

APPENDIX E

WILDLIFE MONITORING/PROTECTION PLAN DESOLATION FLATS NATURAL GAS DEVELOPMENT PROJECT

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ABBREVIATIONS AND ACRONYMS

ANS	Artificial Nesting Structure
APD	Application for Permit to Drill
APLIC	Avian Powerline Interaction Committee
BA	Biological Assessment
BLM	Bureau of Land Management
BO	Biological Opinion
CSU	Controlled Surface Use
DFPA	Desolation Flats Project Area
EIS	Environmental Impact Statement
GIS	Geographic Information System
LOP	Life-of-Project
RFO	Rawlins Field Office
ROW	Right-of-Way
RSFO	Rock Springs Field Office
TEP&C	Threatened, Endangered, Proposed, and Candidate Species
USFWS	U.S. Fish and Wildlife Service
WGFD	Wyoming Game and Fish Department
WYNDD	Wyoming Natural Diversity Database

APPENDIX E: WILDLIFE MONITORING PLAN

1.0 INTRODUCTION

The Wildlife Monitoring/Protection Plan was prepared in conjunction with the Environmental Impact Statement (EIS) for the Desolation Flats Natural Gas Development Project, Sweetwater and Carbon counties, Wyoming. The goal of the plan is to avoid and/or minimize adverse impacts to wildlife that may be present on project-affected areas by monitoring and protecting wildlife populations and associated habitat on the Desolation Flats Project Area (DFPA) during the course of project development and operations and by developing appropriate mitigative actions. Implementation of the plan will allow managers and project personnel opportunities to achieve and maintain desired levels of wildlife productivity and populations on the DFPA (e.g., at pre-project levels) by minimizing and/or avoiding potential adverse impacts to wildlife species. In addition, the implementation of this plan will facilitate the maintenance of a diverse assemblage of wildlife populations on the DFPA simultaneously with the development of natural gas reserves. A Review Team (Review Team), comprised of personnel from the U.S. Bureau of Land Management (BLM) Rawlins Field Office (RFO) and Rock Springs Field Office (RSFO), the U.S. Fish and Wildlife Service (USFWS), the Wyoming Game and Fish Department (WGFD), and Industry (Operators), has been identified to determine wildlife monitoring and protection requirements and needs on an annual basis within the DFPA (USDI-BLM 2000).

The Proposed Action for the Desolation Flats Natural Gas Development Project involves the development of a maximum of 385 new wells at 361 well locations and associated facilities (roads, pipelines, compressor stations) on the DFPA over the next 15-20 years. The proposed life-of-project (LOP) is estimated to be from 30 to 50 years. Alternative development strategies also have been proposed (i.e., Increased Development Alternative, No Action Alternative). A complete description of the proposed project and alternatives is provided in Chapter 2.0 of the EIS.

Proposed inventory, monitoring, and protection measures will be implemented under each potential development scenario (i.e., alternative), unless information revealed in the coordinated review of annual wildlife reports (see Section 2.1) indicates these measures are unnecessary for wildlife protection. The wildlife monitoring / protection plan will not be implemented under the No Action Alternative.

Implementation of the plan will begin in 2003, and it is estimated that the implementation will continue for a maximum of 20 years; however, the plan may be terminated at the end of any year when there is sufficient evidence that wildlife populations and productivity in the DFPA have been successfully protected. The plan will receive a major review for effectiveness every five to six years, or as determined by the Review Team.

2.0 IMPLEMENTATION PROTOCOL

This section provides a preliminary wildlife inventory, monitoring, and protection protocol for the DFPA. A summary of primary protocol components is provided in Table E-1. Inventory and monitoring requirements are included in this table. In areas where development may reach 4 well locations per section, then additional inventory, monitoring, and protection measures are provided, unless otherwise agreed to by the Review Team, and are located in Table E-2. Standard protocol for Application for Permit to Drill (APD) and right-of-way (ROW) application field reviews are provided in Table E-5. Alternative protocols likely will be developed in the future in response to specific needs identified in annual wildlife reports (see Section 2.1). Methods are provided for each wildlife species and/or category, and additional species and/or

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categories may be added based on needs identified in annual wildlife reports. The wildlife species and/or categories for which specific inventory, monitoring, and protection procedures will be applied were developed based on management agency (i.e., RFO and RSFO, USFWS, and WGFD) and individual concerns identified during the preparation of the EIS.

Considerable efforts will be required by agency and Operator (e.g., Marathon, EOG, Tom Brown, Questar, etc.) personnel for plan implementation. Many of the annually proposed agency data collection activities are consistent with current agency activities. Additionally, during annual planning and throughout project implementation, all efforts will be made to accommodate agency personnel schedules and responsibilities, and further agency cost-sharing approaches will be considered such that public demands and statutory directives are achieved (USDI-BLM 2000).

2.1 ANNUAL REPORTS AND MEETINGS

During project development (i.e., 15-20 years), Operators will provide an updated inventory and description of all existing project features (i.e., locations, size, and associated human activity at each feature), as well as those tentatively proposed for development during the next 12 months. This inventory will be submitted to the BLM by the Operators no later than October 15 of each year. These data will be coupled with annual wildlife inventory, monitoring, and protection data obtained from the previous year and included in annual reports. Annual reports will be prepared by the BLM. When annual wildlife inventory, monitoring, and protection data are gathered by parties other than the BLM, those parties (e.g., Operators, WGFD) will be requested to provide the data to the BLM by October 15 of each year. Upon receipt of these data, annual reports will be completed in draft form by the BLM and submitted to Operators, USFWS, and other interested parties no later than December 15 of each year. A one-day meeting of the Review Team will be organized by the BLM and held in January/February of the following year to discuss and modify, as necessary, proposed wildlife inventory, monitoring, and protection protocol for the subsequent field season.

Decisions regarding annual Operator-specific financing and personnel requirements will be made at these meetings. A protocol regarding how to accommodate previously unidentified development sites will also be determined during the annual meeting. Final decisions will be made by the BLM based on the input from the Review Team and all affected parties.

A final annual report will be issued by the BLM to all potentially affected individuals and groups by February/March of each year. Annual reports will summarize annual wildlife inventory and monitoring results, note any trends across years (if available), identify and assess protection measures implemented during past years, specify monitoring and protection measures proposed for the upcoming year, and recommend modifications to the existing wildlife monitoring/protection plan based on the success, and/or failures of past years (e.g., identification of additional species and/or categories to be monitored).

Where possible, the data presented in reports will be used to identify potential correlations between development and wildlife productivity and/or abundance. Addendum E-1 provides examples for the tabular presentation of data within annual reports; however, it should be noted that the final report format will be determined by the BLM. The BLM's Geographic Information System (GIS) will be used for information storage, retrieval, and planning, and annual GIS data updates will be conducted.

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Table E-1: *Summary of General Wildlife Reporting, Inventory, and Monitoring, Desolation Flats Natural Gas Development Project Sweetwater and Carbon Counties, Wyoming, 2002.*

REPORTING		
Action	Dates	Responsible Entity¹
Annual area wide tentative plan of development showing locations of existing and newly proposed development features.	Annually by October 15.	Operators
Annual reports summarizing findings and presenting protection actions.	Annually by: Draft - December Review Team Meeting - January/February Final - February/March	BLM with reviews by Operators, USFWS, WGFD, and other interested parties.
Meetings to finalize future years' inventory, monitoring, and protection measures.	Early December/January and as necessary.	BLM with participation by USFWS, Operators, WGFD, and other interested parties.
INVENTORY AND MONITORING		
Action	Dates	Responsible Entity
Raptor nest inventories (DFPA plus one mile buffer).	Every 5 years during April-May.	BLM; Operator-provided financial assistance for aircraft rental.
Raptor productivity monitoring (on the DFPA plus a one-mile buffer).	Every 5 years during March to mid-July.	BLM with Operator-provided financial assistance for aircraft rental as necessary.
Aerial greater sage-grouse lek inventories (DFPA plus a two-mile buffer).	Every 5 years during March-April.	BLM; Operator-provide financial assistance for aircraft rental.
Greater sage-grouse lek attendance monitoring on and within two-miles of the DFPA.	Annually during March to mid-May.	Selected leks will be visited at least once by the BLM and/or WGFD, such that all known leks are visited every three years.
Greater sage-grouse winter habitat inventory and monitoring within and adjacent to the DFPA.	As required during December-February.	BLM, in coordination with WGFD; Operator-provided financial assistance for aircraft rental.
Big game crucial winter range use monitoring (crucial winter range on the DFPA plus a one-mile buffer, or as determined by the Review Team).	As required and/or available.	BLM, in coordination with WGFD; Operator-provided financial assistance for aircraft rental.

¹With Operator assistance, it is anticipated that agency obligations will not greatly exceed currently approved personnel or financial commitments.

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Raw data collected each year also will be provided to other management agencies (e.g., WGFD, USFWS, Wyoming Natural Diversity Database[WYNDD]) at the request of those agencies. In addition, sources of potential disturbance to wildlife will be identified, where practical (e.g., development activities, weather conditions, etc.).

Additional reports may be prepared in any year, as necessary, to comply with other relevant wildlife laws, rules, and regulations (e.g., black-footed ferret survey reports, raptor reports).

Additional meetings will be held as necessary in any given year by the BLM, Operators, and/or USFWS in Rawlins to inform and update Operator personnel on the findings of the annual reports (USDI-BLM 2000).

2.2 ANNUAL INVENTORY AND MONITORING

The inventory and monitoring protocol will be as identified below for each wildlife species and/or category. This protocol will be unchanged across development alternatives, except as authorized by the BLM or specified in this plan. Additional wildlife species and/or categories and associated surveys may be added or omitted in future years, pending the coordinated review of annual wildlife reports. Opportunistic wildlife observations may be made throughout the year by agency and Operator personnel present in the DFPA.

The frequency of inventory and monitoring will be dependent upon the level of development in the DFPA (see Tables H-1 and H-2). In general, inventory and monitoring frequency will increase with increased levels of development. Inventory and monitoring results may identify the need for further scientific studies. The Review Team and/or BLM will identify the level of effort required by this wildlife plan, subject to the standards stated in the following paragraphs. Site- and species-specific surveys will continue to be conducted in association with APD and ROW application field reviews (see Table E-5).

2.2.1 Raptors

Raptor inventories of potentially affected areas were conducted in early May 2000 and will continue to be conducted every five years thereafter for the LOP to determine the location of raptor nests/territories and their activity status by the BLM (Table E-1). At this time, no raptor concentration areas are known to exist. Approximate raptor nest locations on and adjacent to the DFPA have been identified and are presented in the Wildlife and Fisheries Technical Report for the Desolation Flats Natural Gas Development Project (HWA 2002). These surveys may be implemented aerially (e.g. via helicopter) or from the ground with operator-provided financial assistance. Data collected during surveys will be recorded on Raptor Nesting Record, Raptor Observation Data Sheets, or other similar data forms (Addendum E-1).

Nest productivity monitoring will be conducted by the BLM at active nests that are located within the project area (DFPA plus one-mile buffer) every five years. Nest productivity monitoring will occur between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings). These surveys generally will be conducted from the ground, and attempts will be made to determine the cause of any documented nest failure. Operators may provide financial assistance for aircraft rental, as necessary.

Additional raptor nest activity and productivity monitoring measures will be applied in areas with high levels of development (i.e., areas with ~ 4 locations/section) on and within one mile of the

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DFPA (see Table E-2). Inventory and monitoring efforts in these areas, as well as selected undeveloped comparison areas, will be conducted annually during April and May, followed by nest productivity monitoring. Site- and species -specific raptor nest analyses will be conducted in association with all APD and ROW application field reviews (see Table E-5).

Table E-2: *Additional Wildlife Inventory and Monitoring Measures On and Adjacent to Areas with High Levels of Development (~4 Locations/Section), Desolation Flats Project Area, Sweetwater and Carbon Counties, Wyoming, 2002.*

Action	Dates	Responsible Entity¹
Raptor nest inventory/monitoring on areas with ~ 4 locations/section plus a one-mile buffer and selected undeveloped comparison areas.	Annually during April and May.	BLM surveyor with Operator-provided financial assistance for aircraft rental.
Raptor nest inventory/monitoring on areas with ~ 4 locations/section plus a one-mile buffer and selected undeveloped comparison areas..	Annually during March - July.	BLM surveyor with Operator-provided financial assistance for BLM seasonal support.
Selected sensitive species inventory/monitoring on suitable habitats in areas with ~ 4 locations/section plus a one-mile buffer and selected undeveloped comparison areas.	Annually during spring and summer.	BLM, Operators in coordination with USFWS; Operator-provided financial assistance, not to exceed \$5,000 per operator in any given year.
Aerial greater sage-grouse lek inventory on areas with ~ 4 locations/section plus a two-mile buffer and selected undeveloped comparison areas.	Annually during March-April.	BLM surveyor with operator-provided financial assistance for aircraft rental.
Greater sage-grouse lek attendance monitoring on areas with ~ 4 locations/section plus a two-mile buffer and selected undeveloped comparison areas.	Annually during March to mid-May.	Each known lek will be visited at least once annually by the BLM and/or WGFD; subsequent visits will occur in BLM/WGFD-selected leks by the BLM in coordination with the WGFD.
Greater sage-grouse winter habitat inventory and monitoring in areas with ~ 4 locations/section and undeveloped comparison areas.	Available years.	BLM surveyor in coordination with the WGFD; Operator-provided financial assistance.
Other studies on areas with ~ 4 locations/section and selected undeveloped comparison areas.	Year-long and in any year as deemed necessary by BLM and/or USFWS.	BLM in coordination with USFWS and WGFD; Operator-provided financial assistance, not to exceed \$5,000 per Operator in any given year.

¹With Operator assistance, it is anticipated that agency obligations will not greatly exceed currently approved personnel or financial commitments.

All raptor nest/productivity surveys will be conducted using procedures that minimize potential adverse effects to nesting raptors. Specific survey measures for reducing detrimental effects are listed in Grier and Fyfe (1987) and Call (1978) and include the following:

- (1) Nest visits will be delayed for as long as possible in the nesting season.
- (2) Nests will be approached cautiously, and their status (i.e., number of nestlings/fledglings) will be determined from a distance with binoculars or a spotting scope.

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- (3) Nests will be approached tangentially and in an obvious manner to avoid startling adults.
- (4) Nests will not be visited during adverse weather conditions (e.g., extreme cold, precipitation events, windy periods, hottest part of the day).
- (5) Visits will be kept as brief as possible.
- (6) All inventories will be coordinated by the BLM.
- (7) The number of nest visits in any year will be kept to a minimum.
- (8) All raptor nest location data will be considered confidential (USDI-BLM 2000).

These actions may reduce impacts to nesting raptors. It should be noted that the RFO, in coordination with the USFWS, monitors active/inactive raptor nests within the project area and may band raptors, specifically ferruginous hawks, during June and July. The RFO wildlife biologists have a USFWS permit to proceed with banding.

2.2.2 Big Game Species

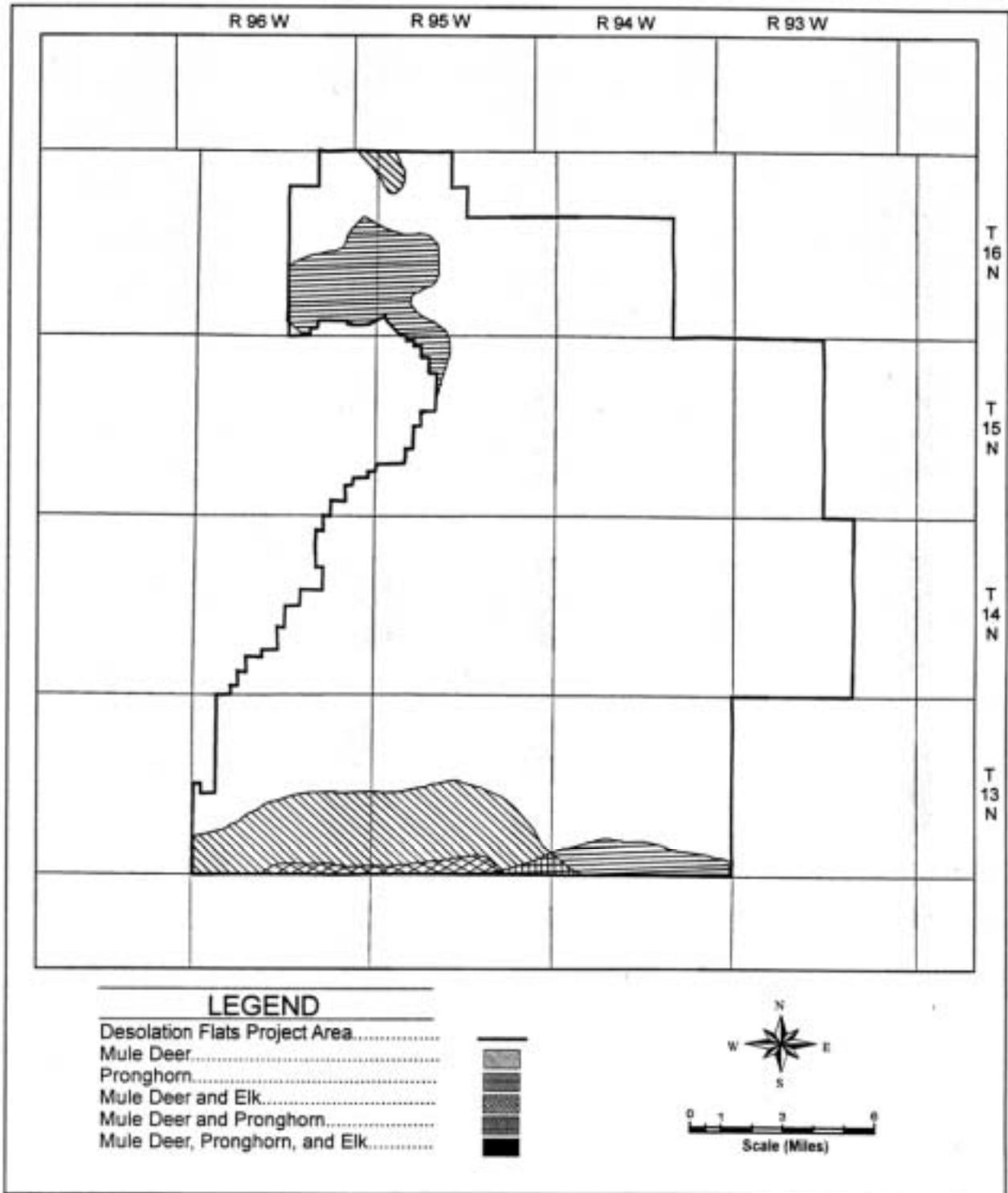
To determine the need for application of crucial winter range seasonal stipulations and assess potential impacts to big game species occurring on the DFPA, data on big game use of crucial winter ranges on the DFPA and an adjacent one-mile buffer will be requested annually by the BLM from the WGFD, as deemed necessary by the BLM (see Table E-1). Big game crucial winter ranges are shown in Map E-1. If data indicates further study is needed, then the BLM will be responsible for the data collection, in coordination with the WGFD (USDI-BLM 2000).

Migration corridors and transitional ranges have been identified to some degree within and adjacent to the DFPA. There may be a need to identify these areas in more detail if impacts to big game movement are identified during these critical time periods. Big game migration corridors and transitional zones are broader in scope and may require additional studies/monitoring if the BLM, WGFD, and/or Review Team determine this need.

2.2.3 Threatened, Endangered, Proposed, and Candidate Species

The level of inventory and monitoring required for threatened, endangered, proposed, and candidate species (TEP&C) will be commensurate with established protocol for the potentially affected species. Survey protocol developed in conjunction with the Biological Assessment (BA) for this project will be conducted as a component of this wildlife protection plan. Methodologies and results of these surveys will be included in annual reports or provided in separate supplemental reports. A preliminary list of TEP&C species proposed for management and known to occur, or potentially to occur, in the vicinity of the DFPA is shown in Table E-3. As TEP&C species are added to or withdrawn from the USFWS list, appropriate modifications will be incorporated to this plan and specified in annual reports. Additional species of concern known to occur, or potentially occur, in the vicinity of the DFPA are shown in Table E-4 (BLM Wyoming State Sensitive Species).

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Map E-1. Big game crucial winter ranges located within the Desolation Flats Project Area.

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TEP&C species data collected during the surveys described below will be considered confidential and will be provided only as necessary to those requiring the data for specific management and/or project development needs. Site- and species-specific TEP&C species surveys will continue to be conducted as necessary in association with all APD and ROW application field reviews (see Table E-5). Data will be collected on appropriate General Wildlife Observation Data Sheets or similar forms (see Addendum E-1). Alternate/additional forms may be used as specified by the BLM (USDI-BLM 2000).

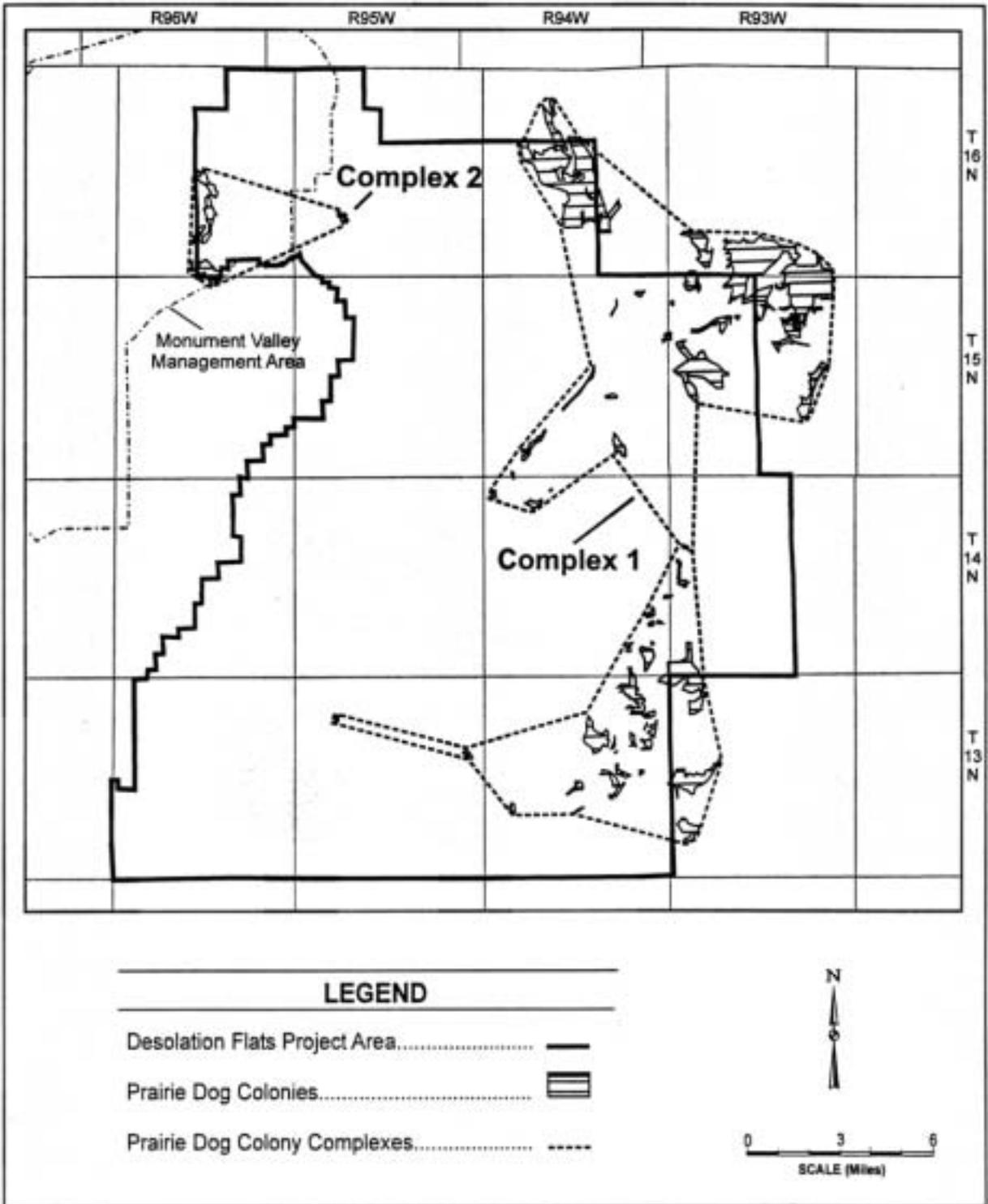
Table E-3: *Threatened, Endangered, Proposed, and Candidate Species Documented or Potentially Occurring on or in the Vicinity of the Desolation Flats Project Area, 2002.*

Species	Scientific Name	Status	Distribution
Bald Eagle	<i>Haliaeetus leucocephalus</i>	Threatened (proposed for de-listing)	Nesting, winter resident, migrant, statewide
Black-footed Ferret	<i>Mustela nigripes</i>	Endangered	Possible resident in prairie dog colonies
Canada Lynx	<i>Lynx Canadensis</i>	Threatened	Resident of forested areas, may travel through
Ute Ladies' Tresses	<i>Spiranthes diluvialis</i>	Threatened	Possible statewide, suitable habitat < 6,500 feet
Bonytail	<i>Gila elegans</i>	Endangered	Downstream resident of Green River
Colorado Pikeminnow	<i>Ptychocheilus lucius</i>	Endangered	Downstream resident of Green River
Humpback Chub	<i>Gila cypha</i>	Endangered	Downstream resident of Green River
Razorback Sucker	<i>Xyrauchen texanus</i>	Endangered	Downstream resident of Green River
Mountain Plover	<i>Charadrius montanus</i>	Proposed Threatened	Grasslands statewide
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	Candidate	Riparian areas west of the Continental Divide

2.2.3.1 Black-footed Ferret

BLM biologists will determine the presence/absence of prairie dog colonies at each proposed development site during APD and ROW application field revisions (see Table E-5). Prairie dog colonies (i.e., potential black-footed ferret habitat) on the area were mapped in April 2000 and burrow densities determined. White-tailed prairie dog colonies located on the DFPA are shown on Map E-2. Colonies that meet USFWS criteria as potential black-footed ferret habitat, per the USFWS 1989 Guidelines, will be surveyed for black-footed ferrets by either the BLM or USFWS-certified, Operator-financed, and BLM-approved biologist prior to BLM authorizing disturbance of these colonies. Surveys will only be conducted as deemed necessary during consultation between the BLM and USFWS. Black-footed ferret surveys will be conducted in accordance with the USFWS guidelines (USFWS 1989) and approved by the BLM and USFWS and will be conducted on a site-specific basis, depending on the areas proposed for disturbance in a given year as specified in the annual report.

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Map E-2. Potential black-footed ferret habitat, (i.e. white-tailed prairie dog colonies and complexes) in relation to the Desolation Flats Project Area.

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2.2.3.2 Bald Eagle

The inventory and monitoring protocol for the bald eagle will be as described for raptor species (Section 2.2.1).

2.2.3.3 Colorado Pikeminnow, Bonytail, Humpback Chub, and Razorback Sucker

There are four endangered fish species that inhabit areas within the Colorado River system. These four species are downstream residents of the Green River, located within the Colorado River system. If there are any proposed projects that will lead to water depletions (consumption) in the Colorado River system, then formal consultation with the USFWS will occur to reduce impacts to these species.

2.2.3.4 Mountain Plover

The Desolation Flats Project Area was mapped in June 2000 to determine if suitable mountain plover habitat existed (Map E-3). There was suitable habitat identified and individual projects will be assessed to determine if suitable mountain plover habitat (i.e., areas with flat topography and vegetation less than four inches high) exists within ¼-mile of each project site. Mountain plover surveys will be completed each field season to identify occupied habitat within the DFPA. Projects that are located in occupied mountain plover habitat, and include well pads, access roads, reserve pits, and ponds >40 acres in size, will have additional stipulations attached (see Addendum E-2). The Mountain Plover Survey Guidelines (USFWS 2002) will be followed for large scale/long term projects and short-term, linear projects. The guidelines identify surveys required to determine the presence and absence of mountain plover as well as density of nesting plovers. A copy of these guidelines will be attached to the Biological Assessment (BA).

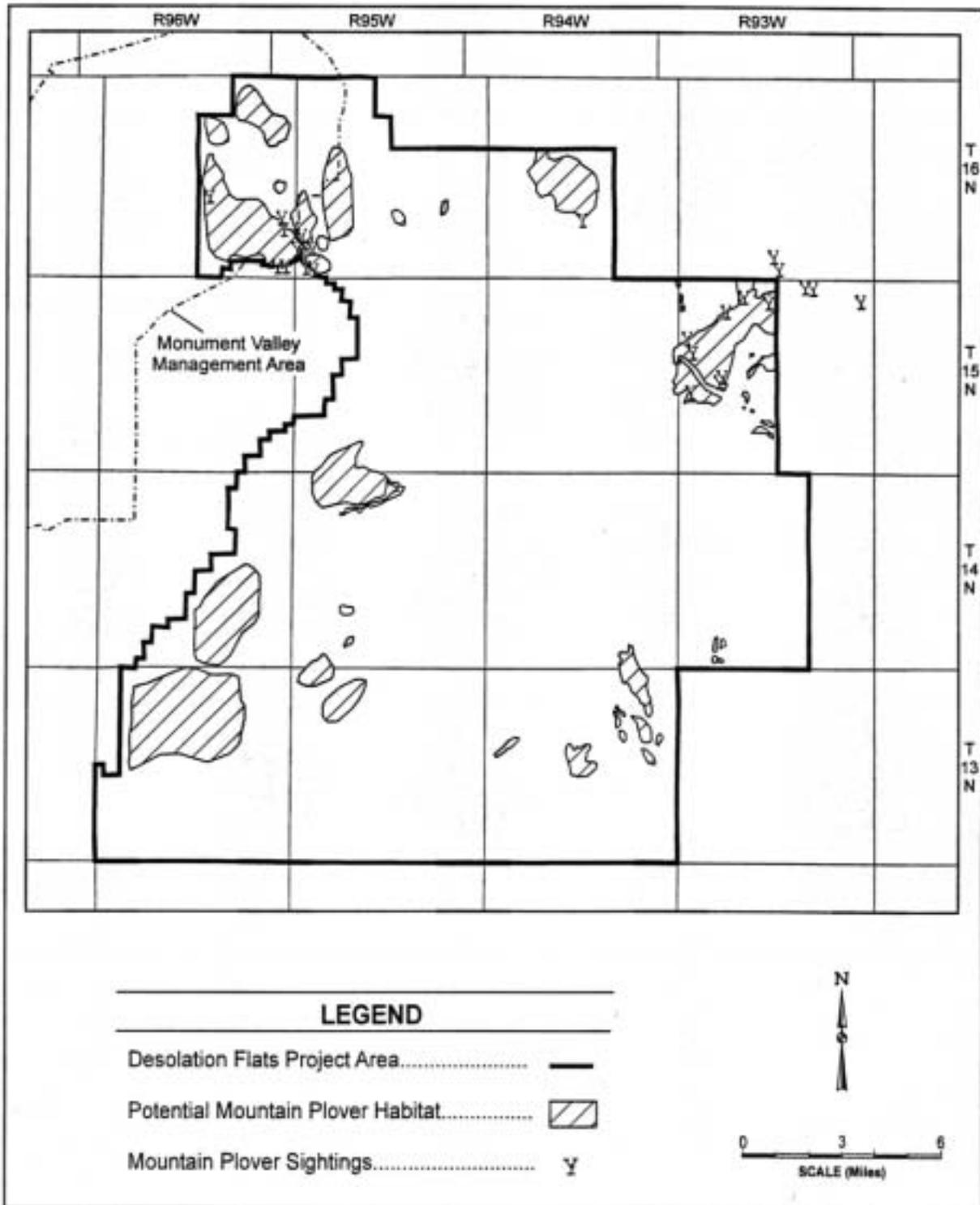
2.2.3.5 Yellow-billed Cuckoo

The Yellow-billed cuckoo inhabits areas that contain open woodlands, stream-side willow, and alder groves. These birds are located west of the Continental Divide. There are not many riparian systems located within the DFPA; therefore, the chance of having these birds within the project area is minimal. Site-specific surveys will be conducted in association with all APD/ROW application field reviews.

2.2.4 BLM Wyoming State Director's Sensitive Species

Many wildlife and plant species are experiencing population declines; therefore, the Wyoming BLM has developed a sensitive species list to better manage these species and their habitats. The goal is to ensure that any actions on public lands consider the overall welfare of these species and do not contribute to their decline. The BLM policy on these species is implemented to ensure actions authorized, funded, or carried out by BLM do not contribute to the need for any species to become listed as a candidate, or for any candidate species to become listed as threatened or endangered. This list is meant to be dynamic, which means it could change as new information for species is accumulated (USDI-BLM 2001). The entire BLM Wyoming State Director's Sensitive Species list and BLM Instruction Memorandum No. WY-2001-040, dated April 9, 2001, are attached in Addendum E-3.

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Map E-3. Areas identified as potential mountain plover habitat and mountain plover Sightings on and proximal to the Desolation Flats Project Area.

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Surveys for BLM Wyoming Sensitive Species (sensitive species) will be conducted by the BLM or a BLM-approved Operator-financed biologist in areas of potential habitat. Table E-4 describes the species that are considered sensitive species by the BLM and either are known to occur, or have the potential to occur, within the DFPA. The surveys for these species may be implemented in conjunction with surveys for other species or as components of the APD/ROW application.

In addition, in areas where four well locations are developed (or in the case where more than four wells are drilled) the entire section plus a one mile buffer, as well as selected undeveloped comparison areas, will be surveyed annually during spring and summer by the BLM and/or BLM-approved Operator-financed biologists for selected sensitive species (see Table E-2). The Review Team may revise the distance of the survey area based on biological requirements and the number of surveys required for each species. If any sensitive species are observed, the observations will be noted on the appropriate data forms (see Addendum E-1). In addition, when and if sensitive species are observed, efforts will be made to determine their activities (e.g., breeding, nesting, foraging, hunting, etc.). If any management agency (e.g., BLM, USFWS) identifies a potential concern regarding any of these species, additional inventory and monitoring may be implemented as specified in annual reports (USDI-BLM 2000).

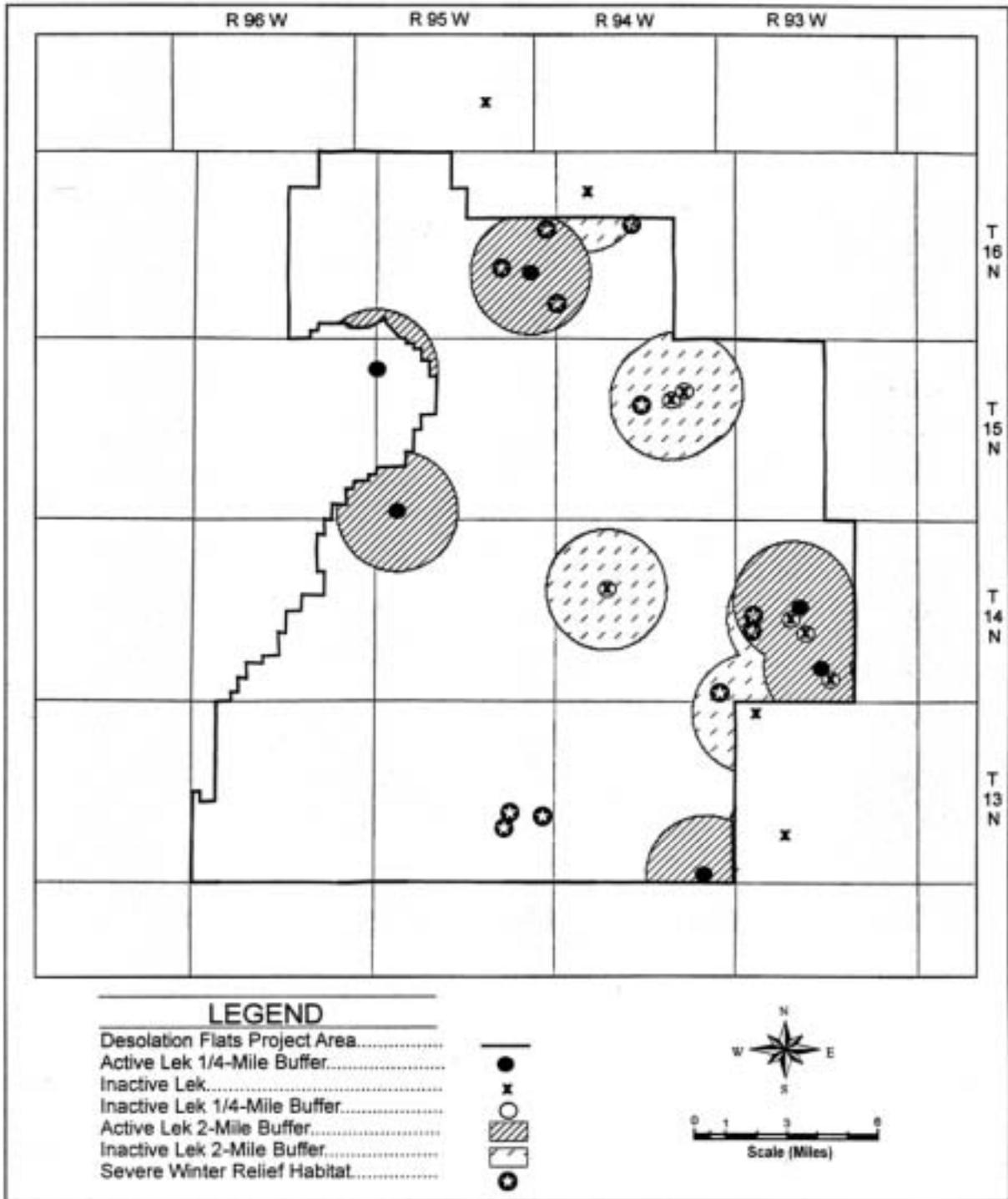
2.2.4.1 Greater Sage-grouse

Baseline data of greater sage-grouse lek locations, (both aerial and ground searches), were collected throughout the DFPA and 2-mile buffer in April of 2000 (Map E-4). In general, greater sage-grouse lek inventories will be conducted on the DFPA and a 2-mile buffer to determine lek locations every five years; however, the Review Team and/or BLM may recommend that monitoring may occur on an annual basis, or earlier than every five years (see Table E-1). Inventories will be conducted by the BLM during March and April every fifth year of this plan, or as deemed necessary by the Review Team. Surveys may be conducted aerially, which will include Operator-provided financial assistance for aircraft rental, or on the ground, as deemed appropriate by the BLM; aerial surveys will be used only to determine lek locations. In areas with four well locations per section, aerial inventories will be conducted annually on affected sections, a 2-mile buffer of disturbance areas, and selected undeveloped comparison areas (see Table E-2).

Selected leks within 2 miles of existing and proposed disturbance areas will be monitored annually by the BLM in coordination with the WGFD between March 1 and May 15, to determine lek attendance such that all leks on these areas are monitored at least once every three years (see Table E-1). Data collected during these surveys will be provided on Greater Sage-Grouse Lek Records or other suitable forms (see Addendum E-1) (USDI-BLM 2000). Map E-4 shows the greater sage-grouse leks that have been identified within the DFPA and a two-mile buffer; these leks include both known active and inactive leks.

Greater sage-grouse winter habitat surveys within the DFPA will be conducted when weather conditions permit to determine the use of these areas and/or any changes that may have occurred to this habitat within the project area (see Table E-1). Winter habitat surveys can only be completed during specific weather conditions, where there is adequate snow cover to determine actual winter use areas. In years when this snow cover is not available, then surveys should not be completed. Map E-4 shows known winter greater sage-grouse habitat that was identified during the 2001/2002 winter time period.

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Map E-4. Greater Sage-Grouse Leks, buffer zones, and severe winter relief habitats located within and near the Desolation Flats Project Area.

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Table E-4: *BLM Wyoming State Director's Sensitive Species Documented or Potentially Occurring on or in the Vicinity of the Desolation Flats Project Area, 2002 (RFO = Rawlins Field Office, RSFO = Rock Springs Field Office).*

Species	Scientific Name	RFO	RSFO	Habitat
Birds				
Greater Sage-Grouse	<i>Centrocercus urophasianus</i>	X	X	Basin-prairie shrub, mountain foothill shrub
Peregrine Falcon	<i>Falco peregrinus</i>	X	X	Tall cliffs
Northern Goshawk	<i>Accipiter gentilis</i>	X	X	Conifer and deciduous forests
Ferruginous Hawk	<i>Buteo regalis</i>	X	X	Basin-prairie shrub, grassland, rock outcrops
Western Burrowing Owl	<i>Athene cunicularia</i>	X	X	Grasslands, basin-prairie shrub
Loggerhead Shrike	<i>Lanius ludovicianus</i>	X	X	Basin-prairie shrub, mountain-foothill shrub
Sage Thrasher	<i>Oreoscoptes montanus</i>	X	X	Basin-prairie shrub, mountain-foothill shrub
Sage Sparrow	<i>Amphispiza billineata</i>	X	X	Basin-prairie shrub, mountain-foothill shrub
Brewer's Sparrow	<i>Spizella breweri</i>	X	X	Basin-prairie shrub
Columbian sharp-tailed grouse	<i>Tympanuchus phasianellus columbianus</i>	X		Grasslands
Mammals				
White-tailed Prairie Dog	<i>Cynomys leucurus</i>	X	X	Basin-prairie shrub, grasslands
Dwarf Shrew	<i>Sorex nanus</i>	X	X	Mountain foothill shrub, grasslands
Swift Fox	<i>Vulpes velox</i>	X	X	Grasslands
Pygmy Rabbit	<i>Brachylagus idahoensis</i>		X	Basin-prairie and riparian shrub
Wyoming Pocket Gopher	<i>Thomomys clusius</i>	X	X	Meadows with loose soil
Long-eared Myotis	<i>Myotis evotis</i>	X	X	Conifer and deciduous forests, caves and mines
Fringed Myotis	<i>Myotis thysanodes</i>	X	X	Conifer forests, woodland-chapparral, caves and mines
Townsend's Big-Eared Bat	<i>Corynorhinus townsendii</i>	X	X	Forests, basin-prairie shrub, caves and mines
Spotted Bat	<i>Euderma maculatum</i>		X	Cliffs over perennial water, basin-prairie shrub
Amphibians				
Northern Leopard Frog	<i>Rana pipiens</i>	X	X	Beaver ponds, permanent water in plains and foothills
Great Basin Spadefoot	<i>Spea intermontana</i>	X	X	Spring seeps, permanent and temporary waters

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Table E-4: Continued.

Species	Scientific Name	RFO	RSFO	Habitat
Reptiles				
Midget Faded Rattlesnake	<i>Crotalus viridis concolor</i>		X	Mountain foothills shrub, rock outcrop
Fish				
Leatherside Chub	<i>Gila copei</i>		X	Bear, Snake, and Green River drainages, clear, cool, streams and pools
Roundtail Chub	<i>Gila robusta</i>	X	X	Colorado River drainage, mostly large rivers, also streams and lakes
Bluehead Sucker	<i>Catostomus discobolus</i>	X	X	Bear, Snake, and Green River drainages, all waters.
Flannelmouth Sucker	<i>Catostomus latipinnis</i>	X	X	Colorado River drainage, large rivers, streams, and lakes
Colorado River Cutthroat Trout	<i>Oncorhynchus clarki pleuriticus</i>	X	X	Colorado River drainage, clear mountain streams
Plants				
Nelson's Milkvetch	<i>Astragalus nelsonianus</i> - or <i>-stragalus pectinatus</i> var. <i>platyphyllus</i>	X	X	Alkaline clay flats, shale bluffs and gullies, pebbly slopes, and volcanic cinders in sparsely vegetated sagebrush, juniper, & cushion plant communities at 5,200-7,600
Wyoming Tansymustard	<i>Descurainia torulosa</i>		X	Sparsely vegetated sandy slopes at base of cliffs of volcanic breccia or sandstone 8,300-10,000
Large-fruited Bladderpod	<i>Lesquerella macrocarpa</i>		X	Gypsum-clay hills & benches, clay flats, & barren hills 7,200-7,700
Stemless Beardtongue	<i>Penstemon accaulis</i> var. <i>acaulis</i>		X	Cushion plant or Black sage grassland communities on semi-barren rocky ridges, knolls, & slopes at 5,900-8,200
Mystery Wormwood	<i>Artemisia biennis</i> var. <i>diffusa</i>		X	Clay flats and playas 6,500
Cedar Rim Thistle	<i>Cirsium aridum</i>	X	X	Barren, chalky hills, gravelly slopes, & fine textured, sandy-shaley draws, 6,700-7,200
Ownbe's Thistle	<i>Cirsium ownbeyi</i>		X	Sparsely vegetated shaley slopes in sage & juniper communities 6,440-8,400
Green River Greenthread	<i>Thelesperma caespitosum</i>		X	White shale slopes & ridges of Green River Formation 6,300
Uinta Greenthread	<i>Thelesperma pubescens</i>		X	Sparsely vegetated benches & ridges on coarse, cobbly soils of Bishop Conglomerate
Cedar Mountain Easter Daisy	<i>Townsendia microcephala</i>		X	Rocky slopes of Bishop Conglomerate
Gibben's Beardtongue	<i>Penstemon gibbensii</i>	X		Sparsely vegetated shale or sandy-clay slopes 5,500-7,700

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2.2.4.2 Ferruginous Hawks, Peregrine Falcon, and Burrowing Owl

The inventory and monitoring protocol for these species is described in the raptor section (see Section 2.2.1).

2.2.5 Other Inventory and Monitoring Measures

Additional inventory and monitoring measures may be applied as specified in annual reports.

2.2.6 General Wildlife

BLM staff will be responsible for keeping records of selected wildlife species observed during the course of their activities on the DFPA and interested Operator personnel may also provide data on wildlife observations, and are encouraged to do so. The information provided will include observations of wildlife species, their numbers, location, activity, and other pertinent data as applicable and identified on the General Wildlife Observation Data Sheet presented in Addendum E-1 of this plan (USDI-BLM 2000).

2.3 PROTECTION MEASURES

The wildlife protection measures proposed herein have been developed from past measures identified for oil and gas developments in Wyoming (USDI-BLM 2000). Additional measures may be included and/or existing measures may be modified in any given year as allowable and as deemed appropriate by BLM in consultation with Operators and other interested parties, and these measures will be specified in annual reports. It is assumed that as the wildlife issues within the DFPA are further described and impacts identified, some protection measures will be removed, whereas others may be added. Protection measures will be implemented by Operators with assistance from and/or in consultation with the BLM. In addition, these measures may be modified on a site-specific basis as deemed appropriate by the BLM after completion of APD and ROW application field reviews.

The principle protection measures for most wildlife species will be avoidance of sensitive/crucial habitats (e.g. big game crucial winter range, raptor nests, greater sage-grouse leks, etc.), where possible. However, numerous species- and project-specific measures may be implemented. Additionally, general wildlife protection measures (see Table E-5) will likely benefit the majority of wildlife species found on and adjacent to the DFPA.

2.3.1 Raptors

The primary protection measure for raptor species on the DFPA will be avoidance of active/inactive nest locations during the breeding season. Active nests are defined as any raptor nest that has been used within the last three years. Depending on the timing of proposed construction and drilling activities, all surface-disturbing activities will be restricted from February 1 through July 31 within a 0.5 to 1.0 mile radius (depending upon species and site-specific conditions) of active, or occupied, as well as inactive, raptor nests and/or nesting territories (i.e., seasonal nest avoidance).

Exceptions to the timing stipulation may be made, based on field investigations of the nest at the time the exception was requested. In addition, well locations, roads, ancillary facilities, and other surface structures requiring a repeated human presence will not be constructed within 825

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feet of active raptor nests, except ferruginous hawk, where the restriction will be 1,200 feet. The seasonal buffer distance and exclusion dates may vary, depending on factors, such as nest activity status, species, prey availability, natural topographic barriers, and line-of-sight distances. Actual nest buffers for each raptor nest will be established in annual reports.

Operators will notify the BLM immediately if raptors are found nesting on or within 1,200 feet of project facilities, and Operators will assist the BLM as necessary in erecting artificial nesting structures (ANS's), as appropriate. The use of ANS's will be considered as a last resort for raptor protection. If nest manipulation or a situation requiring a "taking" of a raptor nest becomes necessary, a special permit will be obtained from the Denver USFWS office, Permit Section. Permit acquisition will be coordinated with the USFWS Office in Cheyenne, Wyoming and will be initiated with sufficient lead time to allow for development of mitigation. Required corresponding permits will be obtained from the WGFD in Cheyenne. Consultation and coordination with the USFWS and the WGFD will be conducted for all protection activities relating to raptors.

If the Review Team determines that project activities could potentially affect raptor nesting on or adjacent to the DFPA as determined from decreased raptor productivity or nesting or documented nest abandonment or failure, ANS's may be constructed at a rate of one to two ANS's for one impacted nest, or existing degraded raptor nests may be upgraded/reinforced to minimize potential impacts. The BLM wildlife biologist will determine the number of required nests, up to two per project, based on site specific conditions and requirements. This focuses on the overall decline of raptor nesting success and will occur if the Review Team determines that projects may be the cause for this decline. The location, design, and other pertinent data regarding ANS's or nests proposed for upgrading will be identified in annual reports, and these ANS's will be located within the nesting territory of potentially affected raptor pairs and outside of the line-of-sight or nest buffer of actively nesting pairs, where possible. Operators will be responsible for the annual maintenance of ANS's throughout the LOP. Annual ANS maintenance activities will be completed after August 1 and prior to October 15 each year, as necessary. ANS's will be placed within the nesting territories of potentially affected raptor pairs at sites sufficiently removed from development activities to minimize or avoid potential adverse effects. All ANS's on public lands will become the property of the BLM upon completion of the project.

In cases where existing project features (e.g., well locations) are located within the nest buffers of active raptor nests, no maintenance activities requiring a work-over rig, unless an exception has been approved, will be allowed during critical periods (i.e., approximately early March through mid-June). The exact dates of exclusion will be determined by the BLM and will likely vary between nests and from year to year, depending on the species present and variations in weather, nesting chronology, and other factors.

No above-ground power line construction is expected with the proposed project, however, if any power lines are built, construction will follow recommendations of the Avian Power Line Interaction committee (APLIC) (1994, 1996) and Olendorff et al. (1981) to avoid collision and/or electrocution of raptors.

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Table E-5: Summary of General APD/ROW Application Stage Survey/Protection Measures, Desolation Flats Project Area, Sweetwater and Carbon Counties, Wyoming, 2002.

Protection Measure	Dates	Responsible Entity
APD-stage general raptor nest analysis within 0.75 to 1.0 mile of proposed disturbance.	Year-long	BLM, Operators
APD-stage seasonal raptor nest avoidance within 0.5 to 1.0 mile of active nests.	February 1-July 31 (depending on species and/or site-specific conditions)	Operators, BLM
APD-stage general raptor nest avoidance within 825 feet of active nests (1,200 feet for active ferruginous hawk nest).	Year-long (Controlled Surface Use [CSU]) generally excluding surface disturbance.	Operators, BLM
APD-stage sensitive species surveys (within 0.25 - 0.5 miles of proposed disturbance sites).	As necessary	<i>BLM or Operators</i>
APD-stage TE P& C habitat avoidance.	As necessary.	Operators, BLM
APD-stage prairie dog colony mapping and burrow density determination.	As necessary.	Operators, BLM
Black-footed ferret habitat (i.e., prairie dog colony) avoidance.	As necessary.	Operators, BLM
Black-footed ferret surveys where suitable habitat must be disturbed.	Where required, in appropriate season and no more than one-year prior to disturbance.	BLM, Operator-financed USFWS-approved biologist
APD-stage mountain plover surveys (within 0.25 mile of proposed project)	As necessary between April and July.	BLM, Operator-financed BLM-approved biologist
Mountain plover nest/brood avoidance.	April 10 - July 10	Operators, BLM
APD-stage western burrowing owl surveys (within 0.5 mile of proposed disturbance sites).	As necessary during June-August	BLM, Operator-financed BLM-approved biologist
Western burrowing owl nest avoidance.	As necessary.	Operators, BLM

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Table E-5: Continued.

Protection Measure	Dates	Responsible Entity
APD-stage greater sage-grouse lek surveys on suitable habitats within 2.0 miles of proposed disturbance sites.	March 1 - mid-May.	Operators, BLM
APD-stage greater sage-grouse lek avoidance on areas within 2.0 miles of a lek.	March 1 - June 30.	Operators, BLM
APD-stage greater sage-grouse lek avoidance on areas within 0.25 mile of a lek.	Year-long.	Operators, BLM
APD-stage greater sage-grouse nest avoidance.	As necessary.	Operators, BLM
APD-stage greater sage-grouse winter habitat avoidance.	As necessary, in appropriate season December-February with adequate snow cover.	Operators, BLM
APD-stage general wildlife avoidance/protection	As necessary.	Operators, BLM, USFWS, WGFD
Big game crucial winter range avoidance.	November 15-April 30.	Operators, BLM

In the event that winter concentration habitat(s) are identified, then construction, drilling, and other activities disruptive to wintering raptors are prohibited during the period of November 15 to April 30 for the protection of winter concentration areas. At this point, winter concentration areas of bald eagles have not been identified; however, this stipulation will apply in the event that an area is identified (USDI-BLM 2000).

2.3.2 Big Game Species

No surface disturbing activities will occur within big game crucial winter range on the DFPA during critical winter periods (November 15 - April 30). No road or pipeline ROW fencing is proposed for the project; however, if ROW fencing is required, it will be kept to a minimum, and the fences will meet BLM/WGFD standards for facilitating wildlife movement. Wildlife proof fencing will be used only to enclose reclaimed areas where it is determined that wildlife species are impeding successful vegetation establishment. Snow-fences, if used, will be limited to segments of 0.25 mile or less. Project personnel will also be advised to minimize stopping and exiting their vehicles in big game winter habitat while there is snow on the ground. In addition, escape openings will be provided along roads in big game crucial winter ranges as designated by the BLM to facilitate exit of big game animals from snow-plowed roads. Additional habitat protection/improvement measures may

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also be applied in any given year as directed by the BLM, in consultation with operators and other agencies, and specified in annual wildlife reports.

Increased human access within the DFPA may lead to increased poaching of big game animals. Potential increases in poaching may be reduced through employee and contractor awareness/education regarding wildlife laws. If violations are discovered on the DFPA Operators will immediately notify the WGFD, and if the violation is committed by an employee or contractor, said employee or contractor will be disciplined and may be dismissed by the Operator and/or prosecuted by the WGFD and/or USFWS (USDI-BLM 2000).

2.3.3 Threatened, Endangered, Proposed, and Candidate Species

USFWS consultation and coordination will be conducted for all protection activities relating to TEP&C species and their habitats, as needed. Where possible, these actions will be specified in advance in the annual reports. The terms and conditions of the Biological Opinion (BO) will be followed.

2.3.3.1 Black-footed Ferret

In general, all prairie dog colonies on the DFPA will be avoided, where practical. If prairie dog colonies of sufficient size and burrow density for black-footed ferrets are scheduled to be disturbed, then black-footed ferret surveys of those colonies will be conducted pursuant to BLM and/or USFWS decisions made during informal consultations. Survey protocol will adhere to USFWS guidelines as established by the USFWS (1989) in consultation with the BLM, and will be conducted by the BLM or a USFWS-qualified, BLM-approved biologist, a maximum of one year in advance of the proposed disturbance. Reports identifying survey methods and results will be prepared and submitted to the BLM in accordance with Section 7 of the Endangered Species Act of 1973, as amended, and the Interagency Cooperation Regulations. Surveys will be financed by Operators.

If black-footed ferrets are found on the DFPA, the BLM will be notified immediately and consultation with the USFWS will be initiated to develop strategies that ensure no adverse effects to the species occur. At this point, all activities will be stopped and before ground-disturbing activities are re-initiated in black-footed ferret habitat, authorization to proceed must be received from the BLM, in consultation with the USFWS (USDI-BLM 2000).

2.3.3.2 Bald Eagle

No surface disturbing activities are permitted between February 1 and July 31 within 1 mile of bald eagle nests (see section 2.3.1). Although there are not any identified bald eagle nests located within the DFPA, or a 1-mile buffer, the timing stipulation applies to all raptor nests and in the event that a bald eagle nest is identified in the project area, then it would be protected.

2.3.3.3 Colorado Pikeminnow, Bonytail, Humpback Chub, and Razorback Sucker

If any proposed development will lead to water depletions (consumption) in the Colorado River system, then formal consultation with the USFWS will occur to reduce impacts to these species.

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2.3.3.4 Mountain Plover

Mountain plover habitats (e.g., cushion plant communities, playa lakes, flat areas with vegetation <4 inches in height) will be avoided where practical, and where these habitats will be disturbed, reclamation will utilize procedures designed to reestablish suitable plover habitat. No surface disturbing activities will be conducted within suitable mountain plover habitat on the DFPA during the breeding and nesting periods between April 10 and July 10. Additional protection measures listed in Addendum E-2 will be attached to individual APD's and ROW's, for those projects that include well pads, access roads, and reserve pits that occur in occupied habitat areas.

Exceptions to construct during the timing stipulation period may be granted provided that the *Mountain Plover Survey Guidelines U.S. Fish and Wildlife Service March 2002* are followed. If an active mountain plover nest is observed within survey areas, planned development activities will be delayed at least 37 days or one week post-hatching. If a brood of flightless chicks is discovered, planned activities will be delayed at least seven days.

2.3.3.5 Yellow-billed Cuckoo

There have not been any yellow-billed cuckoos inventoried and/or monitored within the DFPA at this time. The species basically inhabits riparian zones west of the Continental Divide, and, apart from Sand Creek during high flows, there are not any perennial streams located within the DFPA. It is highly unlikely that this species is present within this project area; however, if information shows that the birds may be present then the Review Team may make recommendations to the BLM, and/or the BLM may identify potential mitigation that may be required to protect this species. Standard operating procedures prohibit the construction of well sites, access roads, and pipelines within 500 feet of surface water and/or riparian areas. This would protect any existing yellow-billed cuckoo habitat.

2.3.4 BLM Wyoming State Director's Sensitive Species

The BLM's management authority for sensitive species is not as specifically structured as for proposed, listed, threatened, or endangered species. The management mandate is less regulatory, and more administrative and generic for sensitive species, than for proposed or listed species in the sense that the BLM is **NOT** required to:

1. Participate in the development of formal recovery plans or critical habitat designations for sensitive species, although the BLM can participate in conservation plans/agreements.
2. Enter into ESA Section 7 consultation in Federal actions, although the BLM can request technical assistance from the USFWS, or other entities.
3. Be concerned with the "take" provisions of biological opinions, or the prohibition of Section 9 of the ESA.

The BLM's posture toward management of sensitive species will be more collaborative and derived, and less directive than for proposed or listed species. The management of these species should be viewed as an opportunity to practice proactive conservation; however, the management of these species should not be onerous or a "show-stopper" of other legitimate, multiple use activities (USDI-BLM, 2001).

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If, during surveys of areas where proposed projects are identified, nests or other crucial habitat for any sensitive species identified in Table E-4 are found, avoidance of these features will be accomplished in consultation and coordination with the BLM and USFWS. Construction activities in these areas will be curtailed until there is concurrence between the BLM and USFWS on what activities can be authorized. Activities will, in most cases, will be delayed until such time that no adverse effects will occur (e.g., after fledging). It is assumed that the protocol specified for general wildlife will likely benefit sensitive species as well. If any agency (i.e., BLM, WGFD, USFWS) identifies a potential for impacts to any sensitive species, additional measures may be implemented as specified in annual reports.

2.3.4.1 Greater Sage-grouse

An NSO (no surface occupancy) restriction will apply within 0.25 miles of greater sage-grouse leks. In addition, powerlines will not be constructed within 0.6 miles of any lek, as necessary to protect leks from raptor predation. To protect nesting greater sage-grouse, operators will restrict construction activities between March 1 and June 30 within a two mile radius of an identified greater sage-grouse lek and associated nesting habitat. In addition, construction, drilling, and other activities potentially disruptive to wintering greater sage-grouse are prohibited during the period of November 15 to April 30 for the protection of winter concentration areas (USDI-BLM 2000).

2.3.4.2 Ferruginous Hawk, Peregrine Falcon, and Burrowing Owl

The protection protocol generally will be as described for raptors (see Section 2.3.1). Additional measures will be applied on a species- or site-specific basis, as deemed appropriate by the USFWS and/or BLM and specified in conditions of approval for individual APD's/ROW's. To protect nesting and brood rearing burrowing owls, construction, drilling, and other activities will be restricted between February 1 and July 31, or until young are fully fledged.

2.3.5 General Wildlife

Unless otherwise indicated, the following protection measures will be applied for all wildlife species. Additional measures primarily designed to minimize impacts to other DFPA resources (e.g., vegetation and surface water resources, including wetlands, steep slopes, etc.) are identified in the EIS and these measures may provide additional protection for area wildlife. Additional actions may be applied in any given year to further minimize potential impacts to wildlife. These actions will be specified in annual reports.

All roads on and adjacent to the DFPA that are required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions and facilitate wildlife (most notably big game) movement through the DFPA. Appropriate speed limits will be adhered to on all DFPA roads, and Operators will advise employees and contractors regarding these speed limits.

To protect important habitat in areas with sagebrush greater than three feet tall, projects will be placed to avoid this habitat where possible. Additional non-species specific wildlife mitigation includes the following:

1. Reserve, work-over, and flare pits and other locations potentially hazardous to wildlife will be adequately protected by netting and/or fencing as directed by the BLM to prohibit wildlife access.

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2. No surface water or shallow ground water in connection with surface water will be utilized for the proposed project.
3. If dead or injured raptors, big game, migratory birds, or unusual wildlife are observed on the DFPA, Operator personnel will contact the appropriate BLM and WGFD offices. Under no circumstances will dead or injured wildlife be approached or handled by Operator personnel.
4. Operators will implement policies designed to control poaching and littering and will notify all employees (contract and company) that conviction of a major violation could result in disciplinary action. Contractors will be informed that any intentional game law violation or littering within the DFPA could result in dismissal.

Additional project- and site-specific measures may be added in future years as specified in annual reports.

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3.0 LITERATURE CITED

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ADDENDUM E-1

EXAMPLE DATA SUMMARY TABLES AND FORMS

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RAPTOR NEST DESCRIPTION DFPA

Species _____ Nest ID _____

Legal Location: T _____ N : R _____ W Sec _____ 1/4 of _____ 1/4 of _____ 1/4

GPS Coordinate: E _____ N _____ (UTM NAD 27)

Nest:

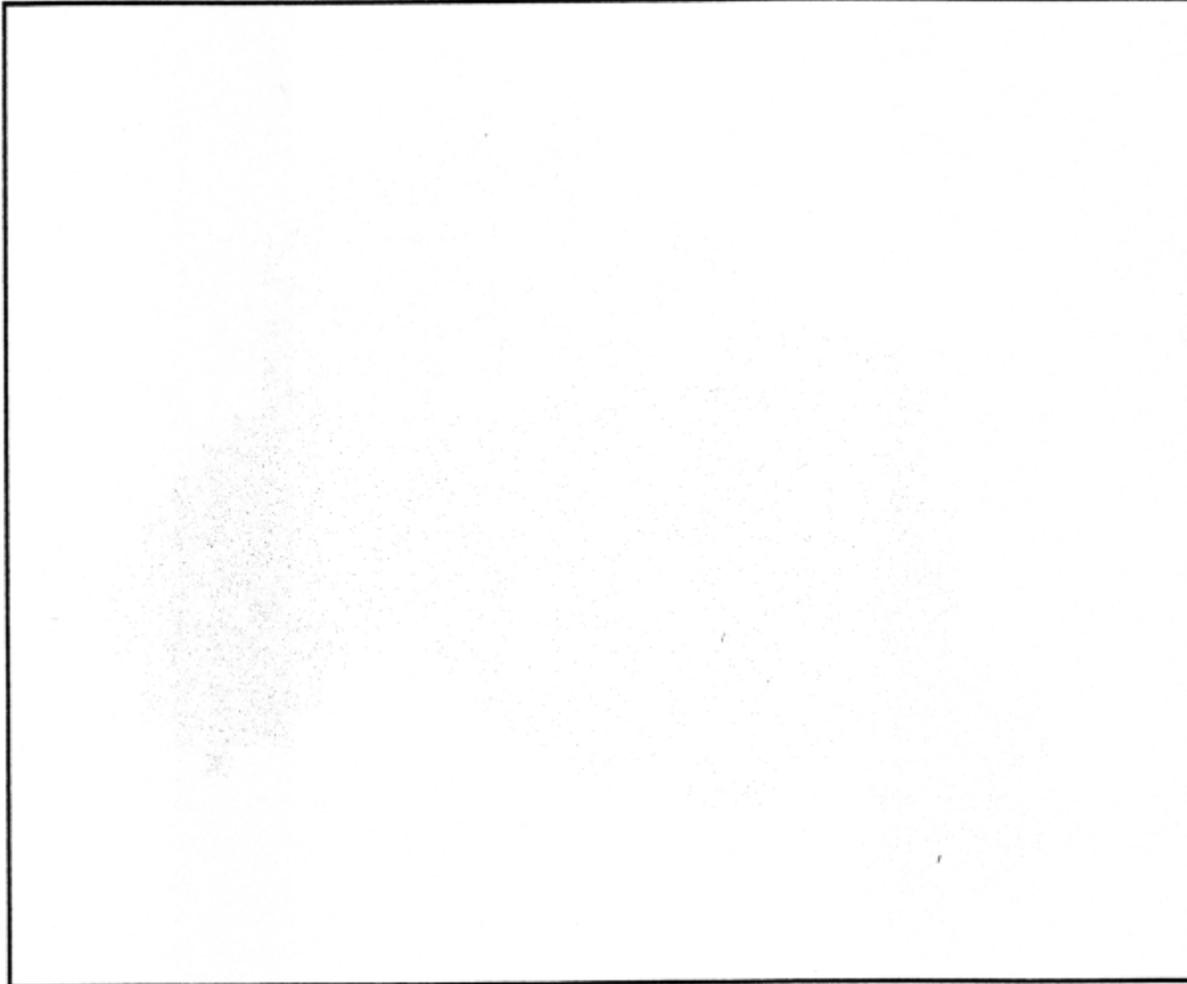
Substrate _____ Aspect of Substrate/Nest _____

Height of Sustrate _____ Height of Nest Above Ground _____

Elevation _____

Habitat Description/Comments _____

USGS Quad



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Black-Footed Ferret Nocturnal Survey

DFPA

Project _____ Survey No. _____ of _____

Observers _____ Date _____ 20____

Survey Method _____ Prairie Dog Town Number(s) _____

Legal Location: Township _____ N Range _____ W Sec(s) _____

Prairie Dog Species _____ Start End

Length of Survey Route (miles) _____ Time _____

Area Searched (acres) _____ Temperature _____

No. of Runs _____ Length of Run (hrs) _____ Wind _____

USGS Quad(s) _____ % Cloud Cover _____

Ferret Observations: (Include detailed location/GPS coordinates for each)

Ferret Sighting _____

Ferret Sign _____

Sign Collected _____

Unidentified Green Eye-Shine _____

Photos Taken/Comments _____

<u>Potential Prey Species</u>	<u>Number Observed (circle each run)</u>	<u>Other Sign</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

<u>Other Predator Species</u>	<u>Number Observed (circle each run)</u>	<u>Other Sign</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

<u>Other Wildlife Species</u>	<u>Number Observed (circle each run)</u>	<u>Other Sign</u>
_____	_____	_____
_____	_____	_____

Daylight Burrow Inspection: Time: _____ - _____ Area Searched (acres) _____

Location Searched _____ No. of Burrows Inspected: _____

Comments: _____

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SAGE GROUSE LEK DESCRIPTION DFPA

Lek ID _____

Legal Location: T _____ N : R _____ W Sec _____ 1/4 of _____ 1/4 of _____ 1/4

GPS Coordinate: E _____ N _____ (UTM NAD 27)

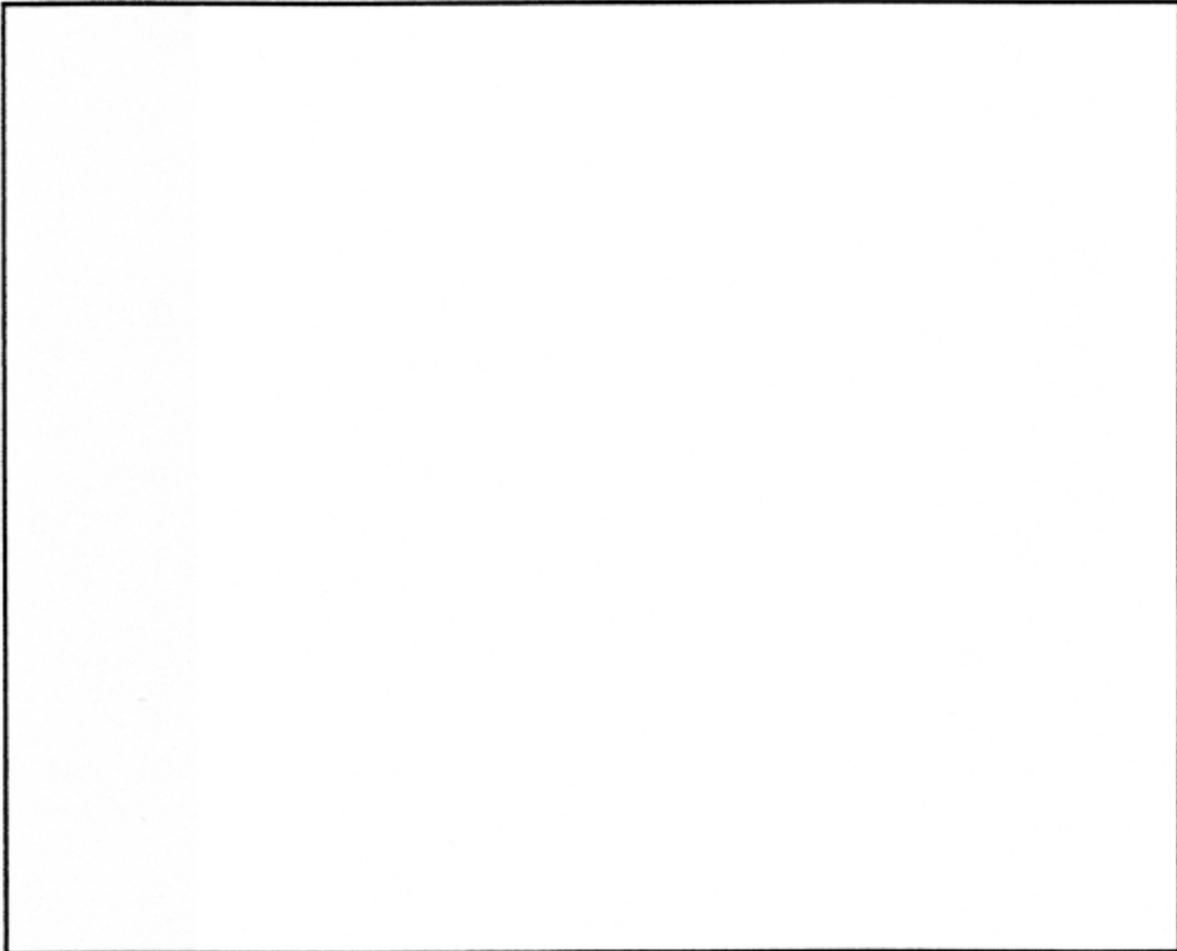
Site Description:

Habitat Type _____ Slope _____

Topography _____ Elevation _____

Comments _____

USGS Quad



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ADDENDUM E-2

MOUNTAIN PLOVER ADDITIONAL STIPULATIONS

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ADDENDUM E-2

Some of the following mountain plover protection measures may be implemented if mountain plover "occupied habitat areas" are disturbed:

1. To protect the identified mountain plover occupied habitat area, the proposed activity would not be allowed as proposed. An alternative such as moving the facility, directional drilling, piping and storage of condensate off the identified mountain plover occupied habitat area to a centralized facility, or other technique for the minimization of ground disturbance and habitat degradation would be required.
2. To protect the identified mountain plover occupied habitat area, the proposed facility would be moved ½ mile from the identified occupied habitat area.
3. To protect the identified mountain plover occupied habitat area and because mountain plover adults and broods may forage along roads during the night, traffic speed and traffic volume would be limited during night-time hours from April 10 to July 10.
4. Within ½ mile of the identified mountain plover occupied habitat area, speed limits would be posted at 25 mph on resource roads and 35 mph on local roads during the brood rearing period (June 1 - July 10).
5. The access road would be realigned to avoid the identified mountain plover occupied habitat area.
6. To protect the identified mountain plover occupied habitat area, traffic would be minimized from June 1 - July 10 by car-pooling and organizing work activities to minimize trips on roads within ½ mile of the mountain plover occupied habitat area.
7. To protect the identified mountain plover occupied habitat area, work schedules and shift changes would be modified from June 1 - July 10 to avoid the periods of activity from ½ hour after sunset to ½ hour before sunrise.
8. To protect the identified mountain plover occupied habitat area, fences, storage tanks, and other elevated structures would be either constructed as low as possible and/or would incorporate perch-inhibitors into their design.
9. Road-killed animals would be promptly removed from areas within ½ mile of the identified mountain plover occupied habitat area.
10. To protect the identified mountain plover occupied habitat area, seed mixes and application rates for reclamation would be designed to produce stands of sparse, low-growing vegetation suitable for plover nesting.
11. To minimize destruction of nests and disturbance to breeding mountain plovers, no reclamation activities or other ground-disturbing activities would occur from April 10 - July 10 unless surveys consistent with the Plover Guidelines or other FWS approved method find that no plovers are nesting in the area.

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12. A plugged and abandoned well within ½ mile of the identified mountain plover occupied habitat area would be identified with a marker 4 feet tall with a perch inhibitor on the top of the marker.

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ADDENDUM E-3

WYOMING BLM STATE DIRECTOR'S SENSITIVE SPECIES LIST AND INSTRUCTION MEMORANDUM

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BLM Wyoming Sensitive Species Policy and List April 9, 2001

Introduction

The USDI Bureau of Land Management (BLM) Wyoming has prepared this list of sensitive species to focus species management efforts towards maintaining habitats under a multiple use mandate. Many species are not on this list due to the lack of status, distribution and habitat requirement information which prohibits any management attention.

The goals of this sensitive species policy are to:

- u` Maintain vulnerable species and habitat components in functional BLM ecosystems.
- u` Ensure sensitive species are considered in land management decisions.
- u` Prevent a need for species listing under the Endangered Species Act.
- u` Prioritize needed conservation work with an emphasis on habitat.

Authority

The authority for this policy and guidance comes from the Endangered Species Act of 1973, as amended; Title II of the Sikes Act, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; and the Department Manual 235.1.1A., General Program Delegation, Director, Bureau of Land Management.

Bureau of Land Management (BLM) Manual 6840 establishes Special Status Species (SSS) policy for plant and animal species and the habitat on which they depend. This SSS policy refers not only to species protected under the Endangered Species Act (ESA), but also to those designated by the State Director as Sensitive. The manual states “ *Sec. 06D - Sensitive Species: State Directors, usually in cooperation with the State wildlife agency, may designate sensitive species. By definition the sensitive species designation includes species that could easily become endangered or extinct in the state. Therefore, if sensitive species are designated by the State Director, **the protection provided by the policy for candidate species shall be used as the minimum level of protection.*** ”

Criteria set forth in the Glossary of Terms section of the 6840 Manual for designating sensitive species are:

1. under status review by the FWS/National Marine and Fisheries Service(NMFS); or
2. whose numbers are declining so rapidly that Federal listing may become necessary; or
3. with typically small or widely dispersed populations; or
4. those inhabiting ecological refugia or other specialized or unique habitats.

The intent of the sensitive species designation is to ensure actions on BLM administered lands consider the welfare of these species and do not contribute to the need to list any other Special Status Species under the provisions of the ESA. Management requirements that apply to the species on the BLM Wyoming Sensitive Species List are to avoid or minimize adverse impacts and maximize potential benefits to species whose viability has been identified as a concern by reviewing programs and activities to determine their potential effect on sensitive species. Requesting technical assistance from the FWS, and any other

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qualified source, on actions that may affect a sensitive species is recommended. It is not the intent of this list to track species rangewide or even statewide as this is done by other entities (WYNDD, WGFD, FWS, GAP, etc.) rather our (BLM) obligation is to determine distribution and manage habitats. It is also the intent of this list to emphasize planning, management, and monitoring of these species.

Guidance

BLM Washington Office Instruction Memorandum IM 97-118 Guidance on Special Status Species Management (6840 Manual) was issued on April 30, 1997 in response to the February 28, 1996 Fish and Wildlife Service (FWS) "Notice of Review of Plant and Animal Taxa That Are Candidates For Listing as Endangered or Threatened" (61 FR 7595). It states: *"The new candidate list eliminated the separate categories of candidates (Category-1 and Category-2) and redefined candidates to include only species for which the FWS has on file sufficient information on biological vulnerability and threat(s) to support issuance of a proposed rule to list, but for which issuance of the proposed rule is precluded by higher listing priorities. The December 5, 1996, notice made this decision to eliminate the Category-2 candidate (C2) list final. In a separate "Notice of Candidate Taxa Reclassification" (61 FR 7457), FWS reclassified 96 former Category-1 (C1) candidates to non-candidate status. Consequently, the list provided in 61 FR 7595 consists of a new candidate list which is an updated list of approximately one-half of the former C1 species, plus those species currently proposed for listing as threatened or endangered. It is, in effect, the list of proposed species and the backlog of listing proposals."*

IM 97-118 continues by reiterating BLM policy to ensure actions authorized, funded, or carried out by BLM do not contribute to the need for any species to become listed as a candidate, or for any candidate species to become listed as threatened or endangered. Early identification of BLM sensitive species is advised in efforts to prevent species endangerment, and State Directors are encouraged to collect information on species of concern to determine if BLM sensitive species designation and special management are needed. It then urges evaluation of former C1 and C2 species to determine their vulnerability to ESA listing and therefore their designation by BLM as a sensitive species, and further urges states without a sensitive species list to institute one comprised of the former C1 and C2 species that meet the 6840 Manual criteria.

BLM WY Approach

In March 1990, an Umbrella Memorandum Of Understanding (MOU) between the Wyoming Game and Fish Department (WGFD) and USDI BLM Wyoming for Management of the Fish and Wildlife Resources on the Public Lands was signed. The purpose of the MOU was for the two agencies to work together to benefit all wildlife in Wyoming by cooperating in planning, and sharing data among other efforts. Six Appendices were planned for Specific Areas of Cooperation, one of which was titled Ecosystem Management and included the subtitle State Sensitive Species. This appendix has yet to be written although the WGFD has a Native Species Status (NSS) matrix (formerly called Species of Special Concern) identifying sensitive species, and under BLM Manual 6840 the Bureau is charged with using other agency's lists when BLM does not have a designated sensitive species list of its own.

The current status of BLM Sensitive Species lists in some adjacent states, and lists from other Federal and State agencies in Wyoming, were reviewed for this effort. BLM in Idaho

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listed 100 species of animals and 169 species of plants on their Sensitive Species List in 1996. In addition, they list 31 species on a Watch List for species whose populations and range appear to be restricted, but information is lacking as to the cause or if the species is headed for extinction and in need of management action to remove or reduce threats. Colorado and Arizona used the criteria from 6840 to update their lists (1998 and 2000 respectively). Arizona issued a list of 109 species, including 10 invertebrate species, in an Instruction Memorandum (IM) and Colorado updated their list to a total of 112 species in an Information Bulletin (IB). The Montana State Office issued an IM in May, 1994, listing 34 Special Status Species and 61 "Candidates" that includes the C1, 2, and 3 and proposed species. Their list has not been updated since the FWS Federal Register Notices in 1996. They have however started collecting information for Habitat Accounts that cover life histories, specific habitat requirements and a literature review for each sensitive species. BLM Utah (1997) lists a total of 178 mammal, bird, fish, reptile and amphibian species with 108 species of plants. The mammal and plant species listed by BLM Oregon/Washington numbered over 1000 species in February 2000 in 3 categories of Bureau Status: Bureau Sensitive - using the 6840 criteria; Bureau Assessment - species may need protection and are included in NEPA analyses; and Bureau Tracking - species for which more information is needed to determine status.

The Wyoming Natural Diversity Database (WYNDD) maintains a list of Wyoming Plant and Animal Species of Special Concern. It provides information on global and State abundance, legal status, and State distribution about rare species. Their Species of Special Concern criteria are: if species are vulnerable to extirpation at the global or State level due to inherent rarity; if there is a significant loss of habitat; or if the species is sensitive to human-caused mortality or habitat disturbances. This information can be found on the internet at: <http://uwadmnweb.uwyo.edu/wyndd/WYNDD/SpeciesofConcern.htm>

The Wyoming Game and Fish Department's Species of Special Concern (SSC) list in the 1996 Nongame Bird and Mammal Plan ranks 47 species using a matrix of population variables and habitat variables. The codes of SSC1, SSC2, and SSC3 refer to each species' level of sensitivity and all are considered "sensitive." In 1998 the name of the matrix was changed to Native Species Status. The mammal list was revised in spring 2000 to reflect the addition of 12 species for a total of 35 mammals. The Department is actively involved in the Partner's in Flight effort to prioritize bird species of concern and develop a bird conservation plan. In November, 1999, the Habitat Protection Program (WGFD Cheyenne Office) produced a Species Watch List using State, Federal, and University of Wyoming Cooperative Fish and Wildlife Research Unit sources to develop a list of 150 species that may need management attention.

Two Forest Service (USFS) Regions cover Wyoming: Region 2 (Rocky Mountain Region) in the eastern part of the State (Bighorn, Black Hills, Medicine Bow, and Shoshone National Forests and Thunder Basin National Grassland) and Region 4 (Intermountain Region) in the western part of Wyoming (Ashley, Bridger-Teton, Caribou, Targhee, Wasatch-Cache National Forests and Flaming Gorge National Recreation Area). The original list of Vertebrate Sensitive Species for Region 4, issued in August, 1990, listed 29 vertebrates. Their January, 1999, updated list includes 222 species of plants, mammals, birds, fish, amphibians and reptiles, the majority (200) of which are plants. Another update of the Region 4 list is planned for this fall. Region 2 is in the process of updating their 1994 list of 165 species of plants, mammals, birds, fish, amphibians and reptiles, and invertebrates. Thunder Basin National Grassland lists 8 plant and 33 vertebrate species on their Species of Concern list.

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BLM resource specialists statewide were polled in March 2000 concerning development of the BLM Wyoming Sensitive Species list. Suggestions and concerns heard from the field were: the species on the sensitive species list should have declining populations throughout all or part of its range; that species are experiencing declining habitat conditions; that the species and their habitats had to be manageable; and that the list should have a limited number of species to meet the objective of focusing management attention. The population and habitat criteria expressed largely correspond with the 6840 criteria. The manageability of the species, their habitats and the list size have guided the development of this list. Also requested were management guidelines, which are not included at this time, but are seen as likely extension of this effort. General habitat requirements are provided in the table as well as statewide distribution by Field Office.

Evaluation/Monitoring/Review Process

The BLM Sensitive Species List is meant to be dynamic. The State Office wildlife and botany staff will annually review the list and solicit recommendations from BLM and non-BLM appropriate authorities for additions and deletions. If biological information shows that a species needs to be included, or removed, the appropriate Field Manager or the State Office can make a nomination for an addition or deletion with sufficient scientific justification and supporting data concerning the above-listed criteria. Under this scenario, if such a species occurs in more than one Field Office, consensus will be sought from the other Field Offices before action is taken.

Any Federally de-listed threatened or endangered species will automatically be designated BLM Wyoming Sensitive for the 5 year monitoring period required by the ESA. Species that were evaluated in a FWS 12 month finding but were found to be “not warranted,” both petitioned species and species given candidate status after 1996 will initially be included on the BLM Wyoming Sensitive Species List.

The List

Using the criteria set forth in Manual 6840 (see page 1 above), BLM Wyoming is designating the following list of plants and animals to be Sensitive Species. While using these criteria, the process of including species on the list is still subjective. This list does not include those species already formally designated by the FWS as Federally endangered, threatened, proposed, and/or candidate.

Many species are not included on the list because their status is largely unknown and basic inventory is needed. It is the BLM Wyoming’s intent that the WYNDD’s and WGFD’s lists should be regularly consulted by field personnel to develop inventory projects designed to gather information on population size, trend, and distribution for these poorly known species. They should also be the target for budgetary funding for inventory purposes.

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BLM WYOMING STATE DIRECTOR'S SENSITIVE SPECIES LIST
(ANIMALS AND PLANTS)

April, 2001

Species Common Name	Scientific Name	Habitat	Designation and Ranking of others: WY Natural Heritage Program, Forest Service (FS) Regions 2 and 4; Wyoming Game and Fish (NSS), BLM states and others ¹	Occurrence by BLM Field Office ²										
				WFO	CYFO	RFO	RSFO	LFO	CFO	BFO	NFO	KFO	PFO	
MAMMALS														
Shrew, Dwarf	<i>Sorex nanus</i>	Mountain foothill shrub, grasslands	G4/S2S3, FSR2, NSS3, UT	X	X	X	X	X	X	X	X	X	X	X
Myotis, Long-eared	<i>Myotis evotis</i>	Conifer and deciduous forests, caves and mines	G5/S1B, S17N, NSS2, ID, OR/WA, AZ	X	X	X	X	X	X	X	X	X	X	X
Myotis, Fringed	<i>Myotis thysanodes</i>	Conifer forests, woodland-chaparral, caves and mine	G5/S1B, S1N, FSR2, TBNG, NSS2, ID, UT, MT, OR/WA, AZ		X		X		X		X			
Bat, Spotted	<i>Euderma maculatum</i>	Cliffs over perennial water, basin-prairie shrub	G4/S1B, S27N FSR2, FSR4, NSS2, ID, CO, UT, MT, OR/WA, AZ	X	X		X		X		X			
Bat, Townsend's Big-eared	<i>Corynorhinus townsendii</i>	Forests, basin-prairie shrub, caves and mines	G4/S1B, S2N, FSR2, TBNG, FSR4, NSS2, ID, CO, UT, MT, OR/WA	X	X	X	X	X	X	X	X			
Rabbit, Pygmy	<i>Brachylagus idahoensis</i>	Basin-prairie and riparian shrub	G4/S2, NSS3, ID, MT, OR/WA, IUCN LR(n)				X						X	X
Prairie Dog, White-tailed	<i>Cynomys leucurus</i>	Basin-prairie shrub, grasslands	G4/S2S3, NSS3, MT	X	X	X	X	X	X	X	X			
Pocket Gopher, Wyoming	<i>Thomomys talpae</i>	Meadows with loose soil	G2/S1S2, NSS4, FSR2			X	X							
Pocket Gopher, Idaho	<i>Thomomys idahoensis</i>	Shallow stony soils	G4/S27, NSS3, IUCN-LR(n)				X						X	X
Fox, Swift	<i>Vulpes velox</i>	Grasslands	Removed from Federal Candidate list 01/08/01	X	X	X	X	X	X	X	X	X		
BIRDS														

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Species Common Name	Scientific Name	Habitat	Designation and Ranking of others: WY Natural Heritage Program, Forest Service (FS) Regions 2 and 4; Wyoming Game and Fish (NSS), BLM states and others ¹	Occurrence by BLM Field Office ²												
				WFO	CYFO	RFO	RSFO	LFO	CFPO	BFO	NFO	KFO	PFO			
Ibis, White-faced	<i>Plegadis chilo</i>	Marshes, wet meadows	G5/S1B, SZN, FSR2, TBNG, NSS3, UT, MT, CO, AZ	X	X	X	X	X	X	X	X	X	X	X	X	X
Swan, Trumpeter	<i>Cygnus buccinator</i>	Lakes, ponds, rivers	G4/S1B, SZN, FSR2, TBNG, FSR4, NSS2, ID, MT	X	X	X	X	X	X	X	X	X	X	X	X	X
Goshawk, Northern	<i>Accipiter gentilis</i>	Conifer and deciduous forests	G5/S23B, S4N, FSR2, TBNG, FSR4, NSS4, ID, CO, UT, MT	X	X	X	X	X	X	X	X	X	X	X	X	X
Hawk, Ferruginous	<i>Buteo regalis</i>	Basin-prairie shrub, grassland, rock outcrops	G4/S3B, S3N, FSR2, TBNG, NSS3, ID, CO, MT	X	X	X	X	X	X	X	X	X	X	X	X	X
Falcon, Peregrine	<i>Falco peregrinus</i>	Tall cliffs	G4/T3/S1B, SZN, FSR2, TBNG, NSS3, UT	X	X	X	X	X	X	X	X	X	X	X	X	X
Sage-grouse, Greater	<i>Centrocercus urophasianus</i>	Basin-prairie shrub, mountain-foothill shrub	G5/S3, TBNG, ID, CO, UT	X	X	X	X	X	X	X	X	X	X	X	X	X
Grouse, Columbian Sharp-tailed	<i>Tympanuchus phasianellus columbianus</i>	Grasslands	G4/T3/S1, FSR2, FSR4, ID, CO, UT, MT			X										
Curlew, Long-billed	<i>Numenius americanus</i>	Grasslands, plains, foothills, wet meadows	G5/S3B, SZN, FSR2, TBNG, NSS3, ID, CO, UT, MT	X	X	X	X	X	X	X	X	X	X	X	X	X
Cuckoo, Yellow-billed	<i>Coccyzus americanus</i>	Open woodlands, streamside willow and alder groves	G5/S2B, SZN, FSR2, TBNG, NNS2, UT, ID, Petitioned	X	X	X	X	X	X	X	X	X	X	X	X	X
Owl, Burrowing	<i>Athene cunicularia</i>	Grasslands, basin-prairie shrub	G4/S3B, SZN, FSR2, TBNG, NSS4, ID, MT, AZ	X	X	X	X	X	X	X	X	X	X	X	X	X
Thrasher, Sage	<i>Oreoscoptes montanus</i>	Basin-prairie shrub, mountain-foothill shrub	G5/S3B, SZN, PIF Priority	X	X	X	X	X	X	X	X	X	X	X	X	X
Shrike, Loggerhead	<i>Lanius ludovicianus</i>	Basin-prairie shrub, mountain-foothill shrub	G5/S4B, SZN, FSR2, TBNG, ID, MT, AZ	X	X	X	X	X	X	X	X	X	X	X	X	X
Sparrow, Brewer's	<i>Spizella breweri</i>	Basin-prairie shrub	G5/S3B, SZN, TBNG, PIF Priority, ID	X	X	X	X	X	X	X	X	X	X	X	X	X

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Species Common Name	Scientific Name	Habitat	Designation and Ranking of others: WY Natural Heritage Program, Forest Service (FS) Regions 2 and 4; Wyoming Game and Fish (NWS), BLM states and others'	Occurrence by BLM Field Office'											
				WFO	CYFO	RFO	RSFO	LFO	CFO	BFO	NFO	KFO	PFO		
Sparrow, Sage	<i>Amphispiza bilineata</i>	Basin-prairie shrub, mountain-foothill shrub	G5/S3B, SZN, PIF Priority, ID, MT	X	X	X	X	X	X	X	X	X	X	X	X
Sparrow, Baird's	<i>Ammodramus bairdi</i>	Grasslands, woody fields	G4/S1B, SZN, FSR2, TBNG, MT	X	X	X		X	X	X					
FISH															
Chubb, Roundtail	<i>Gila robusta</i>	CO River drainage, mostly large rivers, also streams and lakes	G2G3/S27, NSS1, CO, UT			X	X							X	X
Chubb, Leatherside	<i>Gila copei</i>	Bear, Snake and Green drainages, clear, cool streams and pools	G3G4/S2, NSS1, ID, UT				X							X	X
Sucker, Bluehead	<i>Catostomus discobolus</i>	Bear, Snake and Green drainages, all waters	G4/S2S3, NSS1, CO, UT			X	X							X	X
Sucker, Flannelmouth	<i>Catostomus latipinnis</i>	CO River drainage, large rivers, streams and lakes	G3G4/S3, NSS1, CO, UT			X	X							X	X
Trout, Yellowstone Cutthroat	<i>Oncorhynchus clarki bouvieri</i>	Yellowstone drainage, small mountain streams and large rivers	G4T7/S2, FSR2, NSS3, ID, MT	X	X			X	X						X
Trout, Colorado River Cutthroat	<i>Oncorhynchus clarki pleuriticus</i>	CO River drainage, clear mountain streams	G4T7/S2, FSR2, FSR4, NSS2, CO, UT, Petitioned			X	X							X	X
Trout, Bonneville Cutthroat	<i>Oncorhynchus clarki utah</i>	Bear R. drainage, clear mountain streams	G4T7/S1S2, NSS2, FSR4, ID, UT, Petitioned											X	
Trout, Fine-spotted Snake River Cutthroat	<i>Oncorhynchus clarki spp</i>	Snaake R. drainage, clear, fast water	G4T7/S1, NSS4, FSR4, Petitioned											X	X
REPTILES															
Rattlesnake, Midget Faded	<i>Crotalus viridis concolor</i>	Mountain foothills shrub, rock outcrop	G5T3/S1S2, CO				X								
AMPHIBIANS															
Frog, Northern Leopard	<i>Rana pipiens</i>	Beaver ponds, permanent water in plains and foothills	G5/S3, FSR2, TBNG, NSS4, CO, ID, MT	X	X	X	X	X	X	X	X	X	X	X	X
Spadefoot, Great Basin	<i>Spea intermontana</i>	Spring seeps, permanent and temporary waters	G5/S4, NSS4, CO			X	X							X	X

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Species Common Name	Scientific Name	Habitat	Designation and Ranking of others: WY Natural Heritage Program, Forest Service (FS) Regions 2 and 4; Wyoming Game and Fish (NSS), BLM states and others ¹	Occurrence by BLM Field Office ²												
				WFO	CYFO	RFO	RSFO	LFO	CFO	BFO	NFO	KFO	PFO			
Toad, Boreal (Northern Rocky Mountain population)	<i>Bufo boreas boreas</i>	Pond margins, wet meadows, riparian areas	G4T4/S2, NSS2, FSR2, FSR4, UT, ID	X		X	X	X					X			X
Frog, Spotted	<i>Rana pretiosa (lutiventris)</i>	Ponds, sloughs, small streams	G4/S2/S3, FSR2, FSR4, NSS4, ID, UT, MT	X			X	X			X				X	X
PLANTS																
Meadow Pussytoes	<i>Antennaria arcuata</i>	Moist, hummocky meadows, seeps or springs surrounded by sage/grasslands 4,950-7,900'	G2/S2				X	X								X
Laramie Columbine	<i>Aquilegia laramiensis</i>	Crevice of granite boulders & cliffs 6,400-8,000'	G2/S2, FSR2			X										
Small Rock Cress	<i>Arabis pusilla</i>	Cracks/Crevice in sparsely vegetated granite/pegmatite outcrops w/in sage/grasslands 8,000-8,100'	G1/S1 (Removed from Federal Candidate list 10/25/99)				X									
Mystery Wormwood	<i>Artemisia biennis var. diffusa</i>	Clay flats & playas 6,500'	G5T1/S1						P							
Porter's Sagebrush	<i>Artemisia porteri</i>	Sparsely vegetated badlands of ashy or tuffaceous mudstone & clay slopes 5,300-6,500'	G2/S2					X		X	X					
Dubois Milkvetch	<i>Astragalus gilviflorus var. purpureus</i>	Barren shale, badlands, limestone, & redbed slopes & ridges 6,900- 8,800'	G5T2/S2					X								
Hyattville Milkvetch	<i>Astragalus fejanus var. articulatus</i>	Sparsely vegetated stony ridges & barren red clay slopes 4,900-5,900'	G3T1/S1									X				
Nelson's Milkvetch	<i>Astragalus nelsonianus - or - Astragalus pectinatus var. platyphyllus</i>	Alkaline clay flats, shale bluffs and gullies, pebbly slopes, and volcanic cinders in sparsely vegetated sagebrush, juniper, & cushion plant communities at 5200-7600'	G2/S2, CO			X		X		X	X					
Trelease 's Milkvetch	<i>Astragalus riceanotus var. trefautzi</i>	Sparsely vegetated sagebrush communities on shale or limestone outcrops & barren clay slopes at 6,500-8700'	G5T2/S1												X	X

APPENDIX E: WILDLIFE MONITORING PLAN

Species Common Name	Scientific Name	Habitat	Designation and Ranking of oilbars: WY Natural Heritage Program, Forest Service (FS) Regions 2 and 4; Wyoming Game and Fish (NSSL), BLM states and others ¹	Occurrence by BLM Field Office ²													
				WFO	CYFO	RFO	RSFO	LFO	CFO	BFO	NFO	KFO	PFO				
Precocious Milkvetch	<i>Astragalus proimanthus</i>	Cushion plant communities on rocky, clay soils mixed with shale on summits & slopes of white shale hills 6,800-7,200'	G1/S1				X										
Cedar Rim Thistle	<i>Cirsium aridum</i>	Barren, chalky hills, gravelly slopes, & fine textured, sandy-shaly draws 6,700-7,200'	G2Q/S2			X											X
Ownbey's Thistle	<i>Cirsium ownbeyi</i>	Sparsely vegetated shaly slopes in sage & juniper communities 6,440-8,400'	G3/S2				X										
Many-stemmed Spider-flower	<i>Cleome multicaulis</i>	Semi-moist, open saline banks of shallow ponds & lakes with bullic rush & bulrush 5,900'	G2G3/S1							X							
Owl Creek Miner's Candle	<i>Cryptantha subcapitata</i>	Sandy-gravelly slopes & desert ridges on sandstones of the Winds River Formation 4,700-6,000'	G1/S1								X						
Event's Wafer-Parnip	<i>Cymopterus everittii</i>	Coarse volcanic soils or sandstone outcrops dominated by cushion plants or sparse shrublands in openings within Rocky Mtn juniper or Limber pine woodlands at 5,900-10,900'	G2G3/S2S3												X		
Williams' Wafer-Parnip	<i>Cymopterus williamsii</i>	Open ridgetops & upper slopes with exposed limestone outcrops or rockslides 6,000-8,300'	G3/S3	X						X			X				
Wyoming Tansymustard	<i>Descurainia torulosa</i>	Sparsely vegetated sandy slopes at base of cliffs of volcanic broccia or sandstone 8,300-10,000'	G1/S1						X								
Weber's Scarlet-Gilia	<i>Ipomopsis aggregata ssp. weberi</i>	Openings in coniferous forests & scrub oak woodlands 8,500-9,600'	G5T1T2Q/S1, FSR2							X							
Entire-Leaved Peppercrass	<i>Lepidium integrifolium var. integrifolium</i>	WY poplins occur in sparsely vegetated and seasonally wet clay flats, grasswood communities on clay hummocks, and moist alkaline meadows at 6,200-6,770'	G2T1?/S1														X

APPENDIX E: WILDLIFE MONITORING PLAN

Species Common Name	Scientific Name	Habitat	Designation and Ranking of others: WY Natural Heritage Program, Forest Service (FS) Regions 2 and 4; Wyoming Game and Fish (NWS), BLM states and others ¹	Occurrence by BLM Field Office ²													
				WFO	CYFO	RFO	RSFO	LFO	CFO	BFO	NFO	KFO	PFO				
Sidesaddle Bladderpod	<i>Lesquerella arenosa</i> var. <i>agriflora</i>	Dry, open rock outcrops of gravel, shale, or limestone & barren, often seleniferous, roadsides 4,200-4,300'	G2/S1/S1										X				
Fremont Bladderpod	<i>Lesquerella fremontii</i>	Rocky limestone slopes & ridges 7,000-9,000'	G2/S2		X												
Large-fruited Bladderpod	<i>Lesquerella macrocarpa</i>	Gypsum-clay hills & benches, clay flats, & barren hills 7,200-7,700'	G2/S2			X										X	X
Western Bladderpod	<i>Lesquerella multiceps</i>	Dry, gravelly limestone ridges & slopes in sparse grasslands or cushion plant communities at 8,300-8,600'	G3/S1													?	
Prostrate Bladderpod	<i>Lesquerella prostrata</i>	Cushion plant or sparse sage grassland communities on slopes and rims of whitish to reddish or gray limy clays & soft sandstones with a surface layer of fine gravel at elevations of 7,200-7,700'	G3/S1														X
Absaroka Beardtongue	<i>Penstemon absarokensis</i>	Sparsely vegetated openings on steep slopes of loose volcanic rubble or outcrops of dry andesitic volcanic rock at 5,920-10,000'	G2/S2						X								
Stemless Beardtongue	<i>Penstemon acutiflorus</i> var. <i>acutiflorus</i>	Cushion plant or Black sage grassland communities on semi-barren rocky ridges, knolls, & slopes at 5,900-8,200'	G1/S1							X							
Cary Beardtongue	<i>Penstemon caryi</i>	Calcareous rock outcrops & rocky soil w/in sage, juniper, Doug-fir, & limber pine communities 5,200-8,500'	G3/S2, FSR2						X					X			
Gibbens' Beardtongue	<i>Penstemon gibbensii</i>	Sparsely vegetated shale or sandy-clay slopes 5,500-7,700'	G1/S1							X							
Beaver Rim Phlox	<i>Phlox pilungens</i>	Sparsely vegetated slopes on sandstone, siltstone, or limestone substrates 6,000-7,400'	G2/S2											X			X
Tufted Twinpod	<i>Physaria confertiflora</i>	Sparsely vegetated shale slopes & ridges 6,500-7,000'	G2/S2													X	X

APPENDIX E: WILDLIFE MONITORING PLAN

1 Rankings

Heritage Program

WYNDD uses a standardized ranking system developed by The Nature Conservancy's Natural Heritage Network to assess the global and statewide conservation status of each plant and animal species, subspecies, and variety. Each taxon is ranked on a scale of 1-5, from highest conservation concern to lowest. Codes are as follows:

- G Global rank: Rank refers to the rangewide status of a species.
- T Trinomial rank: Rank refers to the rangewide status of a subspecies or variety.
- S State rank: Rank refers to the status of the taxon (species or subspecies) in Wyoming. State ranks differ from state to state.
- 1 Critically imperiled because of extreme rarity (often known from 5 or fewer extant occurrences or very few remaining individuals) or because some factor of a species' life history makes it vulnerable to extinction.
- 2 Imperiled because of rarity (often known from 6-20 occurrences) or because of factors demonstrably making a species vulnerable to extinction.
- 3 Rare or local throughout its range or found locally in a restricted range (usually known from 21-100 occurrences).
- 4 Apparently secure, although the species may be quite rare in parts of its range, especially at the periphery.
- 5 Demonstrably secure, although the species may be rare in parts of its range, especially at the periphery.
- H Known only from historical records. 1950 is the cutoff for plants; 1970 is the cutoff date for animals.
- X Believed to be extinct.
- A Accidental or vagrant: A taxon that is not known to regularly breed in the state or which appears very infrequently (typically refers to birds and bats).
- B Breeding rank: A state rank modifier indicating the status of a migratory species during the breeding season (used mostly for migratory birds and bats)
- N Nonbreeding rank: A state rank modifier indicating the status of a migratory species during the non-breeding season (used mostly for migratory birds and bats)
- ZN or ZB Taxa that are not of significant concern in Wyoming during breeding (ZB) or non-breeding (ZN) seasons. Such taxa often are not encountered in the same localities from year to year.
- U Possibly in peril, but status uncertain; more information is needed.
- Q Questions exist regarding the taxonomic validity of a species, subspecies, or variety.
- ? Questions exist regarding the assigned G, T, or S rank of a taxon.

State Status

The Wyoming Game and Fish Department has developed a matrix of habitat and population variables to determine the conservation priority of all native, breeding bird and mammal species in the state. Six classes of Native Status Species (NSS) are recognized, of which classes 1, 2, and 3 are considered to be high priorities for conservation attention.

These classes can be defined as follows:

- NSS1 Includes species with on-going significant loss of habitat and with populations that are greatly restricted or declining (extirpation appears possible).
- NSS2 Species in which (1) habitat is restricted or vulnerable (but no recent or significant loss has occurred) and populations are greatly restricted or declining; or (2) species with on-going significant loss of habitat and populations that are declining or restricted in numbers and distribution (but extirpation is not imminent).
- NSS3 Species in which (1) habitat is not restricted, but populations are greatly restricted or declining (extirpation appears possible); or (2) habitat is restricted or vulnerable (but no recent or significant loss has occurred) and populations are declining or restricted in numbers or distribution (but extirpation is not imminent); or (3) significant habitat loss is on-going but the species is widely distributed and population trends are thought to be stable.

Forest Service

- Region 2 - Rocky Mountain Region
- Region 4 - Intermountain Region
- TBNG - Thunder Basin National Grassland

Other BLM states

- AZ Arizona
- CO Colorado
- ID Idaho
- MT Montana
- ORWA Oregon/Washington
- UT Utah

IUCN - International Union for Conservation of Nature, Rodent Specialist Group. North American Red List. LOWER RISK (LR) - A taxon is Lower Risk when it has been evaluated, does not satisfy the criteria for any of the categories Critically Endangered, Endangered or Vulnerable. Taxa included in the Lower Risk category can be separated into three subcategories:

- 1. Conservation Dependent (cd). Taxa which are the focus of a continuing taxon-specific or habitat-specific conservation programme targeted towards the taxon in question, the cessation of which would result in the taxon qualifying for one of the threatened categories above within a period of five years.
- 2. Near Threatened (nt). Taxa which do not qualify for Conservation Dependent, but which are close to qualifying for Vulnerable.
- 3. Least Concern (lc). Taxa which do not qualify for Conservation Dependent or Near Threatened.

PIF - Partners in Flight, a coalition of federal, state and provincial agencies, private groups, corporations and individuals dedicated to neotropical migratory bird conservation

Petitioned- Species which has been petitioned for listing under the Endangered Species Act

2 Occurrence by BLM Field Office

- WFO Worldland

APPENDIX E: WILDLIFE MONITORING PLAN

CFYO	Cody
RFO	Rawlins
RSFO	Rock Springs
LFO	Lander
CFO	Casper
BFO	Buffalo
NFO	Newcastle
KFO	Kemmerer
PFO	Pinedale

For Plants:

- P** - Indicates occurrence within BLM Field Office area on Private Land Ownership
- S** - Indicates occurrence within BLM Field Office area on State Land Ownership
- F** - Indicates occurrence within BLM Field Office area on other Federal Land Ownership
- ?** - Indicates likely occurrence within BLM Field Office area