeded and state lands in cooperation with county weed and pest districts. The three types of control used by the BLM on public lands are chemical, biological, and mechanical. Biological control can involve the use of weevils, beetles, or goats. This method may be used in cooperation with mechanical control (e.g., dozing, cutting, chopping). Sagebrush control measures are also implemented by the BLM. These control methods may be chemical or mechanical. Fire is used to improve range forage production, wildlife habitat, timber stands, sale debris disposal, and to reduce hazardous fuel buildup. Noxious weed control is typically implemented along rights-of-way.

Trees will be planted on timber harvest areas that fail to regenerate naturally in order to achieve minimum stocking levels within five years after completing harvest and rehabilitation. Pre-commercial tree thinning will be initiated on overstocked seedling- and sapling-size stands. Temporary use of heavy equipment may be associated with these authorized activities.

If herbicides are proposed for use, minimum-toxicity herbicides should be used with appropriate buffer zones along streams, rivers, lakes, and riparian areas, including those along ephemeral and intermittent streams. Only Federally-approved pesticides and biological controls are used. Local restrictions within each county are also followed. Projects that may affect threatened or endangered plants or animals will be postponed or modified to protect these species. Pesticide Use Proposals (PUPs) and Biological Use Proposals (BUPs) are developed cooperatively with the County Weed and Pest Districts and the BLM. All PUPs and BUPs are reviewed by the state Noxious Weed Coordinator and approved by the BLM Associate State Director.

Effects Analysis

Vegetation improvement projects may result in temporary damage or destruction of non-occupied BTPD habitat. However, it is likely that these same projects would result in lasting improvements to conditions that would benefit the BTPD. Vegetation management on BLM lands would likely improve forage for prairie dogs. Prior to the implementation of any vegetation improvement project that involved disturbing BTPD habitats, the conservation strategies (section 4.0). However, the majority of vegetation management actions, including timber harvesting, tree planting, and sagebrush removal, are not likely to

occur in BTPD habitat, because of its preference for areas of short grazed grasses, where these actions are not going to occur. Areas becoming unsuitable because of noxious weeds would be treated with environmentally acceptable herbicides according to the BTPD conservation strategies (see section 4.0). Pesticide control would also be utilized according to the BTPD conservation strategies (see section 4.0). One example is the use of deltamethrin to control fleas that transmit sylvatic plague in prairie dogs. Active prairie dog burrows are treated with deltamethrin with the intent of protecting prairie dogs from plague. However, deltamethrin is a long-lasting (up to eight months) insecticide and will kill various insects (e.g., beetles, ants, etc.).

Determination

Implementation of vegetation management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the potential for improvement projects to have a temporary impact on potentially suitable BTPD habitats, although the majority of vegetation management actions, including timber harvesting, tree planting, and sagebrush removal, are not likely to occur in mountain plover habitat because of its preference for areas of short grazed grasses, where these actions are not going to occur. However, most vegetation improvement projects would likely be beneficial to the BTPD over the long-term by providing additional forage. Implementation of the conservation strategies (section 4.0) will minimize any impacts to the BTPD from vegetation management projects.

Field Offices

Buffalo, Newcastle and the Great Divide (Rawlins FO) RMPs specifically manage vegetation, for all other RMPs, this determination will apply to this action under any management program it is administered.

Visual Resources

Management Actions

The objectives of visual resources management are to maintain or improve scenic values and visual quality, and establish visual resources management priorities in conjunction with other resource values. Visual resources are managed in accordance with objectives for visual resources management (VRM) classes that have been assigned to each FO. Visual resource classification inventories have been developed for some, but not all, of Wyoming.

No activity or occupancy is allowed within 200 feet of the edge of state and Federal highways. To improve visual resources, the BLM designs facilities to blend in with the surroundings, reclaims watershed projects and water wells, regulates discharge of produced water, and restricts activities that might degrade visual resources. Facilities or structures such as power lines, oil wells, and storage tanks are required to be screened, painted, and designed to blend with the surrounding landscape, except where safety indicates otherwise. Any facilities or structures proposed in or near wilderness study areas will be designed so as not to impair wilderness suitability.

Effects Analysis

Implementation of visual resources management involves no actual ground disturbing activities and therefore no anticipated disturbance to BTPD habitat and no increased human presence, therefore visual resources management would not have any direct effect on the BTPD or its habitat. Activities would attempt to return sites to their natural condition and likely may benefit the species by preserving and

minimizing impacts to landscapes and habitat. It is unlikely that activities associated with visual resource management would occur in BTPD habitat because much of the suitable BTPD habitat across the state falls into VRM Class IV, which is the least restrictive class restriction and the conservation strategies (section 4.0) in place to minimize impacts to prairie dog colonies. The exclusion of some activities and structures from designated view sheds may also have a secondary positive effect of limiting disturbance of habitats that may be suitable for mountain plovers.

Determination

Implementation of visual resources management will have **no impact** on the BTPD. This determination is based on the fact that visual resource management activities involves no actual ground disturbing activities, activities associated with visual resource management would not likely occur in BTPD habitat because much of the suitable BTPD habitat across the state falls into VRM Class IV, which is the least restrictive class restriction, and the conservation strategies (section 4.0) in place to minimize impacts to prairie dog colonies. VRM activities would attempt to return sites to their natural condition and may benefit the species by preserving and minimizing impacts to landscapes and BTPD habitat.

Field Offices

The Casper RMP does not specifically manage for VRM. For this RMP, the determination stated here will apply to any management program containing visual resources management actions.

Watershed and Water Resources

Management Actions

The objectives of watershed and water resources management are to maintain or improve surface and groundwater quality consistent with existing and anticipated uses and applicable state and Federal water quality standards and to provide for availability of water to facilitate authorized uses. This program also aims to minimize harmful consequences of erosion and surface runoff from BLM-administered public land.

Passing of the Water Resources Research Act, Water Resources Planning Act, and the Water Quality Act of 1965 allowed the BLM to expand its water resources program and increased cooperation with soil conservation districts. Activities authorized under water resources management may include implementation of watershed plans, identification of heavy sediment loads, monitoring and treating soil erosion, evaluating and restricting surface development, and monitoring water quality.

No surface disturbance will be allowed within 500 feet of any spring, reservoir, water well, or perennial stream unless waived by the authorized officer. Pollution prevention plans are developed for actions that qualify under the Wyoming Storm Water Discharge Program to reduce the amount of non-point pollution entering waterways. The rights to water-related projects on public lands will be filed with the Wyoming state engineer's office in order to obtain valid water rights.

Effects Analysis

Watershed and water resources management actions are not expected to directly affect the BTPD or its habitat, because these actions are not planned in any of the respective RMPs within BTPD habitat, nor are they likely to occur in the future in suitable BTPD habitat. BTPDs inhabit shortgrass prairie and semi-desert shrublands without much slope, and are not typically found in riparian areas where watershed and

water resources management actions would occur. Watershed and water management actions are designed prevent or reduce erosion, improve water filtration, and reduce salinization. In rare exceptions, water management projects might disturb potentially suitable BTPD habitat when activities occur in upland BTPD habitat adjacent to water management projects. Rivers with wide floodplains, particularly prairie rivers such as the Powder River, may provide suitable BTPD habitat, however, no watershed or water resources projects are planned for this area. These impacts are not expected to impact BTPDs, because of their localized nature and their relatively small size compared to the availability of otherwise suitable habitats.

Determination

Implementation of watershed and water resources management will have **no impact** on the BTPD. This determination is based on the fact that watershed and water resources management does not occur in BTPD habitat. In addition, a 500-foot buffer preventing surface disturbance on perennial streams could **benefit** those individuals that use grasslands adjacent to riparian areas.

Implementation of watershed and water resources management **may impact, but is not likely to contribute toward the need for Federal listing** of the mountain plover. This determination is based on the very low likelihood that actions would occur in BTPD habitat and implementation of the conservation strategies (section 4.0) will minimize impacts to the BTPD from watershed and water resources management actions.

Field Offices

Water and Watershed Resource Management programs are listed separately or managed jointly with air quality and soils management in all five RMPs.

Wild and Scenic Rivers

Management Actions

The objectives of wild and scenic rivers management for public lands administered by the BLM that meet the wild and scenic rivers suitability factors is to maintain or enhance their outstandingly remarkable values and wild and scenic rivers (WSR) classifications until Congress considers them for possible designation. BLM wild and scenic rivers management includes studying segments of the river for potential classification by Congress. The suitable determination is based on the uniqueness of the diverse land resources and their regional and national significance, making them worthy of any future consideration for addition to the WSR system.

The only designated wild and scenic river in the state is Clarks Fork of the Yellowstone River, on National Park Service land. Buffalo FO has proposed a WSR within its borders. The Middle Fork of the Powder River in the Buffalo FO is currently managed as a WSR, but is not Federally designated as such. Management of this area is in accordance with Public Law 90-542.

Effects Analysis

Actions associated with wild and scenic rivers on lands administered by the BLM would not impact the BTPD because these actions would be localized around rivers and not in potentially suitable BTPD habitat. Prairie dogs do not utilize habitat around streams or rivers due to the fact that high water tables and flooding around these areas would fill burrows with water and make them unsuitable habitat.

Determination

Implementation of WSR management will have **no impact** on the BTPD. This determination is based on the fact that BTPD habitat is not associated with rivers or streams and that no BLM designated eligible or suitable WSR stream or river segment on BLM lands in Wyoming contains BTPD habitat.

Field Offices

The Buffalo, Cody and Great Divide (Rawlins FO) RMPs manage eligible and suitable WSR stream or river segments, however, no BTPD habitat occurs within these segments.

Wild Horses

Management Actions

The objectives of wild horse management are to maintain a viable herd that will preserve the free-roaming nature of wild horses in a thriving ecological balance and to provide opportunity for the public to view them. The FLPMA amended the Wild and Free Roaming Horse and Burro Act to authorize the use of helicopters in horse and burro roundups. Wild horse and burro populations have more than tripled since passage of the Wild and Free Roaming Horse and Burro Act in 1971. Wild horse and burro numbers on BLM lands in Wyoming were estimated at 37,000 in 2004; this compares with horse numbers on BLM lands in the west that are estimated at more than 60,000 compared to 17,000 in the late 1960s.

The Wild Horse Program herds, corrals, transports, monitors, and rounds up horses for wild horse management. Herds are monitored by airplane census and counted each year. Helicopters may also be used to round up wild horses. The construction of corrals and capture facilities could cause impacts through ground disturbance and concentrated human presence. Horse round-up generally causes concentrated compaction by horse hooves in corral and load-out areas. Placement of capture corrals and capture facilities outside of prairie dog habitat is important as the concentrated disturbance could potentially be an adverse affect to this species and its habitat.

Land use plans are used to plan wild horse management. The BLM decides how many horses to allow in a certain area. This is termed the approximate management level and the BLM can adjust horse numbers as needed. Issues such as carrying capacity, trends in utilization, and public input are considered. The BLM's wild horse management specialists coordinate with wildlife biologists and archaeologists to ensure that wild horse management will not cause adverse impacts to biological or cultural resources.

Effects Analysis

Wild horse herd management areas (WHHMAs) are located within the Cody (McCullough Peaks WHHMA) and Great Divide (Rawlins FO) (Adobe Town, Flat Top and Seven Lakes WHHMAs) RMP planning areas, but no BTPDs occur within these WHHMAs. Wild horses may occur in BTPD habitat, but because of their roaming habit, wild horse disturbance to prairie dog complexes is minimal. There is the possibility that if wild horse gathers were to take place and wing fences and corrals were set up in a BTPD town, there could be some temporary impacts such as collapse of burrow openings and trampling of vegetation. The prairie dogs could easily escape harm in their burrows, and the impacts would be short-term. In addition, actions such as trampling of vegetation and creation of bare areas may benefit BTPD habitat. Additionally, given the conservation strategies (section 4.0), effects to BTPD colonies would be expected to be minimal.

Determination

Implementation of wild horse management will have **no impact** on the BTPD. This determination is based on the fact that there is no BTPD habitat associated with any WHHMAs on BLM lands in Wyoming.

Field Offices

The Buffalo, Casper, and Newcastle FOs do not manage wild horses, and this determination does not affect these FOs.

Wilderness Resources

Management Actions

All WSAs are managed under the Interim Management Policy (IMP) until Congress issues management guidelines. There are three categories of public lands to which the IMP applies: (1) WSAs identified by the wilderness review required by Section 603 of the FLPMA, (2) legislative WSAs (i.e., WSAs established by Congress, of which there are none administered by the BLM in Wyoming), and (3) WSAs identified through the land-use planning process in Section 202 of the FLPMA. The BLM ensure that proposed actions are consistent with land use plans in effect for WSAs. Absence of roads, total area extent, naturalness, solitude, or a primitive and unconfined type of recreation; and other ecological, geological, educational, scenic, or historical features may be considered wilderness values. Activities associated with this program may include inventories to identify wilderness areas, public involvement with the wilderness study process, authorization of mining claims under unique circumstances, or evaluations of proposed actions to determine potential impacts to known or potential wilderness values.

Operators prepare a Plan of Operation before beginning any mining exploration. The plan identifies the mining strategy and attempts to minimize environmental impacts. Discovery work for WSAs under Section 603 must be done to non-impairment standards. Only “unnecessary and undue degradation” requirements apply to Section 202 WSAs.

A mining claim may be staked at any time in an existing WSA. NEPA analysis is required, however, before any activity is authorized in a WSA. Environmental Assessments (EAs) or Environmental Impact Statements (EISs) are prepared to determine if a proposal meets non-impairment criteria. Categorical exclusions to eliminate this analytical process for uses and facilities on lands under wilderness review are not allowed.

The designation of WSA status is simply a designation, and tempers or stipulates from a WSA viewpoint, specific protections or management of other BLM authorized actions. WSA classifications, in and of themselves, do not place on-the-ground projects or ground disturbing activities. Generally, WSA status is a beneficial impact on wildlife and plant species.

Effects Analysis

Only the Fortification Creek WSA in the Buffalo FO has the possibility of containing BTPD habitat, although it is unknown for sure if BTPDs occur there. Projects allowed with WSAs would be intended to improve natural features and values. Such projects may result in short-term loss of BTPD habitats, but following completion may result in conditions that are improved and more suitable to the BTPD. The

designation and management of WSAs would be beneficial in that they would protect mountain plover habitat from most surface disturbing activities. Surface disturbing activities would be restricted in WSAs. Most wilderness areas likely have very limited potential for BTPDs, because wilderness surveys are typically located in more rugged terrain.

Determination

Implementation of wilderness resources management **may impact, but is not likely to contribute toward the need for Federal listing** of the BTPD. This determination is based on the minimization of direct effects to the BTPD within WSAs through implementation of the Interim Management Policy (IMP) protections until Congress makes a determination to either drop or add a WSA to the Wilderness System. The restriction of surface disturbing activities within WSAs would likely provide **beneficial** affects to BTPDs and their habitat by limiting or restricting other ground disturbing activities.

Field Offices

The Buffalo, Cody and Great Divide (Rawlins FO) RMPs implement Wilderness Management programs. The Platte River (Casper FO) and Newcastle RMPs do not contain any WSAs within their planning areas.

Wildlife Habitat

Management Actions

BLM has identified four primary objectives for the management of wildlife habitats. First, BLM will maintain the biological diversity of plant and animal species. Second, it will support the population objective levels of the WGFD's strategic plan, to the extent practical and consistent with BLM multiple-use management requirements. Third, BLM will maintain and, where possible, improve forage production and quality of rangelands, fisheries, and wildlife habitats. Finally, to the extent possible, BLM will provide habitats for threatened and endangered and special-status plant and animal species on all public lands in compliance with the ESA and approved recovery plans.

Approximately 90 percent of wildlife program activities support other resource programs. These programs include fuels reduction, density of timber stands in deer and elk winter habitats, oil and gas exploration, timber harvest, and prescribed fires. Specific management goals and actions apply to several wildlife groups and habitats including big game ranges, wetland and riparian areas, elk habitat, raptor and grouse breeding areas, and animal and insect damage control. Wildlife management maintains and, where possible, improves forage production and quality of rangelands, fisheries, and wildlife habitat. It also provides habitats for threatened, endangered, and special-status animal and plant species on BLM-administered public land surface in compliance with the ESA and approved recovery plans.

Big game and fisheries management levels identified in the WGFD 1990-1995 strategic plan are supported by the BLM. The BLM cooperates with the WGFD to introduce or reintroduce native and acceptable non-native wildlife and fish where potential habitat exists. Wildlife habitat is monitored and population adjustments and habitat improvements are recommended to the WGFD, as appropriate. The BLM works with the USFWS and the WGFD to evaluate and designate critical habitat for threatened and endangered species on BLM-administered public lands.

BLM's wildlife program is actively involved in projects and management activities that benefit wildlife and habitats for wildlife. Wildlife program projects include surveying; monitoring; improving habitats such as through the development of habitat management plans; and creating cooperative management

areas. Management activities include developing stipulations and protective measures, acquiring land, conducting inventories, performing livestock- or forestry-related activities, and improving wildlife and fisheries habitats.

The BLM develops stipulations and protective measures to enhance wildlife and fisheries habitats. These stipulations and measures include limiting surface development; use of timing restrictions; authorizing withdrawals of some areas from mineral entry; limiting access to specific areas by four-wheel-drive vehicles, snowmobiles, equestrians, and pedestrians; prohibiting surface development; and imposing road closures. The BLM may acquire riverfront land or easements and conduct inventories of potential habitats for occurrences of threatened, endangered, and sensitive species.

BLM conducts livestock- and forestry-related activities that benefit wildlife. Livestock-related wildlife management activities include developing water sources, constructing and maintaining fences, managing other resource activities to conserve forage and protect habitats, improving the production of forage and the quality of rangelands, and improving range with mechanical treatment. Forestry-related wildlife management activities include managing timber and promoting cutting, thinning, planting, seeding, and pitting.

BLM also conducts wildlife management activities specifically to benefit terrestrial and aquatic wildlife. Activities for terrestrial species include, but are not limited to, introducing species, monitoring habitats, modifying fences for antelope passage, implementing public use closures for wintering elk, developing water areas for waterfowl and waterbirds, recommending habitat improvement projects, conducting treatments to control exotic plants, conducting prescribed burns, restoring meadows, cabling junipers, changing types of grazing and season of grazing, developing islands, allowing farming, managing accesses, authorizing agricultural entry and disposal, and using surface protection mitigations. Activities for aquatic species include establishing a baseline fisheries inventory, improving fish habitat, stabilizing banks, developing watering sources, modifying barrier fences, removing exotic fish, constructing instream barriers to protect species from non-native invaders, installing revetments and fish passage structures, installing log overpours, sampling and analyzing macroinvertebrate, installing gabion baskets, and placing large boulders for instream fish habitat.

Effects Analysis

Wildlife habitat management may influence potential habitats for BTPD. Protection of grouse breeding areas could benefit the BTPD by protecting their habitat. Limiting access to specific areas by four-wheel-drive vehicles, snowmobiles, equestrians, and pedestrians; prohibiting surface development; and imposing road closures could benefit the species by protecting prairie dog habitat and reducing human access. Wildlife habitat improvement projects may result in temporary disturbance to BTPD habitat. However, it is likely that these same projects would result in lasting improvements to conditions that would benefit the BTPD. Prior to the implementation of any improvement project that involved disturbing BTPD habitat, the conservation strategies (section 4.0) would be implemented in order to minimize direct effects to BTPDs and their occupied habitats.

Wildlife habitat improvement projects in riparian areas and timber stands are not likely to affect the BTPD or its habitat because of the prairie dog's use of short grass habitats. Improvement projects that seek to increase forage production and the quality of rangelands may result in damage or destruction of some BTPD habitats. Projects conducted to improve wildlife, fisheries or plant habitat would likely be beneficial for BTPD habitat or designed to specifically improve BTPD habitat.

Determination

Implementation of wildlife habitat management **may impact, but is not likely to contribute to the need for Federal listing**. This determination is based on the potential for improvement projects to have a temporary impact on suitable BTPD habitat. However, the effects to BTPDs and their habitat are expected to be minimal based on the localized nature of the projects and implementation of the conservation strategies (section 4.0) when projects occur in BTPD habitat. These same habitat improvements would likely benefit the BTPD in the long-term.

Field Office Management Action	Buffalo FO <i>(Buffalo RMP)</i>	Casper FO <i>(Platte River RMP)</i>	Cody FO <i>(Cody RMP)</i>	Newcastle FO <i>(Newcastle RMP)</i>	Rawlins FO <i>(Great Divide RMP)</i>
Access					
Air Quality	NLC		NLC	NLC	
Special Areas/ ACECs		BI		BI	BI
Cultural/Historical	NLC	NLC	NLC	NLC	NLC
Fire Management	NLC	NLC	NLC	NLC	NLC
Forest Resources	NI	NI	NI	NI	NI
Hazardous Material	NLC		NLC	NLC	
Lands and Realty	NLC	NLC	NLC	NLC	NLC
Livestock Grazing	NLC	NLC	NLC	NLC	NLC
Minerals and Geology	MI-L	NLC	NLC	NLC	NLC
OHV Use	NLC	NLC	NLC	NLC	NLC
Paleontology	NLC				NLC
Recreation	NLC	NLC	NLC	NLC	NLC
Riparian					
Sensitive Plants				NI	NI
Soil/Water/Air		NLC			NLC
Soils Management	NLC			NLC	
Surface Disturbance Restrictions					
T&E Species	NLC				
Vegetation	NLC			NLC	NLC
Visual	NI		NI	NI	NI
Water/Soils					
Watershed/Water Resources	NLC		NLC	NLC	
Wild and Scenic Rivers	NI		NI		NI
Wild Horses			NI		NI
Wilderness	BI		BI		BI
Wildlife and Fish	NLC	NLC	NLC	NLC	NLC

Determination categories considered as part of this analysis, and consistent with BLM policy language (BLM Manual 6840: Special Status Species Management) include the following:

- **No impact (NI); or**
- **May impact, but the overall impacts are beneficial (BI)**
- **May detrimentally impact, but is not likely to contribute to the need for Federal listing (NLC)**
- **May detrimentally impact and is likely to contribute to the need for Federal listing (MI-L)**

4.0 CONSERVATION STRATEGIES

Implementation of the following conservation measures is intended to minimize adverse impacts resulting from the previously described management actions RMPs. In addition to the existing BTPD conservation measures in the RMPs (items 1 through 6), the BLM has committed to implement conservation measures 7 and 8. The BLM will also consider implementing best management practices (BMPs) (items 9 through 22) to further protect the BTPD and its habitat.

Existing Protections in the RMPs

1. The *Wyoming BLM Standard Mitigation Guidelines for Surface Disturbing Activities* requires any lessee or permittee to conduct inventories or studies in accordance with BLM and USFWS guidelines to verify the presence or absence of threatened or endangered species before any activities can begin on site. In the event the presence of one or more of these species is verified, the operation plans of a proposed action will be modified to include the protection of the species and its habitat, as necessary. Possible protective measures may include seasonal or activity limitations, or other surface management and occupancy constraints (BLM 1990). All BLM FOs.
2. Standards for Healthy Rangelands and Guidelines for Livestock Grazing Management for the Public Lands Administered by the Bureau of Land Management in the State of Wyoming (all BLM FOs),
 - Specifically:
 - Standard 1 - Within the potential of the ecological site (soil type, landform, climate, and geology), soils are stable and allow for water infiltration to provide for optimal plant growth and minimal surface runoff.
 - Standard 3 - Upland vegetation on each ecological site consists of plant communities appropriate to the site which are resilient, diverse, and able to recover from natural and human disturbance.
 - Standard 4 - Rangelands are capable of sustaining viable populations and a diversity of native plant and animal species appropriate to the habitat. Habitats that support or could support threatened species, endangered species, species of special concern, or sensitive species will be maintained or enhanced.
3. Grazing management practices will incorporate the kinds and amounts of use that will restore, maintain, or enhance habitats to assist in the recovery of Federal threatened and endangered species or the conservation of Federally-listed species of concern and other state-designated special status species. Grazing management practices will maintain existing habitat or facilitate vegetation change toward desired habitats. Grazing management will consider threatened and endangered species and their habitats (BLM Wyoming Guidelines for Livestock Grazing Management). All BLM FOs.
4. Grazing management practices will restore, maintain, or improve plant communities. Grazing management strategies consider hydrology, physical attributes, and potential for the watershed and the ecological site (BLM Wyoming Guidelines for Livestock Grazing Management - All BLM FOs).
5. The BLM will maintain biological diversity of plant and animal species; support WGFD strategic plan population objective levels to the extent practical and to the extent consistent with BLM multiple use management requirements; maintain, and where possible, improve forage production

and quality of rangelands, fisheries, and wildlife habitat; and to the extent possible, provide habitat for threatened and endangered and special status plant and animal species on all public lands in compliance with the ESA and approved recovery plans (Buffalo RMP, p.33).

6. BLM policy invokes a minimum 5-year status as a BLM sensitive species after any delisting. The BTPD was removed as a candidate for listing under the ESA on August 12, 2004. BLM Policy Manual 6840 dictates that “the protection provided by the policy for candidate species shall be used as the minimum level of protection for BLM sensitive species (BLM Policy Manual 6840 - All BLM FOs).”

Conservation Measures Committed to by BLM

7. Ensure there is no unauthorized control of BTPDs on BLM lands. Prairie dog control on public land shall not be authorized except for human health and safety reasons, or for resource damage determined acceptable for control by the BLM.
8. Notify the public that unauthorized use of poisons for BTPD control is not allowed on BLM lands.
9. On any given grazing allotment containing black-tailed prairie dogs, the Bureau and grazing permittee will manage for a mosaic of range conditions. Areas occupied by prairie dogs may have reduced vegetation while other areas of the allotment which do not contain black-tailed prairie dogs may have thicker stands of grass and forbs.

Best Management Practices

The following BMPs are to be considered on a case-by-case basis at the project level, and implemented where appropriate, to further protect the BTPD.

9. New access roads should avoid intersecting a prairie dog colony or bisecting 2 adjacent colonies, to avoid access by recreational shooters.
10. New prairie dog towns should be allowed to become established on public lands.
11. No further oil and gas exploration and development should be allowed into occupied prairie dog colonies, or the BLM should apply a Condition of Approval (COA) on all Applications for Permit to Drill (APDs) within areas containing known populations of BTPDs that protects rearing of young from April 10 through July 10. When possible, a No Surface Occupancy stipulation should be applied to all occupied and recovering prairie dog habitat for well pads or ancillary facilities (e.g. compressor stations, processing plants, etc.) within 1/8th mile of BTPD habitat. When possible, no seismic activity should be allowed in occupied or recovering prairie dog habitat.
12. A steering committee should be formed to develop and prioritize management practices and assist BLM and USFWS with research efforts.
13. Actively participate in implementation of the Conservation Assessment and Strategy Plan for Black-tailed Prairie Dogs.

14. Follow the guidelines outlined in the Wyoming Black-tailed Prairie Dog Management Plan (Wyoming Black-tailed Prairie Dog Working Group 2001): Encourage the Wyoming Game and Fish Commission to remove unprotected status on prairie dogs, and, if appropriate, work with the WGFD to implement seasonal restrictions on BTPD shooting or seasonal firearms/shooting restrictions or closures on BLM properties with BTPDs between April 1 and July 15.
15. Establish land stewardship agreements with other agencies and/or private landowners where large (1,000 acres) BTPD towns or complexes exist adjacent to BLM land ownership. These agreements can control potential uses that may be detrimental to prairie dogs and their habitats, while preserving the landowner's intent for use.
16. The BLM should avoid the sale or exchange of lands with BTPDs and should attempt to acquire parcels with BTPDs on them.
17. Ensure that BTPD conservation is being addressed on all livestock permit renewal evaluations and associated environmental assessments for oil and gas developments, rights-of-way grants, organized recreational events, etc.
18. Grazing should be reduced or eliminated during drought. Practices should avoid vegetation stand conversions.
19. Natural fire regimes should be restored in BTPD habitats: "Let burn" policies for BTPD towns; and no mechanical or chemical (herbicides) fuel treatments should be allowed in BTPD towns.
20. BLM will encourage, support, and/or establish a BTPD research program, addressing issues such as: The effect(s) of shooting and oil and gas development on BTPDs, sylvatic plague control, and population viability analysis.
21. When drilling multiple oil or gas wells, if geologically and technically feasible, drill from the same pad using directional (horizontal) drilling technologies (up to 16 wells per pad, as technologically feasible) to lessen surface impacts on BTPD colonies/towns.
22. In BTPD habitat, salvage topsoil from all facilities construction and re-apply during interim and final reclamation. In BTPD habitat, native seed mixes will be used to re-establish short grass prairie vegetation during reclamation. Seed mixes and application rates for reclamation should produce stands of vegetation suitable for BTPDs habitat, while meeting the BLM's requirements for stabilizing soil and controlling weeds. Seed mixes and application rates for reclamation should be designed to produce stands of low-growing vegetation suitable for BTPDs in previously suitable BTPD habitat. Reclamation should attempt to return the plant community to the pre-existing condition as soon as possible.

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