

WILDLIFE APPENDIX

This appendix contains a series of tables cited in Chapter 3 of the SEIS Wildlife section. Following those tables is the CBNG Programmatic Wildlife Monitoring and Protection Plan developed by the BLM for the Statewide Document and updated for the SEIS.

This appendix also contains a copy of the Biological Assessment as prepared for the U.S. Fish and Wildlife Service (USFWS). The Biological Assessment has as attachments the BLM's letter

formally requesting a list of threatened and endangered species from the USFWS and initiating consultation for the SEIS process under Section 7 of the Endangered Species Act of 1973. The letter from USFWS responding to the BLM's request is included as well as a memorandum from USFWS explaining that concurrence from them is not required when a no effects determination is made by the BLM.

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**TABLE WIL-1
WILDLIFE SPECIES OF CONCERN**

Common Name	Scientific Name	Occurrence in CBNG Planning Area (by county) ¹	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Mammals						
Pallid bat	<i>Antrozous pallidus</i>	All except Wheatland and Sweet Grass	S2	S	S	Arid areas with rocky outcrops, dry forests, riparian forests, and ponderosa pine low slope forests in south-central Montana (UM).
Townsend's big-eared bat	<i>Corynorhinus (Plecotus) townsendii</i>	All	S2	S	S	Arid scrub and pine forest, uses caves, snags, old mines and buildings the Custer and Gallatin National Forests (NM).
Spotted bat	<i>Euderma maculatum</i>	Golden Valley, Musselshell, Yellowstone, Big Horn, Carbon	S2	S	S	Various habitats in south-central Montana from open coniferous to pastureland.
Northern myotis	<i>Myotis septentrionalis</i>	Not known to occur in CBNG planning area, but distribution not well-known.	S2S3	S		Mixed and coniferous forests with small woodland pools and streams, in clearings (NM). Lower Missouri River.
Long-legged myotis ²	<i>Myotis volans</i>	All	S4	S		Forests and woodlands.
Long-eared myotis ²	<i>Myotis evotis</i>	All	S4	S		Forests and woodlands. Also, rocky areas.
Fringed myotis ²	<i>Myotis thysanodes</i>	Wheatland	S3	S		Shrublands, sagebrush-grassland, pine and Douglas-fir forests and woodlands and adjacent riparian forests.
White-tailed prairie dog	<i>Cynomys leucurus</i>	Carbon	S1	S	S	Grasslands and plains.
Black-tailed prairie dog	<i>Cynomys ludovicianus</i>	All	S3	S	S	Short-grass and mixed-grass prairie in the east of the 110 th meridian Fort Belknap Reservation, and Crow Reservation.
North American wolverine	<i>Gulo gulo luscus</i>	Wheatland, Sweet Grass, Stillwater, Carbon	S3	S	S	Mature and old-growth fir, pine and larch forests, alpine shrub, talus, and riparian cottonwoods.
Fisher	<i>Martes pennanti</i>	Sweet Grass, Stillwater, Carbon	S3	S	S	Forests with mixed habitat, several structural classes, edges and riparian areas.

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**TABLE WIL-1
WILDLIFE SPECIES OF CONCERN**

Common Name	Scientific Name	Occurrence in CBNG Planning Area (by county) ¹	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Northern bog lemming	<i>Synaptomys borealis</i>	Not known to occur in CBNG planning area, but distribution not well-known.	S2		S	Damp pastures, tundra, cool bogs, peatlands, marshes, or moist meadows.
Herptiles						
Boreal/Western toad	<i>Bufo boreas</i>	Wheatland, Sweet Grass, Stillwater, Carbon	S2	S	S	Breeding ponds, summer range, and overwinter refugia within lodgepole pine or spruce-fir forests.
Great Plains toad ²	<i>Bufo cognatus</i>	All except Carbon	S2	S		Coulees and sagebrush-grasslands. Breeds in glacial potholes, stock reservoirs, and irrigation ditches.
Plains spadefoot ²	<i>Spea bombifrons</i>	All	S3	S		Sagebrush and grasslands with loose soils, usually near temporary or permanent water.
Wood frog	<i>Rana sylvatica</i>	None known in CBNG planning area, but distribution not well-known.			S	Temporary ponds, lakes, and streams with adjacent forests or brush with damp litter.
Northern leopard frog	<i>Rana pipiens</i>	All	S3		S	Streams, ponds, lakes, wet prairies, and other bodies of water, frequently moving into grassy, herbaceous fields or forest borders some distance from permanent water.
Snapping turtle	<i>Chelydra serpentina</i>	All except Wheatland, Sweet Grass, Golden Valley, and Musselshell	S3	S		Shallow, mud-bottomed backwaters and ponds with lush aquatic vegetation.
Spiny softshell	<i>Trionyx spiniferus</i>	Custer, Rosebud, Big Horn, Treasure, Yellowstone, Musselshell, Golden Valley, Wheatland (Yellowstone River and some tributaries; Musselshell River)	S3	S		Rivers, backwaters, lakes, and ponds with sand or mud areas for digging nests. Missouri and Yellowstone Rivers
Short-horned lizard ²	<i>Phrynosoma hernandesi</i>	All	S3	S		Short-grass prairie and sagebrush areas, especially south-facing slopes, rocky rims of coulees, and shale outcrops.
Milk snake ²	<i>Lampropeltis triangulum</i>	All except Carter, Sweet Grass, Wheatland, and Golden Valley	S2	S	S	Grasslands, sagebrush, and Ponderosa pine savannah. Also, edges of agricultural fields.

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**TABLE WIL-1
WILDLIFE SPECIES OF CONCERN**

Common Name	Scientific Name	Occurrence in CBNG Planning Area (by county) ¹	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Western hog-nosed snake ²	<i>Heterodon nasicus</i>	All	S2	S	S	Arid areas, farmlands, floodplains, grasslands, and sagebrush with well-drained, sandy soils.
Birds						
Common loon ²	<i>Gavia immer</i>	Wheatland, Golden Valley, Sweet Grass, Stillwater, Carbon, Yellowstone, Big Horn	S2B	S	S	Lakes that are at least 13 acres in size and over 5000 feet in elevation. Also, generally require nursery areas that are sheltered, shallow coves with abundant small fish and insects.
Trumpeter swan	<i>Cygnus buccinator</i>	Sweet Grass	S2B	S	S	Shallow freshwater marshes, ponds, lakes, and slow-moving rivers with both submerged and emergent vegetation.
Franklin's gull ²	<i>Larus pipixcan</i>	Rosebud, Yellowstone, Carbon, Stillwater, Sweet Grass, Wheatland, Golden Valley, Musselshell	S3B	S		Large, relatively permanent prairie marsh complexes.
White-faced ibis	<i>Plegadis chihi</i>	Golden Valley, Musselshell, Stillwater, Yellowstone, Carbon	S1B	S		Freshwater wetlands (marshes, ponds, swamps) with islands of emergent vegetation.
Black tern ²	<i>Chlidonias niger</i>	Carter, Custer, Musselshell, Yellowstone, Stillwater, Sweet Grass, Golden Valley, Wheatland	S3B	S		Breeds in wetlands, marshes, prairie potholes, and small ponds; also, on islands.
Harlequin duck	<i>Histrionicus histrionicus</i>	Carbon, Stillwater, Sweet Grass	S2B	S	S	Summer on mountain streams and rivers, nest on the ground near water's edge or in the hollows of dead trees.
Long-billed curlew	<i>Numenius americanus</i>	Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, Yellowstone, Big Horn, Carbon	S2B	S	S	Open grasslands and prairies, often near water.
Willet ²	<i>Catoptrophorus semipalmatus</i>	All except Treasure and Custer	S5B	S		Open, dry areas and sandy flats; usually, near lakes or marshes.
Wilson's phalarope ²	<i>Phalaropus tricolor</i>	All except Treasure	S4B	S		Marshy borders of lakes and ponds. Also, flooded fields in spring.

**TABLE WIL-1
WILDLIFE SPECIES OF CONCERN**

Common Name	Scientific Name	Occurrence in CBNG Planning Area (by county) ¹	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Golden eagle ²	<i>Aquila chrysaetos</i>	All	S4	S		Nests on cliffs and in large trees. Hunts over grasslands, sagebrush, and open woodlands.
Swainson's hawk	<i>Buteo swainsoni</i>	All	S3B	S		Shrub-steppe, prairie with scattered trees, or open woodlands.
Ferruginous hawk	<i>Buteo regalis</i>	All	S2B	S		Undisturbed plains or shrub-steppe with relatively unbroken terrain and scattered trees, rocks, or treed creek bottoms.
Northern goshawk	<i>Accipiter gentilis</i>	All	S3	S	S	Coniferous, deciduous, and mixed forests with a high density of large, old trees and high overstory canopy.
Burrowing owl	<i>Athene cunicularia</i>	Rosebud, Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, Yellowstone, Carbon	S2B	S	S	Burrows made by prairie dogs or badgers in rangeland and prairie areas.
Great gray owl	<i>Strix nebulosa</i>	Wheatland, Sweet Grass, Stillwater, Carbon	S3	S		Dense, often moist, forests, with openings for hunting.
Three-toed woodpecker	<i>Picoides tridactylus</i>	Wheatland, Sweet Grass, Stillwater, Carbon	S3S4	S		Pine-dominated mature forests and burned areas in early successional stages.
Red-headed woodpecker ²	<i>Melanerpes erythrocephalus</i>	All	S3B	S		Riparian forests along major rivers; also, savannahs and large burns.
Black-backed woodpecker	<i>Picoides articus</i>	Custer, Powder River	S2	S	S	Coniferous forests, especially early post-fire habitat
Sprague's pipit ²	<i>Anthus spragueii</i>	All except Big Horn and Powder River	S2B	S	S	Grasslands.
Pygmy nuthatch ²	<i>Sitta pygmaea</i>	All	S4		S	Primarily Ponderosa pine forests. Also, stands of other pines, Douglas-fir, western larch, and aspen.
Blue-gray gnatcatcher	<i>Polioptila caerulea</i>	Carbon	S1B	S	S	Juniper and limber pine in the Pryor Mountains of south-central Montana.

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**TABLE WIL-1
WILDLIFE SPECIES OF CONCERN**

Common Name	Scientific Name	Occurrence in CBNG Planning Area (by county) ¹	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Sage thrasher ²	<i>Oreoscoptes montanus</i>	All except Carter	S3B	S		Sagebrush; rocky canyons in arid areas.
Loggerhead shrike	<i>Lanius ludovicianus</i>	All	S3B	S	S	Edge habitat with open country, thinly wooded or scrubby land with clearings, meadows, and aspen stands bordering dense, ungrazed or lightly grazed grassland.
Sage sparrow	<i>Amphispiza belli</i>	Not documented within the past 10 years in CBNG planning area, but range not well-known.	S1S3B	S		Sagebrush.
Baird's sparrow	<i>Ammodramus bairdii</i>	All except Treasure, Big Horn, and Musselshell	S2B	S	S	Open tall to mixed grass areas with mixture of mostly native prairie grasses and forbs.
Brewer's sparrow ²	<i>Spizella breweri</i>	All	S2B	S		Sagebrush and grasslands.
Le Conte's sparrow ²	<i>Ammodramus leconteii</i>	Yellowstone, Big Horn	S1S2B	S		Wet or irrigated meadows.
Chestnut-collared longspur ²	<i>Calcarius ornatus</i>	All except Treasure and Big Horn	S3B	S		Short-grass prairie/grasslands.
McCown's longspur ²	<i>Calcarius mccownii</i>	All except Big Horn	S2B	S		Grasslands, pastures, and agricultural areas.
Dickcissel	<i>Spiza americana</i>	Powder River, Rosebud, Treasure	S1S2B	S		Hayfields, pastures, weedy fallow fields, and the weedy margins of ditches and roadsides
Fish						
Yellowstone Cutthroat Trout	<i>Oncorhynchus clarki bouvieri</i>	Western Counties	S2	S	S	Mountain lakes and streams with varying habitat structures and water velocities.
Blue sucker	<i>Cycleptus elongatus</i>	Eastern Counties	S2S3	S		Deep water of large rivers and reservoirs with low turbidity and swift current.

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Common Name	Scientific Name	Occurrence in CBNG Planning Area (by county) ¹	Additional Information			
			MT	BLM	USFS	Suitable Habitat
Paddlefish	<i>Polyodon spathula</i>	Eastern Counties	S1S2	S		Historically found in calm, open waters of large rivers in the Mississippi River drainage as far north as the Missouri River in Montana.
Pearl dace	<i>Semotilus/Margariscus margarita</i>	Unknown within the CBNG Planning Area, but documented in the Yellowstone River just downstream of the CBNG Planning Area (Wibaux and Dawson counties)	S2	S		Cool or cold water lakes, bog ponds, creeks, and springs
Sauger	<i>Sander canadensis</i>	All Counties	S2	S		Larger turbid rivers and the muddy shallows of lakes and reservoirs.
Sturgeon chub	<i>Macrhybopsis gilida</i>	Eastern Counties	S2	S	S	Turbid water with moderate to strong currents.
Northern redbelly dace X Finescale dace ³	<i>Phoxinus eos X Phoxinus neogaeus</i>	Western Counties	S3	S		Boggy lakes, creeks, and ponds, often with cool, dark, tea-colored water.

¹ Represents updated information (relative to the Statewide Document) on known or expected species' occurrence based on FWP species' range maps (Montana Animal Field Guide, <http://fwp.state.mt.us/fieldguide>).

² Classified as state "S1", BLM sensitive, and/or USFS sensitive after completion of the Statewide Document.

³ Hybrid, always female.

NI = no information.

S = sensitive.

S1 = critically imperiled in the state.

S2 = vulnerable to extinction.

S3 = rare or restricted in range.

S4 = uncommon, but not rare; usually widespread.

S5 = common, widespread, and abundant.

B = breeding status of a migratory species (rank refers to the breeding population of the species in Montana).

**TABLE WIL-2
AQUATIC RESOURCES CHARACTERISTICS OF MAJOR DRAINAGES AND REPRESENTATIVE TRIBUTARIES IN THE BILLINGS
AND POWDER RIVER RESOURCE MANAGEMENT PLAN AREAS AND IN PARK, GALLATIN, AND BLAINE COUNTIES¹**

Location and Drainage	Length (miles) ²	Aesthetics ³	Fisheries Management ⁴	Fisheries Resource Value ⁵	Number of Fish Species Present	Dewatering Problem Identified? ⁶
Billings Resource Management Area						
Yellowstone River West of Billings (River Mile [RM] 360.2 – 554.1)	194	National renown, clean stream and natural setting, stream and area fair			23	
Downstream Section (RM 360.2 – 472.9)	113		Warm/cool water	Outstanding, high, substantial	22	Periodic
Upstream Section (RM 472.9 – 554.1)	81		Trout	Outstanding	14	No
Boulder River (RM 0.0 – 65.2)	65	Natural beauty, pristine	Trout	Outstanding, high, substantial	9	Chronic
Stillwater River (RM 0.0 – 60.0)	60	Natural beauty, clean stream and natural setting	Trout	Outstanding, high, substantial	9	No
Clarks Fork of the Yellowstone						
Downstream Section (RM 0.0 – 41.7)	42	Stream and area fair	Trout	Substantial	18	Periodic
Upstream Section (RM 41.7 – 70.9)	29	Clean stream and natural setting	Trout	Substantial	15	Chronic
Yellowstone River East of Billings (RM 294.5 – 360.2)	66	Clean stream and natural setting, stream and area fair	Warm/cool water and non-trout	High	28	Periodic
Bighorn River						
Downstream Section (RM 0.0 – 42.3)	42	Stream and area fair	Trout	High	30	Periodic
Little Bighorn River (RM 0.0 – 118.5)	119	Natural beauty, clean stream and natural setting	Trout	Moderate	15	No
Upstream Section (RM 42.3 – 84.7)	42	National renown	Trout	Outstanding	20	No
Musselshell River (RM 107.9 – 341.9)	234	Clean stream and natural setting, stream and area fair	Trout	High, substantial	30	Chronic, Periodic
Careless Creek (RM 0.0 – 55.6)	56	Clean stream and natural setting, stream and area fair	Trout	Substantial, moderate, limited	14	Chronic

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Location and Drainage	Length (miles) ²	Aesthetics ³	Fisheries Management ⁴	Fisheries Resource Value ⁵	Number of Fish Species Present	Dewatering Problem Identified? ⁶
Powder River Resource Management Area						
Yellowstone River (RM 147.0 – 294.5)	140	Clean stream and natural setting	Non-trout	Outstanding, High	47	No
Rosebud Creek (RM 0.0 – 207.6)	208	Stream and area fair	Undesignated	High, substantial	20	No
Tongue River						
Downstream Section (RM 0.0 – 93.3)	93	Clean stream and natural setting, stream and area fair	Trout	High, substantial	37	Chronic, Periodic
Pumpkin Creek (RM 0.0 -171.1)	171	Clean stream and natural setting, stream and area fair	Non-trout	Substantial, moderate, limited	23	No
Upstream Section (RM 93.3 – 217.5)	124	Clean stream and natural setting	Trout	High	30	Periodic
Otter Creek (RM 0.0 – 103.3)	103	Stream and area fair	Undesignated	Substantial, moderate	24	No
Hanging Woman Creek (RM 0.0 – 47.9)	48	Clean stream and natural setting	Undesignated	Substantial, moderate	26	No
Powder River						
Downstream Section (RM 18.4 – 144.5)	126	Low	Non-trout	High	27	Chronic
Mizpah Creek (RM 0.0 – 149.7)	150	Low, clean stream and natural setting	Non-trout	Moderate, limited	19	No
Little Powder River (RM 0.0 – 71.6)	72	Stream and area fair	Non-trout	Substantial	20	No
Upstream Section (RM 144.5 – 220.2)	76	Low, natural and pristine beauty	Non-trout	High	24	Chronic
Little Missouri River (RM 422.4 – 528.4)	103	Clean stream and natural setting	Non-trout	High	19	No

¹Information derived from the Montana Natural Resource Information System on the Internet at <http://nris.state.mt.us/wis/mris1.html> (downloaded September 29, 2005). Multiple values for a resource characteristic indicate river reach differences within a given drainage.

²Estimated length of drainage within the Resource Management Area or county (based on river miles from NRIS 2005).

³Aesthetics ratings in descending order are: national renown; natural and pristine beauty with some development; clean stream and natural setting; stream and area fair; and low (NRIS 2001).

⁴Categories of fisheries management are: trout; non-trout; warm/cool water; and undesignated.

⁵Fisheries resource values ratings in descending order are: outstanding; high; substantial; moderate; and limited.

⁶Dewatering indicates a reduction in streamflow beyond the point where stream habitat is adequate for fish and usually occurs during the irrigation season (July through September). Periodic dewatering indicates a significant problem in drought or water-short years, and chronic dewatering indicates a significant problem in virtually all years.

**TABLE WIL-3
COMMON AND SCIENTIFIC NAMES AND RELATIVE ABUNDANCE OF FISH SPECIES PRESENT IN MAJOR DRAINAGES
AND REPRESENTATIVE TRIBUTARIES IN THE BILLINGS RESOURCE MANAGEMENT PLAN AREA¹**

Common Name	Scientific Name	Yellowstone River West of Billings	Boulder River	Stillwater River	Clarks Fork of the Yellowstone		Yellowstone River East of Billings	Bighorn River		Little Bighorn River	Musselshell River	Careless Creek
					Downstream Section	Upstream Section		Downstream Section	Upstream Section			
Goldeye	<i>Hiodon alasoides</i>	A, C, R			A	U	A	A	A, C, R		C	
Lake chub	<i>Couesius plumbeus</i>				R	C	R	R			R	A
Common carp ²	<i>Cyprinus carpio</i>	C, R			R	U	C	C	C	U	C	U
Western silvery/plains minnow	<i>Hybognathus argyritis/placitus</i>				R	R		C	R		A, C, R	
Brassy minnow	<i>Hybognathus hankinsoni</i>									U	R	U
Emerald shiner	<i>Notropis atherinoides</i>	C, R				R	C	R	R		A, C, R	
Sand shiner	<i>Notropis stramineus</i>										A, R	
Northern redbelly/finescale dace	<i>Phoxinus eos/neogaeus</i>										R	R
Northern redbelly dace	<i>Phoxinus eos</i>										R	R
Fathead minnow	<i>Pimephales promelas</i>							R		U	C, R	R
Flathead chub	<i>Platygobio gracilis</i>	C			U		A, C	C		U	C	A
Longnose dace	<i>Rhinichthys cataractae</i>	C, R	C	A, C, R	C	C	A	C	A, C	U		A
River carpsucker	<i>Carpiodes carpio</i>	R			C		C	C	R	U		U
Longnose sucker	<i>Catostomus catostomus</i>	A, C	A	C, R	A, C	C	C	A	A	C		C
White sucker	<i>Catostomus commersoni</i>	C		A, R	A	A	C	A	A	C	A, C, U	A, C
Mountain sucker	<i>Catostomus platyrhynchus</i>	A, U, R	C	C, R	C	A	A	C	C	U	C	C
Smallmouth buffalo	<i>Ictiobus bubalus</i>	R					R	R			R	
Bigmouth buffalo	<i>Ictiobus cyprinellus</i>						R	R				

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Common Name	Scientific Name	Yellowstone River West of Billings	Boulder River	Stillwater River	Clarks Fork of the Yellowstone		Yellowstone River East of Billings	Bighorn River		Little Bighorn River	Musselshell River	Careless Creek
					Downstream Section	Upstream Section		Downstream Section	Upstream Section			
Brook stickleback	<i>Culaea inconstans</i>	U										
Shorthead redhorse	<i>Moxostoma macrolepidotum</i>	A, C, R			R		A	C	C, R	U	I	C
Black bullhead ²	<i>Ameiurus melas</i>	R						R			R	
Yellow bullhead ²	<i>Ameiurus natalis</i>						U					
Channel catfish	<i>Ictalurus punctatus</i>	C, R			R		A	C	R	C	A, C, R	
Stonecat	<i>Noturus flavus</i>	R			C		C	R			R	
Northern pike ²	<i>Esox lucius</i>						R	I	R		R	
Yellowstone cutthroat trout	<i>Oncorhynchus clarki bouvieri</i>	C, R	R	C	I	C						
Rainbow trout ²	<i>Oncorhynchus mykiss</i>	C	C, R	A, C, R	R	R	U	C	A, C	C	I	
Mountain whitefish	<i>Prosopium williamsoni</i>	A, R	A	A, C, R	C	A	U	R	C	C	C, R	
Brown trout ²	<i>Salmo trutta</i>	C, R	A	A, C, R	R	R	U	R	A, C	C	C, R	
Brook trout ²	<i>Salvelinus fontinalis</i>	R	A, R	C, R								C
Arctic grayling	<i>Thymallus arcticus</i>											
Burbot	<i>Lota lota</i>	C, R			C	U	C	C	C, R		I	
Plains killifish	<i>Fundulus zebrinus</i>							R				
Mottled sculpin	<i>Cottus bairdi</i>	A, C, U	C		R						A, C	
Green sunfish ²	<i>Lepomis cyanellus</i>							R	R		R, I	
Smallmouth bass ²	<i>Micropterus dolomieu</i>						C	R	R	C	C, R	

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Common Name	Scientific Name	Yellowstone River West of Billings	Boulder River	Stillwater River	Clarks Fork of the Yellowstone		Yellowstone River East of Billings	Bighorn River		Little Bighorn River	Musselshell River	Careless Creek
					Downstream Section	Upstream Section		Downstream Section	Upstream Section			
Largemouth bass ²	<i>Micropterus salmoides</i>						R				I	
Black crappie ²	<i>Pomoxis nigromaculatus</i>						I	I			I	
Yellow perch ²	<i>Perca flavescens</i>						R	R				
Sauger	<i>Stizostedion canadense</i>	R					R	R	R		C, R	
Walleye ²	<i>Stizostedion vitreum</i>						R	R	R		R	
Freshwater drum	<i>Aplodinotus grunniens</i>						R	R			R	

¹Information derived from the Montana Natural Resource Information System on the Internet at <http://nris.state.mt.us/wis/mris1.html> (downloaded September 29, 2005). Multiple values for relative abundance indicate variation among river reaches and/or study results within a given drainage. Relative abundance: A = abundant; C = common; U = uncommon; R = rare; I = incidental; P = present.

²Indicates species is not native.

**TABLE WIL-4
COMMON AND SCIENTIFIC NAMES AND RELATIVE ABUNDANCE OF FISH SPECIES PRESENT IN MAJOR DRAINAGES
AND REPRESENTATIVE TRIBUTARIES IN THE POWDER RIVER RESOURCE MANAGEMENT PLAN AREA¹**

Common Name	Scientific Name	Yellowstone River	Rosebud Creek	Tongue River		Pumpkin Creek	Powder River		Little Powder River	Little Missouri River
				Downstream Section	Upstream Section		Downstream Section	Upstream Section		
Pallid sturgeon	<i>Scaphirhynchus albus</i>	R					U			
Shovelnose sturgeon	<i>Scaphirhynchus platyrhynchus</i>	A		A			A	A		
Paddlefish	<i>Polyodon spathula</i>	C		R						
Goldeye	<i>Hiodon alasoides</i>	A	R	A		R	C	C	C	R
Lake chub	<i>Couesius plumbeus</i>	R	R			C, R	U	U		C
Common carp ²	<i>Cyprinus carpio</i>	C	C	U	C	C, R	R	R	R	R
Western silvery minnow	<i>Hybognathus argyritis</i>	C		U		U		U	U	
Western silvery/plains minnow	<i>Hybognathus argyritis/placitus</i>	U		U		C	A	A	A	
Western plains minnow	<i>Hybognathus placitus</i>	R		U		U	U	C	R	C
Brassy minnow	<i>Hybognathus hankinsoni</i>	R		U		C	R	R	U	
Sturgeon chub	<i>Macrhybopsis gelida</i>	U, R		R			C	C		
Spottail shiner	<i>Notropis hudsonius</i>	U			U					
Golden shiner ²	<i>Notemigonus crysoleucas</i>	U								C
Emerald shiner	<i>Notropis atherinoides</i>	C		U	U					
Sand shiner	<i>Notropis stramineus</i>	R		U		C	R	R	A	A
Northern redbelly/finescale dace	<i>Phoxinus eos/neogaeus</i>	R								
Fathead minnow	<i>Pimephales promelas</i>	C	R	U		A, C	U		A	C
Flathead chub	<i>Platygobio gracilis</i>	A	A	A	A	C, R	A	A	R	A
Longnose dace	<i>Rhinichthys cataractae</i>	R	C	U	C, R	R	C	C, R	R	C

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**TABLE WIL-4
COMMON AND SCIENTIFIC NAMES AND RELATIVE ABUNDANCE OF FISH SPECIES PRESENT IN MAJOR DRAINAGES
AND REPRESENTATIVE TRIBUTARIES IN THE POWDER RIVER RESOURCE MANAGEMENT PLAN AREA¹**

Common Name	Scientific Name	Yellowstone River	Rosebud Creek	Tongue River		Pumpkin Creek	Powder River		Little Powder River	Little Missouri River
				Downstream Section	Upstream Section		Downstream Section	Upstream Section		
Creek chub	<i>Semotilus atromaculatus</i>	R		U	R, U	U	R	R	R	C
River carpsucker	<i>Carpionodes carpio</i>	C	R	C	C	R	R	R	C	R
Longnose sucker	<i>Catostomus catostomus</i>	C	R	C	A, C					
White sucker	<i>Catostomus commersoni</i>	C	C	C	A	C, R	U		R	C
Mountain sucker	<i>Catostomus platyrhynchus</i>	A, R	R	R	C	R				
Blue sucker	<i>Cycleptus elongatus</i>	R		R						
Smallmouth buffalo	<i>Ictiobus bubalus</i>	C, R		R	C					
Bigmouth buffalo	<i>Ictiobus cyprinellus</i>	C, R		R						
Shorthead redhorse	<i>Moxostoma macrolepidotum</i>	A	A	A	A, C	C, R	R	C, R	C	A
Black bullhead ²	<i>Ameiurus melas</i>		R	R	R	R			U	R
Yellow bullhead ²	<i>Ameiurus natalis</i>	R		R	R					
Channel catfish	<i>Ictalurus punctatus</i>	A	C	A	C	C, R	C	C, R	C	C
Stonecat	<i>Noturus flavus</i>	C	R	C	C	R	R	R	R	U
Northern pike ²	<i>Esox lucius</i>	R	C	U	R					
Rainbow trout ²	<i>Oncorhynchus mykiss</i>	R			R		R	R		
Mountain whitefish	<i>Prosopium williamsoni</i>	R			R					
Brown trout ²	<i>Salmo trutta</i>	R			R		R	R		
Brook trout ²	<i>Salvelinus fontinalis</i>		R				R	R		
Burbot	<i>Lota lota</i>	C	C	R			R	R		
Plains killifish	<i>Fundulus zebrinus</i>						U			R

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**TABLE WIL-4
COMMON AND SCIENTIFIC NAMES AND RELATIVE ABUNDANCE OF FISH SPECIES PRESENT IN MAJOR DRAINAGES
AND REPRESENTATIVE TRIBUTARIES IN THE POWDER RIVER RESOURCE MANAGEMENT PLAN AREA¹**

Common Name	Scientific Name	Yellowstone River	Rosebud Creek	Tongue River		Pumpkin Creek	Powder River		Little Powder River	Little Missouri River
				Downstream Section	Upstream Section		Downstream Section	Upstream Section		
Rock bass ²	<i>Ambloplites rupestris</i>	R		R	C					
Green sunfish ²	<i>Lepomis cyanellus</i>	R			R	R	R	R	R	R
Pumpkinseed ²	<i>Lepomis gibbosus</i>	R, I		R	R	R			U	
Goldfish	<i>Carassius auratus</i>				R					
Smallmouth bass ²	<i>Micropterus dolomieu</i>	C, R		C, R	C					
Largemouth bass ²	<i>Micropterus salmoides</i>	R								
White crappie ²	<i>Pomoxis annularis</i>	R	R	U	R	R				
Black crappie ²	<i>Pomoxis nigromaculatus</i>	R, I		U	R					
Yellow perch ²	<i>Perca flavescens</i>	R		I	R					
Sauger	<i>Stizostedion canadense</i>	C, R	C	C	C	R	A	A, R		R
Walleye ²	<i>Stizostedion vitreum</i>	C, R	R	C, R	C		R	R		
Freshwater drum	<i>Aplodinotus grunniens</i>	R		U						

¹Information derived from the Montana Natural Resource Information System on the Internet at <http://nris.state.mt.us/wis/mris1.html> (downloaded September 29, 2005). Multiple values for relative abundance indicate variation among river reaches and/or study results within a given drainage. Relative abundance: A = abundant; C = common; U = uncommon; R = rare; I = incidental; P = present.

²Indicates species is not native.

**CBNG Programmatic Wildlife Monitoring and Protection Plan
for the
Statewide Final Oil and Gas Environmental Impact Statement
and
Proposed Amendment of the Powder River and Billings Resource
Management Plans**

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INTRODUCTION

This Wildlife Monitoring and Protection Plan (WMPP) was prepared in conjunction with the Statewide Oil and Gas Draft Environmental Impact Statement (DEIS) (BLM 2001 Montana DEIS) and Amendment of the Powder River and Billings Resource Management Plans (RMPs). The DEIS and Amendment addresses future exploration for and development of Bureau of Land Management (BLM) and state of Montana (state) managed coal bed natural gas (CBNG) resources and conventional oil and gas resources. The planning area excludes those lands administered by the Forest Service, the Crow, Northern Cheyenne, and other Indian lands. The WMPP will be implemented on federal lands, including split estate, in cooperation with state agencies, federal agencies, tribal representatives, Operators, and landowners. If owners and managers of state and private mineral development are willing to incorporate this guidance into management of their CBNG activities, they may become a partner by entering into a Cooperative Agreement.

A variety of planning issues related to wildlife were identified during preparation of the DEIS. The goal of the WMPP is to avoid or minimize impacts to wildlife and serve as a communication tool to foster cooperative relationships among the CBNG and conventional Oil and Gas industry (i.e., Operators), resource management agencies, landowners and adjacent Tribal Governments. Because this plan addresses a large geographic area composed of diverse wildlife habitats and unique situations, it must be programmatic in nature. However, the need to provide management recommendations and guidance to conserve species and habitats remains. Regional or site specific monitoring and protection plans which follow the guidance provided in this programmatic document will be required as part of each CBNG Project Plan. Implementation of this plan during the course of project development and operations should promote wildlife conservation and allow land managers and project personnel to maintain wildlife populations and productivity levels simultaneously with the development of natural oil and gas resources.

PLAN PURPOSE

Oil and gas leasing decisions and lease stipulations were previously analyzed in the Bureau of Land Management (BLM) 1992 *Final Oil and Gas RMP/EIS Amendment* (BLM 1992). Wildlife stipulations attached to leases offer protective measures: 1) for certain species, 2) during a particular time period, or 3) within a specific area. These stipulations may not address other concerns related to special status species or water/habitat related issues caused by direct and indirect impacts from CBNG exploration and development. Because it is purely speculative to predict how all wildlife will react or how development will proceed, it is difficult to develop prescriptive mitigation standards across the entire planning area. Even though BLM has some adaptive management strategies in place (e.g., conditions of approval and compliance inspections), these mechanisms do not give us the information necessary to understand cause and effect relationships across a landscape. Therefore, the purpose of this Plan is to acquire baseline wildlife information, monitor populations, and assess stipulations for effectiveness. The WMPP will facilitate our ability to pinpoint problems (including the evaluation of other contributing factors), design Project Plans which include conservation for declining species, monitor the effectiveness of decisions, and make recommendations to adjust management to address specific situations.

AREA AND OBJECTIVES

The WMPP document is the framework for wildlife monitoring and protection across the Powder River and Billings Resource Management Plan areas (approximately 6.5 million acres) and provides a template for regional and/or project specific WMPP development. The BLM, Montana Fish Wildlife and Parks (MFWP), and United States Fish and Wildlife Service (FWS) will work cooperatively to implement portions of the WMPP over the planning area. There are two basic layers of analysis, the Plan of Development (POD), and the Powder River Basin in Montana.

As energy development begins, POD specific WMPPs, following the same template as this document, will be written in cooperation with other agencies, Operators, landowners and other interests. The POD analysis will include wildlife impacts from the POD area, and also the cumulative impacts from other PODs (including those of other companies) as well as other activities in the area. The objectives of the program are to:

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- Establish a framework for cooperation among agencies, Operators, landowners, Tribal Governments and interest groups;
- Provide a process for data collection, data management and reporting ;
- Determine needs for inventory, monitoring and protection measures;
- Provide guidance and recommendations for the conservation of wildlife species;
- Establish protocols for biological clearances of Special Status Species;
- Meet the terms and conditions of the Biological Opinion;
- Determine if management practices to conserve wildlife species and habitat in lease stipulations and conservation measures contained in the BLM Record of Decision, CBNG Project Plans or Oil and Gas APDs are meeting specified objectives;
- Develop recommendations to adjust management actions based on field observations and monitoring.

Implementation of the WMPP will begin with the issuance of the *Record of Decision* and will remain in effect for the life of the project (approximately 25 years). Guidance for the conservation of special status species will be incorporated into the “Project Plan of Development Preparation Guide.” Signatories on an Interagency Cooperative Agreement will serve as the “*Steering Committee (Interagency Working Group)*.” A “*Core Team*” (i.e., agency biologists) will oversee the implementation of the programmatic elements of the WMPP. As energy development is initiated within the Montana portion of the Powder River Basin, Operator funded biologists, approved by the BLM, will write area-specific monitoring and protection plans. These plans will be reviewed by the BLM resource specialists for completeness and content.

The programmatic template will undergo an annual review, at least initially, for effectiveness. A major review will be conducted every 5 years, or as determined by members of the *Core Team, Wildlife, and Aquatic Task Groups*. The various cooperators will meet annually (or more often as needed) to evaluate the progress of the various POD inventory and monitoring efforts.

IMPLEMENTATION PROTOCOL

This section provides preliminary wildlife inventory, monitoring, and protection protocol. Required actions for inventory, monitoring and protection vary by species and development intensity. In areas of development with > 1 well location per section, additional actions in Table 3 become applicable. Standard protocol for Application for Permit to Drill (APD) and right-of-way (ROW) application field reviews are provided in Table 2. Alternative measures and protocols will be developed as determined by *Core Team* members in response to specific needs identified in annual reports. This document provides methods for a number of wildlife species/categories. Additional species/categories may be added based on needs identified in annual wildlife reports. The wildlife species/categories for which specific inventory, monitoring, and protection procedures will be applied were developed based on input provided by the public, other agencies, and the BLM during preparation of the DEIS.

Considerable efforts will be required by agency and operator personnel for plan implementation. Many of the annually proposed agency data collection activities are consistent with current agency activities. Additionally, agency cost-sharing approaches will be considered such that public demands and statutory directives are achieved.

ANNUAL REPORTS AND MEETINGS

State and federal agencies will cooperate to implement the programmatic elements of inventory, monitoring and protection actions associated with CBNG development in the Powder River and Billings Resource Management Plan areas. The Montana participants in the Interagency Working Group will oversee implementation across the planning area and summarize information from work achieved in various PODs.

During project development (i.e., 25 years), to include habitat restoration or rehabilitation efforts, Operators will annually provide an updated inventory and description of all existing project features (i.e., location, size, and associated level of human activity at each feature), as well as those tentatively proposed for development during the next 12 months. These data will be coupled with annual wildlife inventory, monitoring, and protection data

obtained for the previous year and included in annual reports. Annual reports will be prepared by the BLM. Annual wildlife inventory, monitoring, and protection data gathered by parties other than the BLM (e.g., Operators, MFWP) should provide data/summaries to the BLM using current format standards. Upon receipt of this information, annual reports will be completed in draft form by the BLM and submitted to the Operators, FWS, MFWP, and other parties. A 1-day meeting of the *Core Team* will be organized by the BLM and held in early December of each year to discuss and modify, as necessary, proposed wildlife inventory, monitoring, and protection protocol for the subsequent year. Additional meetings will be scheduled as necessary.

Discussions regarding annual Operator-specific financing and personnel requirements will occur at these meetings. A formula for determining these requirements will be developed at the first year's meeting (i.e., size of development, anticipated impacts, amount of public land, etc.). 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 of all affected parties.

A final annual report will be issued by BLM to all potentially affected individuals and groups by early February of each year. Annual reports will summarize annual wildlife inventory and monitoring results, note any trends across years, 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 WMPP based on the effectiveness and/or ineffectiveness of past years (i.e., identification of additional species/categories to be monitored). Where possible, data presented in reports will be used to identify potential correlations between development and wildlife productivity and/or abundance. The BLM will be the custodian of the data and stored in BLM's Geographic Information System (GIS) for retrieval, and planning unless otherwise agreed to by BLM, MFWP and FWS. Raw data collected each year will be provided to other management agencies (e.g., USFWS, MFWP) at the request of these agencies. In addition, sources of potential disturbance to wildlife will be identified, where practical (e.g., development activities, weather conditions, etc.). Inventory and monitoring data will be shared on a timely basis by all cooperating agencies.

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, mountain plover, sage grouse lek counts and bald eagle habitat loss reports).

ANNUAL INVENTORY AND MONITORING

This document outlines the inventory and monitoring protocol for a number of selected wildlife species/categories. Protocol will be unchanged except as authorized by the BLM or specified in this plan. Additional wildlife species/categories and associated surveys may be added or wildlife species/categories and surveys may be omitted in future years, depending on the results presented in the coordinated review of annual wildlife reports. MFWP will be contacted during the coordination of survey and other data acquisition phases. Opportunistic wildlife observations may be made throughout the year by agency and Operator personnel.

The frequency of inventory and monitoring will be dependent upon the level of development. In general, inventory and monitoring frequency will increase with increased levels of development. The level of effort should also be determined by species presence and development projection. Inventory and monitoring results may lead to further currently unidentifiable studies (i.e., cause and effect). The following sections identify the level of effort required by the WMPP. Site and species-specific surveys will continue to be conducted in association with APD and ROW application or CBNG project field reviews.

Raptors (Including Bald Eagle and Burrowing Owl)

Raptor inventories will be conducted over the entire CBNG project area every 5 years by BLM and MFWP with financial assistance being provide by proponents. In potentially affected areas, baseline inventory should be conducted prior to the commencement of development to determine the location of raptor nests/territories and their activity status by the BLM, with Operator financial assistance. These inventories should be repeated every 5 years (in areas with 1 or less well locations/section) thereafter for the Life-of-the-Project (LOP) to monitor trends in habitat use. These surveys may be implemented aerially or from the ground. Operators may provide financial assistance for some work. Data collected during the surveys (both inventory and monitoring) will be recorded on BLM approved data sheets and entered into the BLM GIS database. Standardized, recommended wildlife survey protocols are identified in "Wildlife Survey Protocol for Coal Bed Natural Gas Development, Powder River Basin

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Wildlife Taskforce” and/or as referenced in this appendix. BLM should be contacted prior to commencement of wildlife surveys to insure proper survey protocols are being utilized.

Nest productivity monitoring will be conducted by the BLM or a BLM approved biologist. Active nests located within 1 mile of project-related disturbance areas will be monitored between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings per nest). These surveys generally will be conducted from the ground. However, some nests may be difficult to observe from the ground due to steep and rugged topography and may require aerial surveys. Operators may provide financial assistance for aircraft rental as necessary. Attempts will be made to determine the cause of any documented nest failure (e.g., abandonment, predation).

Additional raptor nest activity and productivity monitoring measures will be applied in areas with development (i.e., areas with > 1 well locations/section) on and within 1 mile of the project area. Inventory/monitoring efforts in these areas, as well as selected undeveloped reference areas will be conducted annually during April and May, followed by nest productivity monitoring. Site and species-specific nest inventories will also continue to be conducted as necessary in association with all APD and ROW application field reviews.

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

- Nest visits will be delayed for as long as possible during the nesting season.
- Nests will be approached cautiously, and their status (i.e., number of nestling/fledglings) will be determined from a distance with binoculars or a spotting scope.
- Nests will be approached tangentially and in an obvious manner to avoid startling adults.
- Nests will not be visited during adverse weather conditions (e.g., extreme cold, precipitation events, windy periods, or during the hottest part of the day).
- Visits will be kept as brief as possible.
- Inventories will be coordinated by the BLM.
- The number of nest visits in any year will be kept to a minimum.

Ferruginous Hawk: Timing of surveys is very important in documenting the territory, occupancy, success and productivity of ferruginous hawk populations. The accepted survey and monitoring guidelines for ferruginous hawk are taken from the *Survey and Monitoring Guidelines for Ferruginous Hawks in Montana, 1995*.

Bald Eagle: Inventory and monitoring protocol for the bald eagle will be as described for raptors, with the following additions. Operators will indicate the presence of eagle habitat (nesting, foraging, roosting, winter) as previously defined, on their application. Prior to CBNG development or construction, surveys of the wooded riparian corridors within 1.0 mile of a project area will be conducted in the winter and/or spring by BLM biologists and/or BLM-approved biologists to determine the occurrence of winter bald eagle roost sites/territories. Surveys will be conducted from daybreak to 2 hours after sunrise and/or from 2 hours before sunset to 1 hour after sunset by fixed-wing aircraft. Follow-up ground surveys, if necessary, will be conducted during the same time frame. Surveys will be at least 7 days apart. The location, activity, number, and age class (immature, mature) of any bald eagles observed will be recorded. If a roost or suspected roost is identified, BLM, FWS, and MFWP will be notified and a GPS record of the roost/suspected roost will be obtained and entered into the BLM GIS database. There will be No Surface Occupancy within 0.5 miles of any identified bald eagle roost site/territories.

Nest productivity will be conducted by the BLM or a BLM-approved biologist on and within 1 mile of the project area. Active nests located within one mile of project-related disturbance areas (well sites, pipelines, roads, compressor stations, and other infrastructure) will be monitored on an annual basis between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings per nest).

Burrowing owl: Operators should indicate the presence of prairie dog towns on their application. The presence of sensitive habitat does not indicate burrowing owls are present. It does, however, alert the company and BLM a field review and surveys may be required to process the permit or initiate action. In association with APD and ROW application field reviews, prairie dog colonies within 0.5 miles of a proposed project or any other suitable habitat within a .5 mile radius area, will be surveyed for western burrowing owls by BLM biologists or a BLM-approved Operator-financed biologist twice yearly from June through August to determine the presence/absence of nesting owls. Efforts will be made to determine reproductive success (no. of fledglings/nest).

Threatened, Endangered, Candidate, and Other Species of Concern

Operators **must identify and map** the presence of cottonwood riparian, herbaceous riparian or wet meadows, permanent water or wetlands, prairie dog towns, or rock outcrops, ridges or knolls on their application. The presence of sensitive habitat may not indicate a species is present. It does, however, alert the company and BLM a field review and surveys may be required to process the permit or initiate action. The level of effort associated with the inventory and monitoring required for threatened, endangered, candidate, and other species of concern (TEC&SC) will be commensurate with established protocol for the potentially affected species. Methodologies and results of these surveys will be included in annual reports or provided in separate supplemental reports. As TEC&SC species are added to or withdrawn from FWS and/or BLM lists, appropriate modifications will be incorporated to this plan and specified in annual reports.

TEC&SC data collected during the surveys will be provided only as necessary to those requiring the data for specific management and/or project development needs. Site- and species-specific TEC&SC surveys will continue to be conducted as necessary in association with all APD and ROW application field reviews. Data will be collected on BLM approved data sheets and entered into the BLM GIS database.

Black-footed Ferret

Operators should indicate the presence of prairie dog towns on their application. The presence of sensitive habitat does not **necessarily** indicate suitable black-footed ferret habitat **is** present. It does, however, alert the company and BLM that a field review and surveys may be required to process the permit or initiate action. BLM biologists and/or BLM-approved Operator-financed biologists will determine the presence/absence of prairie dog colonies within 0.5 miles of proposed activity during APD and ROW application field reviews. Prairie dog colonies on the area will be mapped to determine overall size following the approved methodology. Colony acreage will be determined using GIS applications. Colonies that meet FWS size criteria as potential black-footed ferret habitat (USFWS 1989) will be surveyed to determine active burrow density using the methods described by Biggins et al. (1993) or other BLM- and FWS-approved methodology.

Project activity will be located to avoid impacts to prairie dog colonies that meet FWS criteria as black-footed ferret habitat (FWS 1989). If avoidance is not possible, all colonies meeting the FWS size criteria and any colonies for which density estimates are not obtained will be surveyed for black-footed ferrets by an operator-financed, FWS-certified surveyor prior to, but no more than 1 year in advance of disturbance to these colonies. Black-footed ferret surveys will be conducted in accordance with FWS guidelines (FWS 1989) 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. If a black-footed ferret or its sign is found during a survey, all development activity would be subject to recommendations from the *Montana Black-footed Ferret Survey Guidelines, Draft Managing Oil and Gas Activities in Prairie Dog Ecosystems with Potential for Black-footed ferret Reintroduction* and re-initiation of Section 7 Consultation with FWS.

Black-tailed **and White-tailed** Prairie Dog

The BLM will determine the acreage of occupied black-tailed **and/or white-tailed** prairie dog habitat **within** suitable mountain plover habitat on federally managed surface acres and federal mineral estate lands. Further, a reasonable effort should be made to estimate actual impacts, including habitat loss, CBNG development will have on occupied black-tailed **and white-tailed** prairie dog acres within suitable mountain plover habitat over the entire project area.

Prairie dog towns on BLM lands within 0.5 miles of a specific project area will be identified, mapped, and surveyed as described in the black-footed ferret section. On an annual basis, the BLM and/or a BLM-approved Operator-financed biologist will survey, at least a portion of, the prairie dog colonies, including the reference colonies. Prairie dog populations are subject to drastic population fluctuations primarily due to disease (plague). Therefore, efforts will be made to compare the data from the reference colonies with that obtained from the project areas, in order to monitor the response of prairie dog populations to CBNG development.

Mountain Plover

Surface use is prohibited within 1/4 mile of active mountain plover nest sites. Disturbance to prairie dog towns will be avoided where possible. Any active prairie dog town occupied by mountain plover will have **Controlled** Surface Use between April 1 and July 31, which may be reduced to **Controlled** Surface Use within 1/4 mile of an active nest,

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once nesting has been confirmed. An exception may be granted by the authorized officer after the BLM consults with the FWS on a case-by-case basis and the operator agrees to adhere to the new operational constraints.

On federally managed surface acres, black-tailed and white-tailed prairie greater than 80 acres in size within suitable mountain plover habitat will have a no surface use stipulation from May 1 through June 15. Prior to permit approval, habitat suitability will be determined. The BLM, FWS and MFWP will estimate potential mountain plover habitat across the CBNG area using a predictive habitat model. Over the next 5 years, information will be refined by field validation using most current FWS mountain plover survey guidelines (FWS 2002c) to determine the presence/absence of potentially suitable mountain plover habitat. In areas of suitable mountain plover habitat, surveys will be conducted prior to ground disturbance activities by the BLM or a BLM-approved Operator biologist, using the FWS protocol at the project area, plus a 0.5 mile buffer. Efforts will be made to identify mountain plover nesting areas not subject to CBNG development, to be used as reference sites. Comparisons will be made of the trends in mountain plover nesting occupancy between these reference areas and areas experiencing CBNG development.

The BLM shall monitor loss of mountain plover habitat associated with all portions of this action (operators will indicate the presence of prairie dog towns or other mountain plover habitat indicators on their application). Suitable mountain plover habitat has been defined under 'critical habitat' for the mountain plover in FWS' Statewide Biological Opinion. The actual measurement of disturbed habitat will be the responsibility of the BLM or their agent (consultant, contractor, etc) with a written summary provided to the FWS' Montana Field Office, upon project completion or immediately, if the anticipated impact area is exceeded.

Gray Wolf

According to the *Biological Assessment for Coalbed Methane Production in Montana*, state lands and counties (Gallatin and Park Counties) bordering Yellowstone National Park would be surveyed in the spring for wolves, occupied dens, or scat prior to development. These surveys could be conducted from the air or from the ground. Areas in which wolves are observed would continue to be surveyed annually until reintroduction objectives are met. Efforts will be made to compare production and/or occupancy trends in wolf populations in these areas to a reference population in order to gain more reliable information regarding the response of wolves to CBNG development.

Sage-Grouse

BLM and MFWP will conduct sage grouse lek inventories over the CBNG project area every 5 years to determine lek locations. Surveys of different areas may occur during different years with the intent the high potential CBNG project areas will be covered at least once every 5 years. Inventories and protocol will be consistent with the *Montana Sage Grouse Conservation Plan*, coordinated by the BLM and MFWP. In areas with development, aerial inventories will be conducted annually on affected sections, 3 mile buffers, and selected undeveloped reference areas. Surveys may be conducted aerially or on the ground, as deemed appropriate by the BLM and MFWP. Operator may provide financial assistance.

Reference leks are leks located in similar habitat and within close proximity to areas currently being developed. These "reference leks" will be identified by BLM and MFWP.

Aerial surveys will be used for determining lek locations. BLM, MFWP or BLM-approved Operator-financed biologist will monitor sage-grouse lek attendance within 3 miles of areas having development such that all leks on these areas are surveyed at least once every 3 years. Data collected during these surveys will be recorded on BLM and MFWP approved data sheets and entered into the approved database. An effort should also be made to compare trends of the number of males/lek to reference leks.

Sage-grouse winter use surveys of suitable winter habitat within 3 miles of a project area will be coordinated by the BLM and implemented by the BLM and/or MFWP during November through February as deemed appropriate by these agencies, and results will be provided in interim and/or annual reports. Historical information of winter sage-grouse locations will be useful in focusing efforts in areas suspected of providing winter habitat. Sage-grouse winter habitat use surveys will be conducted when suitable conditions exist.

Big Game

Elk, mule deer, white-tailed deer, and pronghorn are the common big game species that occur within parts or all of the CBNG planning area. BLM and/or MFWP will collect annual big game seasonal habitat use data and make it available to Operators, Tribes and landowners. Big game use of seasonal habitats is highly dependent upon a

combination of environmental factors including terrain, forage quality and snow depth. Therefore, it is difficult to attribute changes in habitat use to a single factor. Comparisons in trends between big game seasonal habitat reference areas and seasonal habitats associated with CBNG development may provide some insight into the response of big game to CBNG development.

General Wildlife

Wildlife mortality observed in pits will be documented, reported to the BLM and FWS, and measures will be taken to prevent future mortality. If the dead animals are birds, they will be collected and kept for identification by someone with an appropriate salvage permit. Also, the pits would need to be “spot checked” by appropriate BLM or FWS personnel in insure compliance. In no cases would operators or other workers be allowed to be in possession of migratory bird carcasses. Well field access roads and other roads with project-related traffic increases will be monitored for wildlife mortality so that specific mitigation can be designed and implemented as deemed necessary by BLM, in consultation with MFWP.

Aquatic Species

Baseline aquatic inventories will be conducted in potentially affected areas by BLM and MFWP with Operator financial assistance, prior to development, in an effort to determine occurrence, abundance, and population diversity of the aquatic community. These inventories should be repeated as necessary in selected intermittent/perennial streams associated with produced water discharge, as well as selected intermittent/perennial streams associated with no produced water discharge (control sample site).

Natural fluctuations in species occurrence, abundance, and population diversity will be determined by comparing changes in control sample sites to baseline inventories. Changes in occurrence, abundance, and population diversity of the aquatic community in streams associated with produced water discharge may then be possible by comparing to the natural fluctuations.

Detection of a retraction in the range of a species, a downward trend in abundance, or reduced population diversity in systems with produced water discharge shall warrant a review of Project Plans and possible recommendations for adjustment of management to address the specific problems.

Aquatic groups to be inventoried and monitored will include:

- Benthic macroinvertebrates** - Determine population diversity using Hess/kick net sampling protocol to measure species abundance and establish a diversity index.
- Amphibians and aquatic reptiles** - Determine population diversity and abundance utilizing sampling methodologies being developed for prairie species.
- Non-game fish** - Determine population diversity using electrofishing and seining.
- Algae (periphyton)** – Determine population diversity.

PROTECTION MEASURES

Wildlife protection measures have been put in place through lease stipulations. The following sections from the FWS’ Biological Opinion describe stipulations or mitigation that restrict activities through lease agreements or terms and conditions to reduce the likelihood of “take” of a federally listed species. For all stipulations and mitigation measures that include protection of specific habitats (e.g., sage-grouse winter habitat), identification of the specific habitat areas will be based on the best available science. This may include BLM surveys or information from other sources. For example, researchers at the University of Montana and Montana State University are developing sage-grouse habitat models that should provide better information on sage-grouse habitat areas than is currently available.

Lease stipulation

The lease stipulations were approved in the 1994 BLM Oil and Gas EIS. These are mandatory measures or actions developed as a result of wildlife research and input from agencies and Operators. Avoidance of important breeding, nesting, and seasonal habitats is the primary protection measure that will reduce the possibility of CBNG and Oil and Gas development having an impact on wildlife populations, productivity, or habitat use. Additional conservation measures will be incorporated through the Project Plan design or as Conditions of Approval. Data

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collected during monitoring efforts and analyzed will be used to determine the appropriateness and the effectiveness of these measures throughout the CBNG project area. Based on the results of the monitoring data, these measures will be reviewed by the *Core Team*. As monitoring data are collected over time, it is likely some protection measures will be added, while others will be modified or removed in cooperation with other agencies and the *Core Team*. All changes in these protection measures will be reported, with a justification for the change, in annual reports. A RMP amendment may be required depending on the recommended change.

“Waivers” A lease stipulation may be waived by the Authorized Officer (AO) if a determination is made by the BLM, in consultation with MFWP and/or FWS, that the proposed action will not adversely affect the species in question.

“Exceptions” to protection measure may be granted by the AO, in coordination with FWS for T&E species and MFWP, if the Operator submits a plan that demonstrates impacts from the proposed action will not be significant, or can be adequately mitigated.

“Modifications” may be made by the AO if it is determined portions of the area do not include habitat protected by the stipulation.

Raptors

From March 1 – August 1, all surface disturbing activities are prohibited within ½ mile of active raptor nest sites except ferruginous hawk, bald eagle and peregrine falcon nest sites. For ferruginous hawks and bald eagles, no surface occupancy or use will be allowed within ½ mile of known active nest sites. No surface occupancy or use is authorized within 1 mile of identified peregrine falcon nests. Active raptor nests are defined as those used within the last two years.

Big Game

Surface use is prohibited to avoid disturbance of white-tailed deer, mule deer, elk, pronghorn antelope, moose, and bighorn sheep during the winter use season, December 1 - March 31. This stipulation does not apply to the operation and maintenance of production facilities.

Elk Parturition Range

In order to protect **identified** elk parturition range, surface use is prohibited from April 1 to June 15 within established spring calving range. This protection measure does not apply to the operation and maintenance of production facilities.

Bighorn Sheep – Powder River Breaks

No surface occupancy or use is allowed in the designated Powder River Bighorn Sheep Range. In crucial winter range outside of the designated area, surface use is prohibited from December 1 to March 31.

Sage and Sharptailed Grouse

Lek sites

In order to minimize impacts to sharptailed and sage-grouse leks, surface occupancy within ¼ mile of leks is prohibited. The measure may be waived if the AO, in coordination with MFWP, determines the entire leasehold can be occupied without adversely affecting grouse lek sites, or if the lek sites within ¼ mile of the leasehold have not been attended for 5 consecutive years.

Nesting area

Surface use is prohibited between March 1 – June 15 in grouse nesting habitat within 2 miles of a known lek. This measure does not apply to the operation and maintenance of production facilities. This measure will be implemented to protect sharptailed and sage-grouse nesting habitat from disturbance during spring and early summer in order to maximize annual production of young, and to minimize disturbance to nesting activities adjacent to nesting sites for the long-term maintenance of grouse populations in the area.

Winter range

Surface use is prohibited from December 1 through March 31 within designated crucial winter range to protect sage-grouse from disturbance during winter season use.

Control of West Nile Virus

Manage produced water to reduce the spread of West Nile virus within sage-grouse habitat areas. Implement the following impoundment construction techniques to eliminate water sources that support breeding mosquitoes:

- Overbuild the size of ponds to accommodate a greater volume of water than is discharged. This will result in non-vegetated and muddy shorelines that breeding mosquitoes avoid.
- Build steep shorelines to reduce shallow water and aquatic vegetation around the perimeter of impoundments. Construction of steep shorelines also will increase wave action that deters mosquito production. Use of this construction technique could be harmful to certain wildlife species such as birds, and would require consideration on a case by case scenario.
- Maintain the water level below rooted vegetation for a muddy shoreline that is unfavorable habitat for mosquito larvae. Rooted vegetation includes both aquatic and upland vegetative types. Always avoid flooding terrestrial vegetation in flat terrain or low lying areas.
- Construct dams or impoundments that restrict down slope seepage or overflow. Seepage and overflow results in down-grade accumulation of vegetated shallow water areas that support breeding mosquitoes.
- Line the channel where discharge water flows into the pond with crushed rock, or use a horizontal pipe to discharge inflow directly into existing open water, thus precluding shallow surface inflow and accumulation of sediment that promotes aquatic vegetation.
- Line the overflow spillway with crushed rock, and construct the spillway with steep sides to preclude the accumulation of shallow water and vegetation.
- Fence pond site to restrict access by livestock and other wild ungulates that trample and disturb shorelines, enrich sediments with manure and create hoof print pockets of water that are attractive to breeding mosquitoes.
- The following measures will also be employed for impoundments storing produced water:
- Use adulticides to target adult mosquito populations and larvicides to control the hatching of mosquito larvae, using approved pesticides and utilizing licensed applicators with a PUP.
- Introduce native fish species, such as fathead minnow or sand shiner, that would feed on mosquito larvae.
- Use electric, solar, or wind-powered fountains or aerators, which would create a ripple disturbance in the water surface and dissuade mosquitoes from laying eggs. This would also have the added effect of aerating the water to support a fish population and help prevent against winter fish die-off.
- Use a vertical discharge pipe in the center of the impoundment to create a ripple effect and aerate the water to support a fish population.

Prairie Dog Towns and Associated Black-footed Ferret Habitat

Prior to surface-disturbing activities, prairie dog colonies and complexes 80 acres or more in size and containing at least 5 burrows per acre will be examined to determine the presence or absence of black-footed ferrets. The findings of this examination may result in some restrictions to the operator's plans or may even preclude use and occupancy.

The lessee or operator may, at their own option, conduct an examination on the leased lands to determine if black-footed ferrets are present if the proposed activity would have an adverse effect or if the area can be block cleared. This examination must be done by, or under the supervision of, a qualified resource specialist approved by the BLM. An acceptable report must be provided documenting the presence or absence of black-footed ferrets and identifying the anticipated effects of the proposed action on the black-footed ferret and its habitat. This stipulation does not apply to the operation and maintenance of production facilities.

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Interior Least Tern

The interior least tern is listed as an endangered species under the ESA. Birds occupy sandbars and graveled islands in eastern Montana and along the Yellowstone and Missouri Rivers. Surface occupancy and will be prohibited within 1/4 mile of wetlands identified as interior least tern habitat.

Terms and Conditions from Section 7 Consultation

In order to be exempt from the prohibitions of Section 9 of the Act, the Bureau must comply with the following terms and conditions, which implement the reasonable and prudent measures described and outlined in the Biological Opinion. **These terms and conditions are nondiscretionary.**

All Species

In the event wildlife species (dead or injured) are located during construction and operation, the FWS' Billings Sub-Office of the Montana Field Office (406-247-7366) and Law Enforcement Office (406-247-7355) will be notified within 24 hours. If the dead animals are birds, they will be collected and kept for identification by someone with an appropriate salvage permit. Also, the pits would need to be "spot checked" by appropriate BLM or FWS personnel in insure compliance. In no cases would operators or other workers be allowed to be in possession of migratory bird carcasses. The action agency must provide for monitoring the actual number of individuals taken. Because of difficulty in identification, all small birds found dead should be stored in a freezer for the FWS to identify.

- The Bureau shall monitor all loss of bald eagle (nesting, potential nesting and roost sites) and suitable mountain plover habitat associated with all actions covered under the *Montana Statewide Draft Oil and Gas EIS and Amendment of the Powder River and Billings RMPs* and ROD. Bald eagle nesting, potential nesting and roost sites, and suitable mountain plover habitat have been defined under 'habitat use' and critical habitat' respectively, for each species in the Biological Opinion. The actual measurement of disturbed habitat can be the responsibility of the BLM or their agent (consultant, contractor, etc), with a written summary provided to the FWS' Montana Field Office upon project completion. The report will include the location and acres of habitat loss, field survey reports, what stipulations were applied, and a record of any variance granted to timing and/or spatial buffers. The monitoring of habitat loss for these species will commence from the date the Record of Decision (ROD) is signed. The actual measurement of disturbed habitat can be the responsibility of the Bureau's agent (consultant, contractor, etc.) with a written summary provided to the FWS' Montana Field Office semi-annually, or immediately if the Bureau determines the action (*i.e.* Application for Permit to Drill (APD), pipeline, compressor station) will adversely affect a listed species. It is the responsibility of the Bureau to ensure the semi-annual reports are complete and filed with the FWS in a timely manner. The semi-annual report will include field survey reports for endangered, threatened, proposed and candidate species for all actions covered under the *Montana Statewide Draft Oil and Gas EIS and Amendment of the Powder River and Billings RMPs* and ROD. The semi-annual reports will include all actions completed under this BO up to 30 days prior to the reporting date. The first report will be due 6 months from the signing of the ROD and on the anniversary date of the signing of the ROD. Reporting will continue for the life of the project.
- As outlined in the guidance and conservation measures in the CBNG Programmatic Wildlife Monitoring and Protection Plan for the Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans, "All new roads required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions. Appropriate speed limits will be adhered to on all project area roads, and Operators will advise employees and contractors regarding these speed limits."

Bald Eagle

- The Bureau shall require implementation of all conservation measures/mitigation measures identified in the Biological Assessment prepared for the project and dated **October 2006** and wildlife inventory, monitoring, and protection protocol identified in the WMPP. The Bureau shall monitor for compliance with the measures and protocol. These are as follows:
- The appropriate standard seasonal or year-long stipulations for raptors or no surface occupancy for bald eagles as identified in the Billings Resource Management Plan (BLM 1983), Powder River Resource

Management Plan (BLM 1984), and Oil and Gas Resource Management Plan/ EIS Amendment (BLM 1992) will be applied. This includes No Surface Occupancy within ½ mile of nests active in the last 7 years and ½ mile of roost sites.

- Inventory and monitoring protocol for the bald eagle will be as described for raptors, with the following additions. Operators will indicate the presence of eagle habitat as previously defined, on their application. Prior to CBNG development or construction, surveys of the wooded riparian corridors within 1.0 mile of a project area will be conducted in the winter and/or spring by BLM biologists and/or BLM-approved biologists to determine the occurrence of winter bald eagle roosts. Surveys will be conducted from daybreak to 2 hours after sunrise and/or from 2 hours before sunset to 1 hour after sunset by aircraft. Follow-up ground surveys, if necessary, will be conducted during the same time frame. Surveys will be at least 7 days apart. The location, activity, number, and age class (immature, mature) of any bald eagles observed will be recorded and if a roost or suspected roost is identified, BLM, FWS, and MFWP will be notified and a GPS record of the roost/suspected roost will be entered into the approved database. No Surface Occupancy will be applied within 0.5 miles of any identified bald eagle roost sites.
- Nest productivity will be conducted by the BLM or a BLM approved biologist in areas with development (i.e., areas with greater than 1 well locations/section) and within 1 mile of the project area. Active nests located within one mile of project-related disturbance areas will be monitored between March 1 and mid-July to determine nesting success (i.e., number of nestlings/fledglings per nest).
- No new above-ground power line should be constructed within ½ mile of an active eagle nest or nest occupied within the recent past. No surface occupancy or use is allowed within 0.5 miles of known bald eagle nest sites which have been active within the past 7 years. All other actions will be consistent with the *Montana Bald Eagle Management Plan - July 1994*.
- Power lines will be built to standards identified by the Power Line Interaction Committee (2006) to minimize electrocution potential. The FWS has more specific recommendations that reaffirm and compliment those presented in the *Suggested Practices*. It should be noted these measures vary in their effectiveness to minimize mortality, and may be modified as they are tested. Local habitat conditions should be considered in their use. The FWS does not endorse any specific product that can be used to prevent and/or minimize mortality, however, we are providing a list of Major Manufacturers of Products to Reduce Animal Interactions on Electrical Utility Facilities.

New Distribution Lines and Facilities

The following represents areas where the raptor protection measures will be applied when designing new distribution line construction:

- 1.1 Bury distribution lines where feasible.
- 1.2 Raptor-safe structures (e.g., with increased conductor-conductor spacing) are to be used (i.e., minimum 60" for bald eagles would cover all species).
- 1.3 Equipment installations (overhead service transformers, capacitors, reclosers, etc.) are to be made raptor safe (e.g., by insulating the bushing conductor terminations and by using covered jumper conductors).
- 1.4 Jumper conductor installations (e.g., corner, tap structures, etc) are to be made raptor safe by using covered jumpers or providing adequate separation.
- 1.5 Employ covers for arrestors and cutouts.
- 1.6 Lines should avoid high avian use areas such as wetlands, prairie dog towns, and grouse leks. If not avoidable, use anti-perching devices to discourage perching in sensitive habitats such as grouse leks, prairie dog towns and wetlands to decrease predation and decrease loss of avian predators to electrocution.

Modification of Existing Facilities

Raptor protection measures to be applied when retrofitting existing distribution lines in an effort to reduce raptor mortality. Problem structures may include dead ends, tap or junction poles, transformers, reclosers and capacitor banks or other structures with less than 60" between conductors or a conductor and ground. The following modifications will be made:

- 2.1 Cover exposed jumpers.

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- 2.3 Gap any pole top ground wires.
- 2.4 Isolate grounded guy wires by installing insulating link.
- 2.5 On transformers, install insulated bushing covers, covered jumpers, cutout covers and arrester covers.
- 2.6 When raptor mortalities occur on existing lines and structures, raptor protection measures are to be applied (e.g., modify for raptor-safe construction, install perches, perching deterrents, nesting platforms, nest deterrent devices, etc).
- 2.7 Use anti-perching devices to discourage perching in sensitive habitats such as grouse leks, prairie dog towns and wetlands to decrease predation, and decrease loss of avian predators to electrocution.
- 2.8 In areas where midspan collisions are a problem, install effective line-marking devices. All transmission lines that span streams and rivers or in known or discovered raptor migration areas, should maintain proper spacing and have markers installed.

These additional standards to minimize migratory bird mortalities associated with utility transmission lines, will be incorporated into the Terms and Conditions for all APDs and stipulations for Right-Of-Way applications.

Mountain Plover

- The Bureau shall require implementation of the conservation measures for mountain plover as identified in the Biological Assessment dated October 2006, and wildlife inventory, monitoring, and protection protocol addressed in the *WMPP*. The Bureau shall monitor for compliance with the measures and protocol. These are as follows:
- Surface use is prohibited within 1/4 mile of active mountain plover nest sites. Disturbance to prairie dog towns will be avoided where possible. Any active prairie dog town occupied by mountain plovers will have a Controlled Surface Use stipulation applied between April 1 and July 31. This area may be reduced to No Surface Use within 1/4 mile of an active nest, once nesting has been confirmed. An exception may be granted by the authorized officer after the BLM consults with the FWS and the operator agrees to adhere to the new operational constraints.
- Due to the declining status of mountain plover in the analysis area and the need to retain the most important and limited nesting habitat, all active prairie dog colonies on federal surface within suitable mountain plover habitat will have No Surface Occupancy (NSO) applied. This NSO may be modified through an amendment to this biological opinion after analysis of impacts to this preferred nesting habitat is completed.
- BLM will determine the acreage of occupied black-tailed and white-tailed prairie dog habitat within suitable mountain plover habitat on federally managed surface and mineral estate lands. Further, a reasonable effort should be made to estimate the actual impacts, including habitat loss, CBNG development will have on occupied black-tailed and white-tailed prairie dog acres within suitable mountain plover habitat over the entire project area. The BLM, FWS, and cooperators will develop a survey protocol that may include prioritization of subsets of the project area to be analyzed. Based on the results of such analysis, NSO on active prairie dog habitat within suitable mountain plover habitat may be modified utilizing an amendment to the biological opinion.
- Prior to permit approval, habitat suitability will be determined. The BLM, FWS and MFWP will estimate potential mountain plover habitat across the CBNG area using a predictive habitat model. Over the next 5 years, information will be refined by field validation using most current FWS mountain plover survey guidelines (FWS 2002c) to determine the presence/absence of potentially suitable mountain plover habitat. In areas of suitable mountain plover habitat, surveys will be conducted prior to ground disturbance activities by the BLM or a BLM-approved biologist using the FWS protocol at a specific project area plus a 0.5 mile buffer. Efforts will be made to identify mountain plover nesting areas not subject to CBNG development as reference sites. Comparisons will be made of the trends in mountain plover nesting occupancy between these reference areas and areas experiencing CBNG development.
- BLM shall monitor all loss of mountain plover habitat associated with this action (operators will indicate the presence of prairie dog towns or other mountain plover habitat indicators on their application). Suitable mountain plover habitat has been defined under 'critical habitat' for the mountain plover in the Biological Opinion. The actual measurement of disturbed habitat can be the responsibility of the BLM, their agent

(consultant, contractor, etc) with a written summary provided to the FWS' Montana Field Office upon completion, or immediately if the anticipated impact area is exceeded relative to the estimated surface disturbances defined in the SEIS.

- If suitable mountain plover habitat is present, surveys for nesting mountain plovers will be conducted prior to ground disturbance activities, if ground disturbing activities are anticipated to occur between April 10 and July 10. Disturbance occurring outside this period is permitted, but any loss of mountain plover suitable habitat must be documented. Sites must be surveyed 3 times between the April 10 and July 10 period, with each survey separated by at least 14 days. The earlier date will facilitate detection of early-breeding plovers. A disturbance-free buffer zone of 1/4 mile will be established around all mountain plover nesting locations between April 1 and July 31. If an active nest is found in the survey area, the planned activity should be delayed 37 days, or seven days post-hatching. If a brood of flightless chicks is observed, activities should be delayed at least seven days (FWS 2002). Exceptions and/or waiver to stipulations can be made by the BLM, through consultation with the FWS.
- Roads will be located outside of nesting plover habitat where possible. Apply mitigation measures to reduce mountain plover mortality caused by increased vehicle traffic. Construct speed bumps, use signing or post speed limits as necessary, to reduce vehicle speeds near mountain plover habitat.
- Creation of hunting perches will be minimized within ½ mile of occupied nesting areas. Utilize perch inhibitors (perch guards) to deter predator use.
- Native seed mixes will be used to re-establish short grass vegetation during reclamation.
- There will be No Surface Occupancy of ancillary facilities (e.g., compressor stations, processing plants) within ½ mile of known nesting areas. Variance may be granted after consultation with the FWS.
- In habitat known to be occupied by mountain plover, no dogs will be permitted at work sites to reduce the potential for harassment of plovers.
- The FWS will provide operators and the BLM educational material illustrating and describing the mountain plover, its habitat needs, life history, threats, and development activities that may lead to incidental take of eggs, chicks, or adults. This information will be required to be posted in common areas and circulated in a memorandum among all employees and service providers.

Programmatic Guidance for the Development of Project Plans

Guidance for developing Project Plans and/or conservation measures applied as Conditions of Approval provide a full range of practicable means to avoid or minimize harm to wildlife species or their habitats. Operators will minimize impacts to wildlife by incorporating applicable WMPP programmatic guidance into Project Plans. Not all measures may apply to each site-specific development area and means to reduce harm are not limited to those identified in the WMPP. This guidance may change over time if new Conservation Strategies become available for Special Status Species or monitoring indicates the measure is not effective or unnecessary.

BLM and MFWP will work together to collect baseline information about wildlife and sensitive habitats possibly containing special status species. During the project development phase, Operators will identify potentially sensitive habitats and coordinate with BLM to determine which species or habitats are of concern within or adjacent to the project area. In areas where required site-specific wildlife inventories have not been completed, Operators and BLM will work cooperatively to achieve this. BLM's responsibilities under NEPA and ESA essentially are the same on split estate as they are with federal surface. BLM and Operators will seek input from the private surface owner to include conservation measures in split estate situations.

The following guidance and conservation measures are considered "features" or project "design criteria" to be used during Project Plan preparation. The design of projects can incorporate conservation needs for wildlife species or measures can be added as "Conditions of Approval." These types of conservation actions offer flexibility for local situations and help minimize or eliminate impacts to the species of interest.

1. Use the best available information for siting structures (e.g., storage facilities, generators and holding tanks) outside of the zone of impact in important wildlife breeding, brood-rearing and winter habitat based on the following considerations.
 - a. size of the structure(s),

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- b. level/type of anticipated disturbance
 - c. life of the operation, and
 - d. extent to which impacts would be minimized by topography.
2. Concentrate energy-related facilities when practicable.
3. Encourage development in incremental stages to stagger disturbance; design schedules that include long-term strategies to localize disturbance and recovery within established zones over a staggered time frame.
4. Prioritize areas relative to their need for protection, ranging from complete protection to moderate to high levels of energy development.
5. Develop a comprehensive Project Plan prior to POD or full field development activities to minimize road densities.
6. To reduce additional surface disturbance, existing roads and two-tracks on and adjacent to the CBNG project area will be used to the extent possible and will be upgraded as necessary.
7. Minimize stream channel disturbances and related sediment problems during construction of road and installation of stream crossing structures. Do not place erodible material into stream channels. Remove stockpiled material from high water zones. Locate temporary construction bypass roads in locations where the stream course will have minimal disturbance. Time construction activities to protect fisheries and water quality.
8. Design stream-crossings for adequate passage of fish (if potential exists), minimize impacts on water quality, and at a minimum, the 25-year frequency runoff. Consider oversized pipe when debris loading may pose problems. Ensure sizing provides adequate length to allow for depth of road fill.
9. Use corridors to the maximum extent possible: roads, power, gas and water lines should use the same corridor whenever possible.
10. Avoid, where possible, locating roads in crucial sage grouse breeding, nesting and wintering areas and mountain plover habitats. Develop roads utilizing topography, vegetative cover, site distance, etc. to effectively protect identified wildlife habitats.
11. Conduct all road and stream crossing construction and maintenance activities in accordance with Agency approved mitigation measures and BMPs.
12. Utilize remote monitoring technologies whenever possible to reduce site visits thereby reducing wildlife disturbance and mortalities.
13. All new roads required for the proposed project will be appropriately constructed, improved, maintained, and signed to minimize potential wildlife/vehicle collisions and facilitate wildlife movement through the project area. Appropriate speed limits will be adhered to on all project area roads, and Operators will advise employees and contractors regarding these speed limits.
14. Road closures may be implemented during crucial periods (e.g., extreme winter conditions, and calving/fawning seasons). Personnel will be advised to minimize stopping and exiting their vehicles in big game winter range.
15. Roads no longer required for operations or other uses will be reclaimed if required by the surface owner or surface management agency. Reclamation will be conducted as soon as practical.
16. Operator personnel and contractors will use existing state and county roads and approved access routes, unless an exception is authorized by the surface management agency.
17. Use minimal surface disturbance to install roads and pipelines and reclaim sites of abandoned wells to restore native plant communities.
18. Reclamation of disturbed areas will be initiated as soon as practical. Native species will be used in the reclamation of important wildlife habitat. Wildlife habitat needs will be considered during seed mix formulation.
19. Locate storage facilities, generators, and holding tanks outside the line of sight and sound of important sage-grouse breeding habitat.
20. Minimize ground disturbance in sagebrush stands with documented use by sage-grouse:
 - (a) breeding habitat – the lek and associated sagebrush;
 - (b) nesting habitat – sagebrush within 4 miles of a lek; and
 - (c) wintering habitat – sagebrush with documented winter use by sage-grouse.
21. Site new power lines and pipelines in disturbed areas wherever possible; remove overhead powerlines when use is complete.
22. Minimize the number of new overhead power lines in sage-grouse or mountain plover habitat. Use the best available information for siting powerlines in important sage-grouse breeding, brood-rearing, and winter habitat. Bury lines in sage-grouse and mountain plover habitat, when feasible.
23. Restrict timing for powerline installation to prevent disturbance during critical sage-grouse periods (breeding March 1 – June 15; winter December 1 –March 31).

24. If above ground powerline siting is required within 2 miles of important sage-grouse breeding, brood-rearing, and winter habitat, emphasize options for preventing raptor perch sites utilizing Avian Powerline Action Committee 2006 guidelines.
25. Encourage monitoring of avian mortalities by entering into a Memorandum of Understanding (MOU) with FWS and the state agencies to establish procedures and policies to be employed by the parties to lessen industry's liability concerns about the "take" of migratory birds.
26. Remove unneeded structures and associated infrastructure when project is completed.
27. Restrict maintenance and related activities in sage-grouse breeding/nesting complexes; 15 March -15 June, between the hours of 4:00-8:00 am and 7:00-10:00 pm.
28. Restrict noise levels from production facilities to 49 decibels (10 dBA above background noise at the lek).
29. Restrict use of heavy equipment that exceeds 49 dBA within 2 miles of a lek from 4-8am and 7-10pm during April 1 – June 30.
30. Protect, to the extent possible, natural springs from disturbance or degradation.
31. Design and manage produced water storage impoundments so as not to degrade or inundate sage-grouse leks, nesting sites and wintering sites, prairie dog towns or other Special Status Species habitats.
32. CBNG produced water should not be stored in shallow, closed impoundments or playas. Impoundments designed as flow through systems will lessen the likelihood selenium will bioaccumulate to levels adversely affecting other wildlife.
33. Develop offsite mitigation strategies in situations where fragmentation or degradation of Special Status Species habitat is unavoidable.
34. Protect reserve, workover, and production pits potentially hazardous to wildlife by netting and/or fencing as directed by the BLM to prevent wildlife access and minimize the potential for migratory bird mortality.
35. Reduce potential increases in poaching through employee and contractor education regarding wildlife laws. Operators should report violations to BLM and MFWP.
36. Operator employees and their contractors will be discouraged from possessing firearms while working.

Measures 3, 4, 20, 21, 24, 25, 29, and 30 were added for the SEIS/Amendment from the Management Plan and Conservation Strategies for sage-grouse in Montana (Montana Sage Grouse Work Group 2005).

Table 1. Summary of General Wildlife Reporting, Inventory, and Monitoring, CBNG Development; Powder River and Billings Resource Management Plans, CBNG Amendment (2002)

Action	Dates	Responsible Entity
Plans of development for outcoming years, showing general location of proposed development	Annually	Team (BLM, USFWS, MFWP, Operators)
Annual reports summarizing findings and presenting necessary protection measures	Annually	BLM with reviews MFWP, USFWS, Operators, and other interested parties
Meeting to finalize future year's inventory, monitoring, and protection measures	Annually	BLM with participation by USFWS, MFWP, Operators, and other interested parties
Inventory and Monitoring		
Big game use monitoring	When Applicable	MFWP with BLM assistance
Determine mountain plover habitat suitability	Prior to permit approval	BLM & operator assistance
In areas of suitable mountain plover habitat, conduct nest surveys in project area, plus a .5 mile buffer	Prior to ground disturbing activities	BLM & operator assistance
In areas of suitable mountain plover habitat, map active black-tailed prairie dog colonies on federal mineral estate.	Prior to permit approval	BLM & operator assistance
Active prairie dog colonies within .5 mile of a specific project area will be identified, mapped and surveyed	Prior to permit approval	BLM with MFWP & operator assistance
Raptor nest inventories (POD areas plus 1 mile buffer; burrowing owls excluded)	Every 5 years during April and May but prior to permit approval	BLM with MFWP & operator assistance
In areas with potential bald eagle winter roost sites/territories, conduct surveys within one mile of project area	Prior to ground disturbing activities	BLM & operator assistance
Conduct bald eagle nest inventories within .5 miles buffer of project area	Between March 1 and mid July	BLM & operator assistance
Monitor productivity at active bald eagle nests within one mile of project-related disturbance	Between March 1 and mid July	BLM & operator assistance
Raptor next productivity monitoring at active nests within one mile of project disturbance area	Annually March to mid-July	BLM with MFWP & operator assistance
Sage-grouse lek inventories (project area plus two mile buffer)	Every 5 years	BLM with MFWP & operator assistance

Action	Dates	Responsible Entity
Inventory and Monitoring (continued)		
Sage-grouse lek attendance monitoring on and within 2 miles of the RMU	Annually	BLM with MFWP & operator assistance will visit selected leks each year so that all leks will be visited annually
Threatened, Endangered & Sensitive species inventory/monitoring within selected CBNG development areas	When Applicable	BLM with MFWP & operator assistance
Other wildlife species inventory/monitoring within selected CBNG development areas	When Applicable	BLM with MFWP & operator assistance

Table 2. Summary of APD/ROW Survey and Protection Measures, CBNG Development within the Powder River and Billings Resource Management Plans

Protection Measure	Dates
Bald eagle nest surveys within 0.5 mile of project area	Yearlong
Bald eagle nest avoidance within 0.5 mile of active nests	No Surface Use or Occupancy
Bald Eagle Winter Roost surveys within 1 mile of project area	December 1 to April 1
Bald Eagle Winter Roost avoidance within 0.5 miles of roost site	No Surface Use or Occupancy
Black-footed ferret surveys	Prairie dog colonies > 80 acres
Mountain plover surveys within 0.5 miles of project area	May 1 to June 15
Active prairie dog colonies on federal surface in mountain plover habitat	BLM & operator assistance
Mountain plover nest/brood avoidance within .25 miles of project area	April 1 to July 31
Peregrine falcon nest avoidance within 1 mile of active nest	No Surface Use or Occupancy
Threatened, Endangered & Sensitive species surveys	As necessary
Threatened, Endangered & Sensitive species avoidance	As necessary
Big game crucial winter range avoidance	December 1 – March 31
Elk Parturition Range avoidance	April 1 – June 15
Big Horn Sheep – Powder River Breaks	No Surface Use or Occupancy
Prairie dog colony mapping and burrow density determinations	Yearlong
Raptor nest survey/inventory within 0.5 miles of project area	Yearlong
Raptor nest avoidance within 0.5 miles of active nests	March 1 – August 1
Sage-grouse nesting habitat avoidance on areas within 2.0 miles of a lek	April 1 – June 30
Sage-grouse and sharp-tailed grouse lek avoidance within 0.25 miles of a lek	No Surface Use or Occupancy
Sharp-tailed grouse nesting habitat avoidance on areas within 0.5 mi. of a lek	March 1 – June 15
Western burrowing owl surveys (prairie dog colonies within 0.5 miles of disturbance)	June – August
General wildlife avoidance/protection	As necessary

Table 3. Additional Wildlife Inventory and Monitoring Measures On and Adjacent to Areas with High Levels of Development (4 Locations/Section), Powder River and Billings Resource Management Plans, CBNG Amendment (2001)

Action	Dates	Responsible Entity
Raptor nest inventory/monitoring on areas with development, plus a 1-mile buffer.	Annually during April and May	BLM surveyor with Operator-provided financial assistance
Raptor productivity monitoring on areas with development, plus a 1-mile buffer.	Annually during March-July	BLM surveyor with Operator-provided financial assistance for BLM volunteer support
Selected TEC&SC inventory/monitoring on suitable habitats in areas with development, plus a 1-mile buffer	Annually during spring and summer	BLM or Operator-financed BLM-approved biologist
Collect baseline information for benthic macroinvertebrates, amphibians and aquatic reptiles, algae and non-game fish. Monitor changes on selected streams	Baseline 1 – 2 years prior and annually over the life of the project	BLM surveyor with Operator-provided financial assistance
Sage-grouse lek inventory on areas of development plus a 2-mile buffer and selected undeveloped comparison areas	Every 5 years, mid-March to mid-May	BLM surveyor with Operator-provided financial assistance
Sage-grouse lek attendance monitoring on areas of development plus a 2-mile buffer and selected undeveloped comparison areas	Annually, mid-March to mid-May	Each known lek will be visited at least once annually by the BLM and/or Operator-financed BLM-approved biologist; subsequent visits will occur at BLM-selected leks by the BLM, and/or Operator-financed BLM-approved biologist
Others studies on areas with development and selected undeveloped comparison areas		USFWS and/or BLMA with Operator- and other party-provided financial assistance

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**BIOLOGICAL ASSESSMENT for
COAL BED Natural Gas PRODUCTION
IN MONTANA**

Prepared for
Bureau of Land Management (BLM),
Miles City and
Billings field Offices

October 2006

Julie A. Grialou

Wildlife Biologist

Bob Sullivan

Fisheries Biologist

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BIOLOGICAL ASSESSMENT FOR COAL BED NATURAL GAS PRODUCTION IN MONTANA

1.0 INTRODUCTION

The Bureau of Land Management (BLM), Miles City and Billings Field Offices, Montana, are proposing changes in the coal bed natural gas (CBNG) development program. The Powder River and Billings Resource Management Plans (RMPs), as amended by BLM's 1994 *Oil and Gas Amendment of the Billings, Powder River, and South Dakota Resource Management Plans*, support conventional oil and gas development and limited CBNG exploration and development. The BLM proposes to amend the Billings and Powder River RMPs to address increased interest in CBNG in these RMP areas. An Environmental Impact Statement (EIS) was completed in 2003 to evaluate impacts arising from implementation of the amended RMPs. As a result of lawsuits filed against the BLM's Record of Decision (ROD), the U.S. District Court issued orders, dated February 25, 2005, and April 5, 2005, requiring the BLM to 1) prepare a Supplemental EIS (SEIS) to evaluate a phased development alternative for CBNG production, 2) include the proposed Tongue River Railroad in the cumulative impact analysis, and 3) analyze the effectiveness of water well mitigation agreements. An SEIS/Amendment is being prepared to further evaluate impacts from implementation of the amended RMPs in light of the issues identified by the U.S. District Court.

The oil and gas industry is experiencing growing interest and predicts further interest in the exploration and development of CBNG because of increasing energy demands and efforts to find alternative energy sources. Increased CBNG development would result in a major federal action with potential to significantly affect the environment. This Biological Assessment (BA) was compiled to consider the potential impacts on federally listed and proposed threatened and endangered (T&E) species from proposed changes to levels of CBNG exploration and development in Montana. The BLM is the lead agency for this BA. Designated cooperators—those who have signed a memorandum of understanding with the BLM—are the Environmental Protection Agency (EPA), Department of Energy (DOE), U.S. Army Corps of Engineers (USACE), Bureau of Indian Affairs (BIA), Montana Department of Environmental Quality (MDEQ), Montana Board of Oil and Gas Conservation (MBOGC), Crow Tribe of Montana, Lower Brule Sioux Tribe, and the following counties: Big Horn, Carbon, Golden Valley, Musselshell, Powder River, Rosebud, Treasure, and Yellowstone. The

Northern Cheyenne Tribe has also collaborated on the development of this SEIS/Amendment.

This BA is being prepared pursuant to Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended. The U.S. Fish and Wildlife Service (USFWS), as required under the ESA, provided a list of federal endangered, threatened, and proposed threatened and endangered species that may be present in the Planning Area (Table 1 and Appendix A). Eight federally listed threatened, endangered, and proposed for listing wildlife species potentially occur in the Planning Area. The list provided by the USFWS did not include any plant species. Under the ESA, the BLM must ensure that activities instigated under this action do not jeopardize the continued existence of any threatened, endangered, or proposed for listing species. The USFWS must concur that the BLM's actions will not jeopardize a listed species. One candidate species may also potentially be found in the project area. Although not subject to the extensive procedural provisions of the ESA, the USFWS encourages that no action be taken that could impact candidate species and contribute to the need to list the species.

Project Plans of Development (PODs) will be developed and approved using the programmatic guidance outlined in the Preferred Alternative, including the Wildlife Monitoring and Protection Plan (Wildlife Appendix of Draft SEIS/Amendment). Additional monitoring guidance support can be found in the Monitoring, Vegetation, and Mineral Appendices of the Draft SEIS/Amendment. PODs will include baseline inventory in areas where wildlife inventory has not been completed. Operators will be required to submit a Project POD demonstrating how their project design minimizes or mitigates impacts to surface resources and meets objectives for wildlife. Both the Preferred Alternative and the Wildlife Monitoring and Protection Plan involve a cooperative approach, which incorporates adaptive environmental management principles and establishes a framework encouraging industry, landowners, and agencies to work together constructively to incorporate conservation measures into CBNG development. All CBNG development will follow the programmatic guidance to address wildlife concerns, and each individual Project POD will include a site-specific Wildlife Monitoring and Protection Plan which includes mitigation measures specific to species or local habitats. Over the life of the CBNG project, these plans offer some assurances that management will be adapted to address site-specific situations.

TABLE 1
 FEDERALLY-LISTED THREATENED, ENDANGERED, AND PROPOSED FOR LISTING SPECIES

Common Name	Scientific Name	Habitat in Montana	Federal Status
Listed Species			
Whooping crane	<i>Grus americana</i>	Wetlands, croplands; transient statewide.	E
Bald eagle	<i>Haliaeetus leucocephalus</i>	Forested riparian areas throughout the state	T
Interior least tern	<i>Sterna antillarum athalassos</i>	Sandbars and islands in eastern Montana and along the Yellowstone and Missouri Rivers.	E
Gray wolf	<i>Canis lupus</i>	Adapted to many habitats, need large ungulate prey base and freedom from human influence.	E/XN
Canada lynx	<i>Felis lynx canadensis</i>	Montane spruce/fir forest in western Montana.	T
Black-footed ferret	<i>Mustela nigripes</i>	Prairie dog complexes in eastern Montana	E/XN
Grizzly bear	<i>Ursus arctos horribilis</i>	Alpine/subalpine coniferous forest in western Montana.	T
Pallid sturgeon	<i>Scaphirhynchus albus</i>	Bottom dwelling fish of the Missouri and Yellowstone Rivers	E
Candidate Species			
Montana Arctic grayling	<i>Thymallus arcticus</i>	Fluvial populations in the cold-water, mountain reaches of the Upper Missouri River, and dispersed streams in SW Montana.	C

T=threatened; E=endangered; E/XN= endangered/non-essential, experimental; C=candidate.

2.0 PROJECT DESCRIPTION

Three action alternatives plus a No Action Alternative and a Preferred Alternative were originally proposed in the 2003 Final EIS (Alternatives A through E). The SEIS/Amendment has proposed two additional action alternatives that consider phased development, as well as a new Preferred Alternative. The Preferred Alternative discussed in this BA was selected based on an analysis of impacts for all alternatives.

Exploration and development of CBNG resources on BLM, state, or fee minerals are allowed subject to agency decisions, lease stipulations, permit requirements, and surface owner agreements. Under the Preferred Alternative, operators would be required to submit a Project POD outlining the proposed federal well development of an area when requesting CBNG well densities greater than 1 well per 640 acres. The Project POD would be developed in consultation with the affected surface owner(s), tribes, other affected parties, and other involved permitting agencies. All shallow coal seams would have vertical wells installed; for deeper coal seams, the operator would drill directionally or demonstrate in the Project POD for agency consideration why directional drilling is not needed or feasible. Operators would develop single or multiple coal seams per their Project PODs; however, there would be only one well bore per coal seam per designated spacing restriction. Operators would also be required to demonstrate in their Project PODs how impacts to surface resources, such as wildlife, would be minimized or mitigated.

Protection of hydrological resources was one of the most critical concerns addressed during the development of the Final EIS and SEIS/Amendment, receiving significant analysis with regards to various options for the management of water produced with CBNG development. In light of those analyses, the Preferred Alternative combines management options so that no degradation of water quality would be allowed in any watershed. The hierarchy for water management options requires beneficial use as the first priority, followed by the operator's choice as outlined in a Water Management Plan, which must be submitted as part of the federal Project POD. A Water Management Plan would be required for exploratory wells, and for each Project POD. Management options available include injection, treatment, impoundment, discharge, or other operator-proposed methods, provided they are addressed in the Water Management Plan and

approved by the appropriate agency. Impoundments proposed as part of the Water Management Plan would be designed and located to minimize or mitigate impacts to soil, water, vegetation, and channel stability. No discharge of produced water (treated or untreated) would be allowed into the watershed unless the operator has an approved Montana Pollutant Discharge Elimination System (MPDES) permit and can demonstrate in the Water Management Plan how discharge could occur in accordance with water quality laws without damaging the watershed. The Preferred Alternative also includes a water screen to further protect the quality of water within individual 4th order watersheds. The water screen requires that the cumulative volume of untreated CBNG produced water that could be discharged to surface waters would be limited to 10 percent of the 7Q10 flow. The allowable volume of discharged water would be calculated cumulatively based on permitted outfalls. If the cumulative 10 percent of 7Q10 limit was already used, within a watershed, the proposed discharge from federal APDs would need to be managed by other practices. This limit is based on the amount of discharge allowed under an MPDES permit without exceeding Montana non-degradation criteria.

The air quality objectives for the proposed action include maximizing the number of wells connected to each compressor and requiring natural gas-fired engines for compressors and generators, except in areas with sensitive resources, including people, where noise is an issue. In those areas, the decibel level would be required to be no greater than 50 decibels measured at a distance of one-quarter mile from the compressor. This may require installation of an electrical booster at these locations.

Transportation corridors would be required for utilities, roads, and pipelines with existing disturbances used where possible. The operator will also address in the Project POD how the surface owner was consulted for input into the location of roads, pipelines, and utility line routes. For powerlines, the operator will demonstrate in the Project POD how the proposal for power distribution would mitigate or minimize impacts to affected wildlife. For example, the operator may propose that all or a portion of the powerlines be buried and any aboveground lines be designed following raptor-safe specifications. When wells are abandoned, the associated oil and gas roads would remain open or be

BIOLOGICAL ASSESSMENT

closed at the surface owner's discretion. If the roads where requested to be closed they would be rehabilitated. This includes leaving BLM and state roads open, if access is desirable.

As with current management, there would be no buffer zone for CBNG production around active coal mines (Montana State Office Instruction Memorandum No. 2000-053, June 1, 2000, *No Surface Occupancy Stipulations*).

To help protect wildlife species other than sage-grouse that rely either seasonally or fully on sagebrush habitats (such as mule deer and migratory song birds; i.e. Brewer's sparrow and sage sparrow), the BLM would limit the amount of disturbance in such crucial habitat (e.g., the crucial brood rearing/breeding/wintering habitat) on its administered surface or on private surface overlying federal minerals. Crucial habitat polygons would be identified within each proposed POD during project application development. Annual monitoring of sage-grouse leks near CBNG development and at reference locations will be used to assess the need for additional management actions to prevent impacts. A negative change in sage-grouse males on the CBNG leks may result in changes in management. Ongoing research and monitoring in the Powder River Basin might cause the BLM to modify the threshold percentage for via adaptive management or mitigation.

To protect sage-grouse, the BLM would place conditions on development within crucial sage-grouse habitat areas. For any development to occur in these crucial habitat areas, there must be a high likelihood that the development will not displace the sage-grouse from the habitat areas. This condition may lead to significantly different development approaches within the crucial sage-grouse habitat areas, which could include low intensity development, widely-spaced well locations, and other options. For sage-grouse, the following threshold would be used to initiate management change as a result of monitoring:

- A 25 percent or more decline of male sage-grouse attendance on leks within two miles of CBNG development in crucial sage-grouse habitat in comparison to control leks. Similarly, if populations remain comparable with the control leks or increase over a five year monitoring period, management of development may be modified to be less restrictive

For proposed federal CBNG development within 5 miles of the Northern Cheyenne and Crow Indian Reservations, the BLM, in consultation with the tribes, would require site-specific groundwater and air analyses. These analyses would be submitted as part of the operator's POD submissions. The operator's analyses must demonstrate that the overall POD would be protective of Indian Trust, groundwater, CBNG, and air quality. If the analysis indicated that unacceptable levels of impairment to these resources would occur and could not be mitigated in consultation with the tribes, the BLM would not approve the APDs. The BLM might require operator(s) to install groundwater monitoring wells and air monitoring stations between the development area and the reservations to confirm the initial findings of the analyses. Modeling and monitoring groundwater would also provide critical data to determine if CBNG resources were being affected.

This BA addresses environmental impacts from implementation of the Preferred Alternative.

2.1 Project Location

The project is located across south-central and southeastern Montana. This area includes parts of thirteen counties: Carter, Powder River, Custer, Rosebud, Treasure, Wheatland, Sweet Grass, Stillwater, Carbon, Golden Valley, Musselshell, Yellowstone, and Big Horn.

Because of the extensive area covered, Map 1 is provided instead of legal descriptions.

The planning area shown in Map 1 is defined as the area where oil and gas decisions will be made by the BLM. The BLM's planning area is the oil and gas estate administered by the BLM in the Powder River and Billings RMP areas. The planning area excludes those lands administered by the U.S. Department of Agriculture (USDA) Forest Service (USFS), the Crow Tribe, Northern Cheyenne Tribe, and other Indian lands.

For ease of reference, the Billings and Powder River RMP areas are collectively referred to in this document as the BLM CBNG Planning Area. This 13-county area is where there is CBNG development interest.

The Powder River RMP area encompasses the southeastern corner of Montana, including Powder River, Carter, and Treasure counties, and portions of Big Horn, Custer, and Rosebud counties. The Powder River RMP area comprises approximately 1,080,675

acres of federally managed surface and 4,103,700 acres of federal mineral estate.

The Billings RMP area comprises the south-central portion of Montana consisting of Carbon, Golden Valley, Musselshell, Stillwater, Sweet Grass, Wheatland, and Yellowstone counties and the remaining portion of Big Horn County. The Billings RMP area comprises approximately 425,336 acres of federally managed surface and 906,084 acres of federal mineral estate.

Adjacent to the Planning Area, other major land holdings include the Crow and Northern Cheyenne Indian Reservations, the Custer National Forest, portions of Yellowstone National Park, the Big Horn Canyon National Recreational Area, the Burlington Northern and Santa Fe Railroad, and the Fort Keogh Agricultural Experiment Station. The total surface area of the CBNG Planning Area (all owners) exceeds 21.9 million acres.

2.2 Purpose and Need

The purpose of the project is to provide direction and analysis for CBNG exploration and development on the Powder River and Billings RMP areas.

The oil and gas analysis in current BLM planning documents did not predict as many wells. A BA to establish the impacts to federally listed species is needed to analyze the effects from increased CBNG and oil and gas development.

2.3 Construction Techniques

Each well project has four phases: exploration, development, operation, and shutdown. Once a well is in place, it is expected to operate for 20 years

before abandonment. The BA focuses on the first two phases, exploration and development. These lead to the operation phase, once the well is in place.

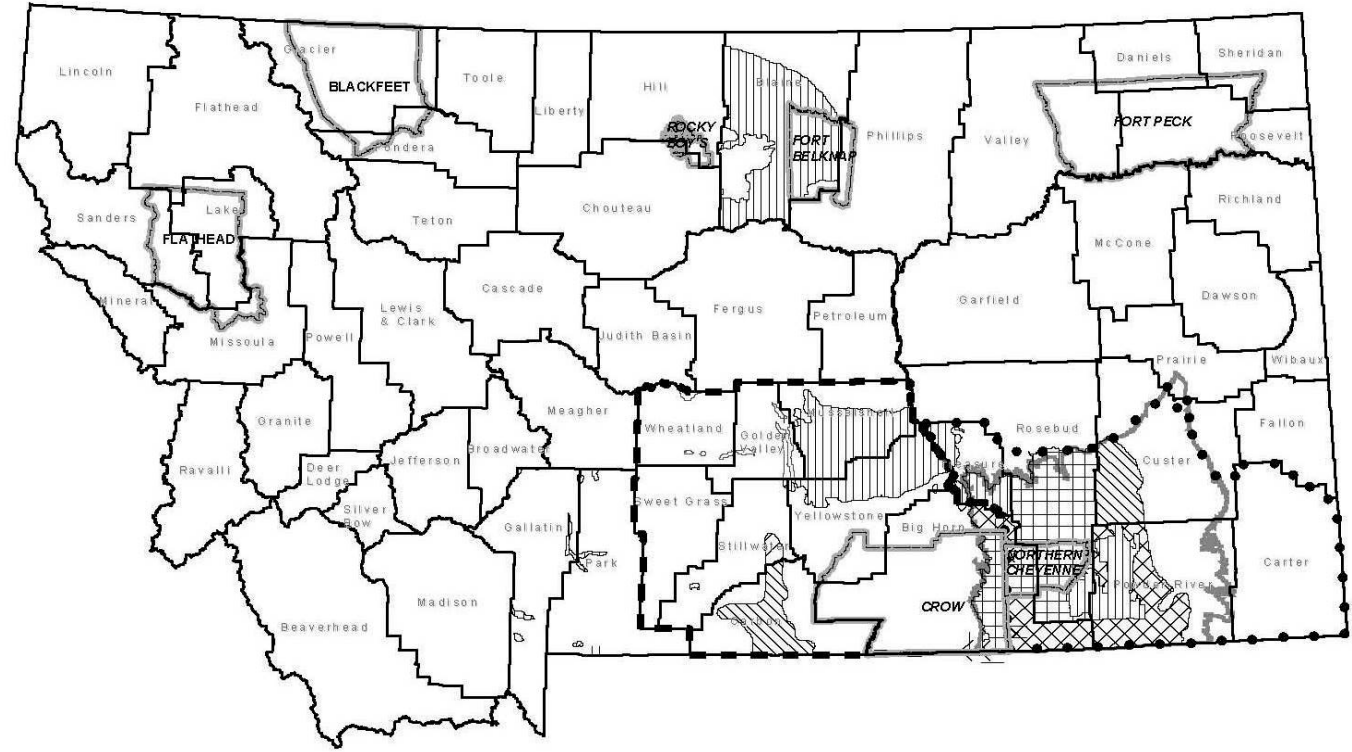
During development, 3.25 acres are likely to be disturbed for each well for exploration, construction, and drilling operations. Table 2 shows the land area that would be directly disturbed by CBNG development and the expected length of road and utility corridors. Under the Preferred Alternative, the use of transportation corridors to consolidate the placement of roads and utilities and minimize surface disturbance is required. It is also required that existing roads be used and utility corridors follow those existing roads if they are available. When exploratory construction begins on a site, the exploratory well will take about 3 to 5 days to drill, with 2 to 3 extra days to complete for CBNG if the site is developed. During the exploratory phase, wildlife species will be disturbed by the presence of bulldozers, drilling equipment, and other machinery. The short-term disturbance effect of the exploratory phase will end with either abandonment or continuation to the development stage if the well site is suitable for production. If the site is abandoned after exploration, the site will take approximately 5 years to attain preconstruction vegetative canopy cover values. Reclamation of the site with vegetation will be undertaken, but restoration to pre-project conditions is not planned.

Development disturbance will begin if exploration results in estimates of suitable levels of production. This and operational disturbance should be considered long-term because of the permanent placement of the pad. The materials source for roads would be located as close as possible to each project site, but no specific sources have been identified at this time.

TABLE 2
ESTIMATES OF LAND AREA THAT WILL BE DIRECTLY DISTURBED BY THE PREFERRED ALTERNATIVE

Area Disturbed per Well (acres)	Length of Road per Well (miles)	Length of Utility Corridor per Well (miles)	Total Number of Wells Drilled	Total Area Disturbed (acres)	Total Length of CBNG Roads (miles)	Total Length of Utility Corridors
3.25	0.237	0.734	18,225	59,045	6,662	20,623

Map 1: CBNG Development Based on Reasonable Foreseeable Development Scenario



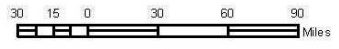
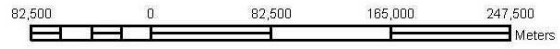
Legend

POTENTIAL CBM WELLS

- Minimal
- 1 - 150
- 151 - 400
- 401 - 700
- 701 - 4000
- 4001 - 7000

- Powder River RMP Area
- Billings RMP Area
- Native American Reservations

1:5,000,000



This map shows the maximum number of CBM wells as described in the Reasonable Foreseeable Development Scenario. NOTE: Development on this map has been confined to the regions with known sub-bituminous coal occurrences.

DATA SOURCES:

Counties: 1:100,000 scale, counties, Montana State Library/NRIS, Helena, Montana.
 Reservations: 1:100,000 scale, counties, Montana State Library/NRIS, Helena, Montana.
 Development Data: BLM Reasonable Foreseeable Development Scenario.

3.0 DATA COLLECTION AND ASSESSMENT

Appropriate federal and state agencies were contacted to obtain information on specific habitats and areas within the project area where listed species may potentially occur. Research literature was reviewed for listed species. Biologists with knowledge of the area were interviewed before assessing impacts that could result from project implementation. Impacts would be considered significant if implementation of the Preferred Alternative would adversely affect any listed or proposed species, including destruction of occupied habitat or "taking" (harm, harassment, pursuit, injury, or kill) of federally listed wildlife or plant species.

3.1 Literature Studies

A literature search was conducted to determine habitat requirements for each listed species. Habitat requirements for listed species were then compared to terrestrial vegetation communities in the project area to determine the potential for occurrence of listed species. If suitable habitat was present, a literature search was completed to determine if existing site-specific or regional data on the species were available. The broad geographic area covered by this BA means that every species listed has some potential habitat within the proposed project's boundary.

3.2 Survey Methodologies

No specific surveys were conducted for this BA. Therefore, it is essential that clearance surveys be conducted on a site-by-site basis before CBNG exploration begins. Site clearances and field survey methodologies differ according to the species of interest.

3.2.2 MAMMALS

Four threatened, endangered, or proposed mammalian species potentially occur in the project area (Table 1). Two of the species, the black-footed ferret and gray wolf, are listed as experimental populations for specific regions within the state of

Montana. Specific surveys need not be conducted for the gray wolf or the Canada lynx because of the unlikely possibility of actually observing these species even if they are present. Instead, reconnaissance-level surveys for signs of these species (scat and tracks) will be included with other biological surveys at individual project sites. In addition, in habitats with higher potential for these animals, specific transects will be put in place and checked for scat. If found, hair and track traps for lynx and grizzly bears will be used to determine positive presence. If wolves are suspected, taped howling reconnaissance surveys will be employed to ascertain whether these species are using the area for denning.

3.2.3 BIRDS

One threatened and two endangered bird species are known to or could occur in the project area. Specific surveys would include nesting surveys and winter foraging surveys. Consultation with local wildlife biologists will precede all exploratory CBNG activities within 1.6 miles of any waterway. This consultation will result in obtaining nesting and winter foraging information for bald eagles that may be impacted by CBNG activities. If nesting sites are known to occur within this radius of the proposed CBNG site or sites, a biologist will be retained to survey specifically for this species for the duration of both the exploration and development phases in that locale. If the proposed CBNG site is found to be within a nesting or winter foraging area, CBNG work will be halted until the nest is no longer active or until winter has passed and the foraging eagles have migrated. BLM leasing stipulations pertaining to bald eagles apply and will be implemented.

Interior least terns are colonial nesting waterbirds that seldom swim, spending much of their time on the wing (Hubbard 1978). Therefore, clearance surveys that search for flying birds or nesting colonies will be done in appropriate habitats, sand bar river areas, or nearby sand pits, in the spring by a qualified biologist prior to exploration and well development.

Because whooping cranes are rare migrants in the planning area vicinity and do not nest or winter in the area, surveys for these birds will not be conducted.

4.0 PROJECT CONDITIONS

This section discusses habitat requirements and distributions of species listed or proposed for listing by the USFWS as endangered or threatened, the status of the species or habitat within the project area, potential impacts from project implementation, conservation actions, and an impact determination. Habitat requirements and distribution data were obtained from Federal Register (FR) listing notices, conversations with federal and state biologists, and other published and unpublished research data.

4.1 Mammals

4.1.1 BLACK-FOOTED FERRET (*MUSTELA NIGRIPES*)

4.1.1.1 Habitat

This species was listed as endangered March 11, 1967, and is currently listed as endangered/experimental, non-essential in Montana. Historically, black-footed ferrets inhabited grassland plains (shortgrass and midgrass prairies) surrounded by mountain basins up to 3,250 meters (10,500 feet) in elevation (USFWS 1998). This species is always found in association with another grassland species, the prairie dog (*Cynomys* spp.; Burt and Grossenheider 1980, Cahalane 1954). Prairie dogs are the principle food of the black-footed ferret, and prairie dog burrows provide the ferret's principle shelter. Research has found that the black-footed ferret is more than just associated with the prairie dog, but is truly obligate and dependent upon this rodent for its survival as a species (Anderson et al. 1986, Biggins et al. 1986, Clark 1989, Forrest et al. 1988, Henderson et al. 1974, Hillman 1968, Miller et al. 1996). Data suggest that a ferret needs a prairie dog colony of at least 12.5 hectares (31.3 acres) to survive for a year and a minimum of 50 hectares (125 acres) to raise a litter (Caughley and Gunn 1996). Ferret range is coincident with that of prairie dogs (Anderson et al. 1986). There is no documentation of black-footed ferrets breeding outside of prairie dog colonies. Specimen records of black-footed ferrets are available from ranges of three species of prairie dogs: black-tailed prairie dog (*Cynomys ludovicianus*), white-tailed prairie dog (*Cynomys leucurus*), and Gunnison's prairie dog (*Cynomys gunnisoni*; Anderson et al. 1986).

Major causes for the decline in this species are long-term prairie dog control efforts, the loss of habitat as

a result of destruction of original grasslands, and canine distemper (Frey and Yates 1996). Recovery plans were approved in June 1978 and August 1988. These included captive breeding and release to protected habitats in the wild.

4.1.1.2 Distribution

Historically, this species' range included New Mexico, Arizona, Colorado, Utah, Kansas, Oklahoma, Texas, Wyoming, Nebraska, Montana, North Dakota, South Dakota, Alberta, and Saskatchewan. It was decimated from all of its former range, and distribution is now limited to introduced populations in Arizona, Wyoming, Montana, and South Dakota (USFWS 1998). Reintroduction efforts have been concentrated in these four states because they still have protected areas with large prairie dog colonies. Although the Wyoming effort has been hampered by disease problems, the other three states have shown some success (USFWS 1996). Reintroduction efforts began in 1991 in Wyoming, 1994 in Montana and South Dakota, and 1996 in Arizona.

4.1.1.3 Status in the Project Area

Based on surveys conducted to date, black-footed ferrets are not known to occur in the project area. However, one of the potential black-footed ferret reintroduction sites recommended by the Montana Black-Footed Ferret Coordinating Committee is located within the project area in Custer County. If a proposal is made by the USFWS and the Montana Department of Fish, Wildlife and Parks (MFWP) to reintroduce the black-footed ferret in this area, further coordination to avoid impacts will be required.

4.1.1.4 Project Impact

Black-footed ferrets are exclusively found associated with their main prey species: prairie dogs. Prairie dogs are found throughout the project area. Any activity affecting prairie dog colonies has the potential to impact the ferret.

4.1.1.5 Conservation Measures

Two BLM leasing stipulations address black-footed ferret concerns. The first states that exploration in prairie dog colonies within potential black-footed ferret reintroduction areas comply with the Draft *Guidelines for Oil and Gas Activities in Prairie Dog Ecosystems Managed for Black-footed Ferret Recovery* (USFWS 1990). Compliance with these guidelines is required, and they specify that

conditions of approval depend on the type and duration of the proposed activity, proximity to occupied ferret habitat, and other site-specific conditions. Exceptions or waivers of this stipulation may be granted if the Montana Black-Footed Ferret Coordination Committee determines the proposed activity would have no adverse impacts on ferret reintroduction or recovery. The second stipulation requires all prairie dog colonies or complexes greater than 80 acres in size be surveyed for black-footed ferret absence or presence through consultation with the FWS, prior to ground disturbance. The results of the survey determine whether restrictions or denial of use are appropriate for the site. Both of these stipulations will be implemented under the proposed action.

4.1.1.6 Determination

Provided strict adherence to BLM leasing stipulations, the proposed action will result in a "may affect, not likely to adversely affect" situation for black-footed ferrets.

4.1.2 CANADA LYNX (*LYNX CANADENSIS*)

4.1.2.1 Habitat

This species was listed as threatened on March 24, 2000. In the contiguous United States, the distribution of the lynx is associated with the southern boreal forest, comprised of subalpine coniferous forest in the West, and primarily mixed coniferous/deciduous forest in the East (Aubry et al. 1999); whereas in Canada and Alaska, lynx inhabit the classic boreal forest ecosystem known as the taiga (McCord and Cardoza 1982, Quinn and Parker 1987, McKelvey et al. 1999). Within these general forest types, lynx are most likely to persist in areas that receive deep snow, for which the lynx is highly adapted (Ruggiero et al. 1999).

According to the USFS (1993), lynx require three primary habitat components:

1. Foraging habitat (15- to 35-year-old lodgepole pine (*Pinus contorta*) to support snowshoe hare, the primary food source, and provide hunting cover).
2. Denning sites with patches of spruce and fir greater than 200 years old and generally smaller than 5 acres.
3. Dispersal and travel cover that is variable in vegetative composition and structure.

Abundance of snowshoe hare is the limiting factor for lynx. The hare is limited by the availability of winter habitat that includes early successional lodgepole pine with trees at least 6 feet tall.

4.1.2.2 Distribution

In the western United States, lynx historically occurred in the Cascades Range of Washington and Oregon; and the Rocky Mountain Range in Montana, Wyoming, Idaho, eastern Washington, eastern Oregon, northern Utah, and Colorado (McCord and Cardoza 1982, Quinn and Parker 1987).

4.1.2.3 Status in the Project Area

The range of lynx includes portions of four counties within the project area: Wheatland, Sweet Grass, Stillwater, and Carbon (MFWP 2006). Within this area, lynx are expected to occur within suitable subalpine coniferous forests and moist Douglas fir forests, especially those areas with dense, old growth providing lynx forage and denning areas, as well as young, dense forested stands providing lynx forage. The project area does not contain areas proposed by USFWS as critical lynx habitat (USFWS 2005a).

4.1.2.4 Project Impact

Although possible, exploration and development of CBNG are not expected to occur in higher elevation forests providing lynx habitat. If exploration or associated roads or utility lines were constructed within lynx habitat, the animals could be impacted by habitat loss and by disturbance.

4.1.2.5 Conservation Measures

Any drilling pads or other construction areas (e.g., road and utility line construction) located in suitable high elevation forested areas, especially areas with populations of hares or rabbits, would be surveyed prior to ground disturbance for scat and individuals following established protocols. If found, the site would be avoided and surrounded by a buffer zone as recommended by USFWS biologists.

4.1.2.6 Determination

Implementation of conservation measures will result in a "may affect, not likely to adversely affect" situation for Canada lynx.

4.1.3 GRAY WOLF (*CANIS LUPUS*)

4.1.3.1 Habitat

This species was listed as endangered on March 11, 1967, and is currently listed as endangered/experimental, non-essential in Montana. However, USFWS has recently concluded that delisting gray wolves in the Northern Rocky Mountains may be warranted (USFWS 2005b). The gray wolf can be found in any area, within their current range, that supports populations of hoofed mammals (ungulates), its major food source.

4.1.3.2 Distribution

The wolf was considered extirpated from the western portion of the conterminous United States by about 1930. The gray wolf is native to most of North America north of Mexico City, except for the southeastern United States, where a similar species, the red wolf (*Canis rufus*), was found. The gray wolf occupied nearly every area in North America that supported populations of hoofed mammals (ungulates). The gray wolf occurred historically in the northern Rocky Mountains, including mountainous portions of Wyoming, Montana, and Idaho. For 50 years prior to 1986, no detection of wolf reproduction was found in the Rocky Mountain portion of the United States.

A revised recovery plan for the Northern Rocky Mountain states (Montana, Wyoming, Idaho) was approved by USFWS in 1987 (USFWS 1987). It identified a recovered wolf population as being at least 10 breeding pairs of wolves, for 3 consecutive years, in each of three recovery areas (Central Idaho, Greater Yellowstone, and Northwestern Montana). A population of this size would be comprised of about 300 wolves. The plan recommended natural recovery in Montana and Idaho. The plan recommended use of ESA section 10(j) authority to reintroduce experimental wolves. By establishing a nonessential experimental population, more liberal management practices could be implemented to address potential negative impacts or concerns regarding the reintroduction. The final EIS was filed with the EPA on May 4, 1994, and the notice of availability was published on May 9, 1994. The EIS considered five alternatives: 1) Reintroduction of Wolves Designated as Experimental; 2) Natural Recovery (No Action); 3) No Wolves; 4) Wolf Management Committee Recommendations; and 5) Reintroduction of Wolves Designated as Non-experimental. After careful review, the USFWS proposed to reintroduce nonessential experimental gray wolves in

Yellowstone Park and central Idaho. Wolves in the third recovery area, the Northwest Montana Recovery Area encompassing northwest Montana and the Idaho Panhandle, are covered fully by the ESA as endangered species. Under the Experimental Population Final Rule guidelines from 1994, 35 wolves were introduced into central Idaho and 66 wolves were introduced into Yellowstone National Park in 1995 and 1996.

In recent years, wolves in the Northern Rocky Mountain states have continued to increase in distribution and numbers, and recovery criteria have been met for removing Northern Rocky Mountain wolves from the Endangered Species list (USFWS et al. 2005). Estimates of wolf numbers at the end of 2004 were 452 wolves in the Central Idaho Recovery Area, 324 wolves in the Greater Yellowstone Recovery Area, and 59 in the Northwest Montana Recovery Area.

4.1.3.3 Status in the Project Area

Wolves in the project area vicinity are part of the experimental population originally introduced into Yellowstone Park. The most recent Rocky Mountain Wolf Recovery Annual Report estimates the population size of the experimental wolf population in southern Montana at 94 wolves (USFWS et al. 2005). The range of the Moccasin Lake, Phantom Lake, Red Lodge, and Beartooth wolf packs occur within, or partially within, the project area (USFWS et al. 2005). There are no active wolf den or rendezvous sites known to occur within the project area. However, the Red Lodge pack likely has a den site somewhere in the Red Lodge vicinity (Trapp, personal. comm. 2006).

4.1.3.4 Potential Impact

Roads and the presence of humans would increase the threat from shooting, either intentionally or accidentally (if mistaken for a coyote). The density of roads in occupied wolf areas could force wolves from occupied areas and could increase stress on wolves and result in the loss of some individuals.

4.1.3.5 Conservation Measures

Prior to construction on project area lands in counties where wolves are most likely to occur (Carbon, Stillwater, and Sweet Grass counties currently, with potential for additional counties in the future if wolves expand their range), surveys would include specific searches for this animal, occupied dens, or scat. If wolves or other wolf indicators were found, USFWS would be consulted and proper protocols

followed. Likely protocols include providing buffers around wolf den and rendezvous sites and limiting road density in areas of occupied wolf habitat.

4.1.3.6 Determination

Implementation of conservation measures will result in a "not likely to jeopardize" situation for this experimental/non-essential gray wolf population.

4.1.4 GRIZZLY BEAR (*URSUS ARCTOS HORRIBILIS*)

4.1.4.1 Habitat

This species was listed as endangered on March 11, 1967. This status was changed to threatened on July 28, 1975. On November 11, 2000, the USFWS listed some populations in Montana and Idaho as experimental to facilitate restoration to designated recovery areas. On June 20, 2001, Interior Secretary Gale Norton rescinded the plans for restoration and withdrew a plan to reintroduce grizzly bears into the Bitterroot ecosystem of Idaho and Montana. Current status for this species is threatened, although the Yellowstone distinct population segment (DPS) of grizzly bears has been proposed for delisting (USFWS 2005c).

The grizzly (or brown) bear was once found in a wide variety of habitats including open prairie, brushlands, riparian woodlands, and semidesert scrub. Most populations require vast areas of suitable habitat to prosper. They forage for wild fruits; nuts; bulbs; roots; insect larvae in logs; and carcasses of elk, deer, and cattle (Graham 1978, Mealey 1975, Schleyer 1983). This species is common only in habitats where food is abundant and concentrated, including white-bark pine, berries, and salmon or cutthroat runs, and where conflicts with humans are minimal (Reinhart 1990, Podruzny 1999). Research indicates it is important to maintain areas where grizzly bears can forage for a 24- to 48-hour period secure from human disturbance (Gibeau et al. 1996).

Winter dens are dug in north-facing slopes or more often at the base of large trees in areas away from humans in late fall or winter after snow has begun to fall (Crowed and Crowed 1972, Jonkel 1980, Judd et al. 1986, Vroom et al. 1980).

4.1.4.2 Distribution

This species once lived in a variety of habitats across most of North America. Grizzly bears now occupy only 2 percent of their original range in the lower 48

states in remote wilderness areas in Idaho, Montana, Wyoming, Alaska, and Washington.

4.1.4.3 Status in the Project Area

The current range of grizzly bears extends into the southwestern portion of the project area (Map 2). These bears are part of the Yellowstone grizzly bear DPS. On November 15, 2005, the USFWS announced this DPS is a recovered population, no longer meeting the ESA's definition of threatened or endangered, and consequently, the USFWS proposed to delist this DPS (USFWS 2005c). The Yellowstone grizzly bear DPS increased from estimates as low as 136 individuals when listed in 1975 to more than 580 animals as of 2004. The population has been increasing since the mid 1990s and is increasing at 4 to 7 percent per year. The range of this population also has increased dramatically as evidenced by the 48-percent increase in occupied habitat since the 1970s (USFWS 2005c).

None of the areas that may potentially be developed for CBNG occur within the Yellowstone grizzly bear recovery zone, and approximately 550 acres of BLM-administered coal or oil/gas/coal estate occur within occupied grizzly bear habitat outside the recovery zone (Map 2).

4.1.4.4 Potential Impact

Roads and the presence of humans would increase the risk of human-bear interactions, which occasionally end in the death of the grizzly bear. The increase in density of roads in occupied grizzly bear areas could force the bears from these areas and could increase stress on the bears, resulting in the potential loss or reduced fecundity of some individuals.

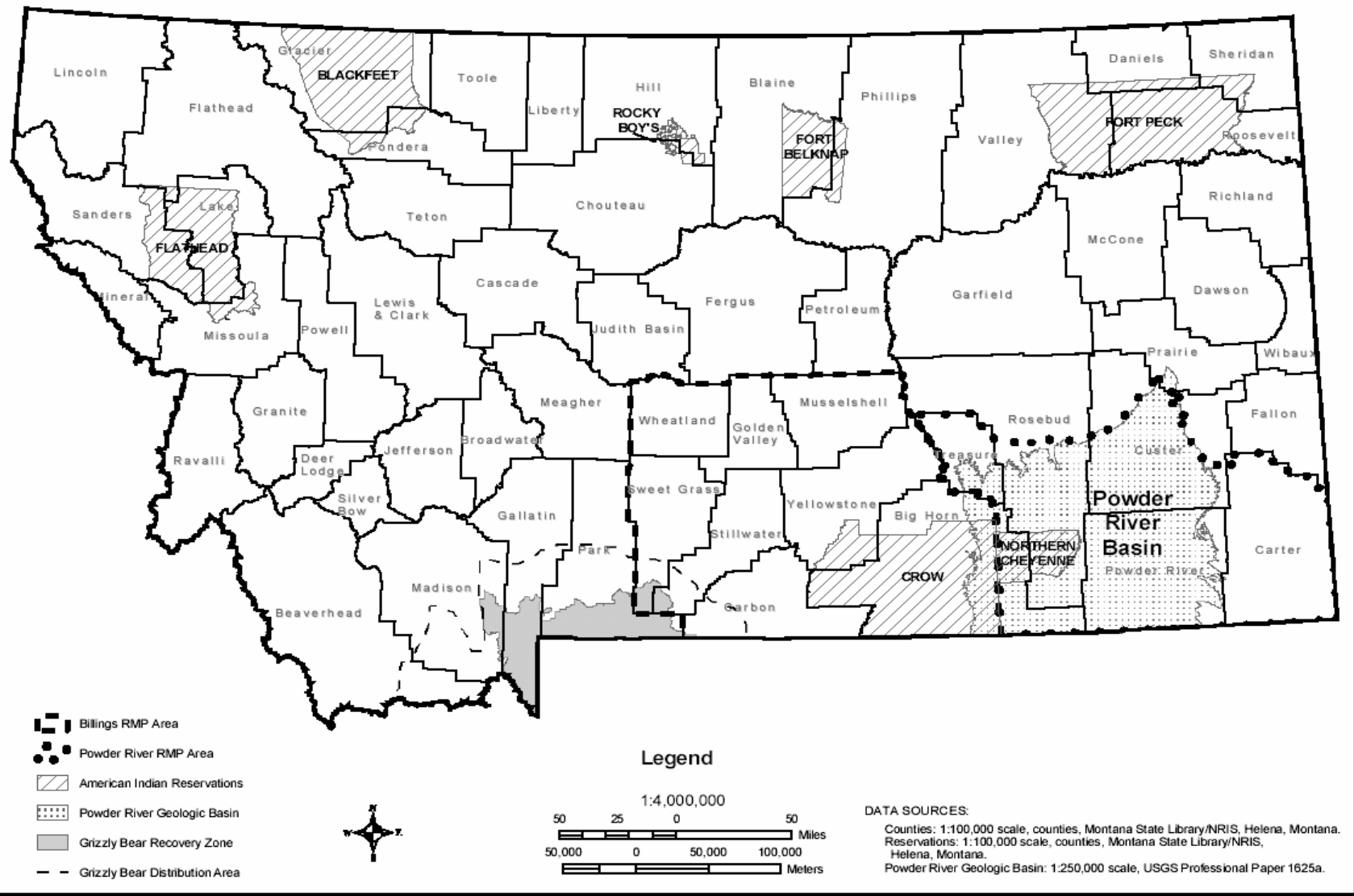
4.1.4.5 Conservation Measures

Garbage and other human refuse will be removed from drilling and construction sites in potential bear habitat to avoid attracting bears. Surveys for scat and other sign of grizzly bears in remote, sparsely roaded areas would be conducted prior to construction. If found, protocol would be established after consultation with USFWS biologists.

4.1.4.6 Determination

Implementation of conservation measures will result in a "may affect, not likely to adversely affect" situation for grizzly bears.

Map 2: CBNG PLANNING AREA AND THE YELLOWSTONE GRIZZLY BEAR RECOVERY ZONE



4.2 Birds

4.2.1 BALD EAGLE (*HALIAEETUS LEUCOCEPHALUS*)

4.2.1.1 Habitat

This species was reclassified from endangered to threatened, because of recovery status, on July 12, 1995. Due to continued recovery and increase in population size, the USFWS proposed the bald eagle be delisted (USFWS 1999).

Bald eagles concentrate in and around areas of open water where waterfowl and fish are available. They prefer solitude; late-successional forests; shorelines adjacent to open water; a large prey base for successful brood rearing; and large, mature tree for nesting and resting (Fisher et al. 1998).

4.2.1.2 Distribution

The bald eagle ranges throughout much of North America, nesting on both coasts from Florida to Baja California, Mexico in the south, and from Labrador to the western Aleutian Islands, Alaska in the north. An estimated one-quarter to one-half million bald eagles lived on the North American continent before the first Europeans arrived. Nationwide bald eagle surveys, conducted in 1973 and 1974 by the USFWS, other cooperating agencies, and conservation organizations, revealed that the eagle population throughout the lower 48 states was declining. A partial survey conducted by the National Audubon Society in 1963 reported on 417 active nests in the lower 48 states, with an average of 0.59 young produced per nest. Surveys coordinated by USFWS in 1974 resulted in a population estimate of 791 occupied breeding areas for the lower 48 states. The USFWS estimated that the breeding population exceeded 5,748 occupied breeding areas in 1998. The bald eagle population has essentially doubled every 7 to 8 years during the past 30 years.

4.2.1.3 Status in the Project Area

Bald eagles nest along all the major rivers within the project area. These watersheds provide important habitat during spring and fall migrations, as well as during the winter months. Bald eagles have been expanding their nesting territories throughout south-central and southeastern Montana (Flath 1991).

4.2.1.4 Project Impact

Bald eagles are sensitive to human presence. Disturbance to foraging, resting, roosting, or migrating eagles is possible through surface use in other areas not addressed by stipulations. Stipulations listed in the introduction of the Wildlife section (Chapter 4 Wildlife) in the Powder River and Billings Amendment to the RMPs and SEIS, including no surface use or occupancy within 0.5 mile of nests active in the last 7 years and within riparian area nesting habitat. It is assumed these stipulations would prevent eagles from abandoning traditional nesting sites in the project area, but periodic or complete abandonment of non-nesting habitat may occur depending on the level of human use and noise. Removal of large trees in wintering areas, particularly at established roost sites, could also displace bald eagles by removing perch and roost sites.

Regarding oil and gas infrastructure, above-ground transmission facilities will not likely result in the death of bald eagles from electrocution because of proper design and construction requirements. Utility lines and motor vehicles do however pose strike hazards for bald eagles, especially near perennial rivers and water bodies that support fish and waterfowl. For powerlines, the operator will demonstrate in the Project POD how the proposal for power distribution would mitigate or minimize impacts to affected wildlife. For example, the operator may propose that all or a portion of the powerlines be buried and any aboveground lines be designed following raptor-safe specifications. Additionally, for each proposed CBNG development, operators will document in the Project POD the surface owner consultation process and input received for the location of roads, pipelines, and utility line routes.

4.2.1.5 Conservation Measures

Prior to CBNG development or construction, a wildlife biologist will survey the construction zone within a 1.0-mile width for bald eagles and bald eagle nests. Surface occupancy and use will be prohibited within 0.5 mile of any identified nest or riparian nesting habitat. Surveys for bald eagle winter roost sites will be conducted during winter/spring along wooded riparian corridors within 1.0 mile of proposed CBNG development. Surface occupancy will be prohibited within 0.5 mile of any identified bald eagle roost site. Specifications to minimize the effects of roads, pipelines, and utility line routes on bald eagles are described in Section 4.2.1.4.

4.2.1.6 Determination

Implementation of the conservation measures will result in "may affect, not likely to adversely affect" situation for bald eagles.

4.2.2 INTERIOR LEAST TERN (*STERNA ANTILLARUM* *ATHALASSOS*)

4.2.2.1 Habitat

This species was listed as endangered on May 28, 1985.

The occurrence of breeding least terns is localized and depends upon the presence of dry, exposed sand bars and favorable river flows that support desired forage fish and that also isolate the sand bars from the river banks. Characteristic riverine nesting sites are dry, flat, sparsely vegetated sand and gravel bars within a wide, unobstructed, water-filled river channel (Ziewitz et al. 1992). The sand at a nesting site must be mostly clear of vegetation, and water levels low enough for nests to remain dry. Nests are initiated only after spring and early summer flows recede and dry areas on sand bars are exposed, usually on higher elevations away from the water's edge. Artificially created nesting sites, such as sand and gravel pits, dredge islands, reservoir shorelines and power plant ash disposal areas, also are used occasionally as well (Kirsch 1996).

4.2.2.2 Distribution

The interior least tern is migratory and historically bred along the Mississippi, Red, and Rio Grande River systems and rivers of central Texas. The breeding range extended from Texas to Montana and from eastern Colorado and New Mexico to southern Indiana. It included the Red, Missouri, Arkansas, Mississippi, Ohio, and Rio Grande river systems. The interior least tern continues to breed in most of the aforementioned river systems, although its distribution generally is restricted to less altered river segments (USFWS 2006a).

4.2.2.3 Status in the Project Area

The least tern is known to nest in the project area and also occasionally may pass through the area during spring and fall migration. Its habitat in the project area includes graveled islands in the lower Yellowstone River (Fisher et al. 1998).

4.2.2.4 Project Impact

This species is susceptible to disturbance during the nesting period. It is highly vulnerable to changes in water levels during the nesting period.

4.2.2.5 Conservation Measures

Potential habitat near drilling and construction sites will be identified and appropriate surveys will be conducted for this species. Surface occupancy and use will be prohibited within 0.25 mile of wetlands identified as providing interior least tern nesting habitat. Occupied wetlands and water levels will be protected in all phases of drilling and construction and no discharge into occupied wetlands will be permitted.

4.2.2.6 Determination

With strict adherence to survey protocols, stipulations and conservation measures, the proposed action will have "no effect" on interior least terns.

4.2.3 WHOOPING CRANE (*GRUS* *AMERICANA*)

4.2.3.1 Habitat

The whooping crane was first listed as endangered on March 11, 1967, and the listing was "grandfathered" into the ESA. Whooping cranes nest in marshy areas among bulrushes, cattails, and sedges that provide protection from predators as well as food (USFWS 2006b). During the nesting season, the birds feed and roost in wetlands and upland grain fields, where they associate with ducks, geese, and sandhill cranes. Whooping cranes use a variety of habitats during migration, including croplands for feeding and large palustrine (marshy) wetlands and riverine habitats for roosting. About 9,000 hectares of salt flats in the Aransas National Wildlife Refuge (NWR) and adjacent islands comprise the principal winter grounds.

4.2.3.2 Distribution

Wild populations of whooping cranes utilize the Texas Gulf coast, including Aransas NWR, Texas, and Bosque del Apache NWR, New Mexico, and migration and staging areas through northeastern Montana, the western half of North Dakota, central South Dakota, Nebraska, Oklahoma, and east-central Texas (USFWS 2006b). In addition, a non-migratory whooping crane population resides in Florida (USFWS 2006b). For the past 20 years, observations

in Montana have been restricted to the northeast corner of the state (MFWP 2006). The birds observed in this area represent occasional migrants traveling through from the Aransas population on journey to the breeding grounds in Alberta and the Northwest Territories. As of January 2005, the wild population of whooping cranes was estimated at approximately 300 individuals (USFWS 2005d).

4.2.3.3 Status in the Project Area

Whooping cranes have not been sighted within the project area within the past 20 years (MFWP 2006). Any birds that may use the area would only occur as transients passing through the area during migration.

4.2.3.4 Project Impact

Whooping cranes are very occasional migrants in southeast and south central Montana, and there are no known stop-over habitats within the project area. As migrants, whooping cranes would only be affected by very tall structures, such as large transmission lines and towers, communication towers and guy-wires, and similar structures which represent potentials for in-flight collisions. There are no such tall structures proposed in this project.

4.2.3.5 Conservation Measures

There are no ancillary structures and facilities proposed in the project area which would present a potential for in-flight collision for whooping cranes. The on-site electric distribution lines are all relatively low, and many lines will be buried to further reduce the potential for collision.

4.2.3.6 Determination

Implementation of the conservation measures would result in “no effect” to whooping cranes.

4.3 Fish

4.3.1 PALLID STURGEON (*SCAPHIRHYNCHUS ALBUS*)

4.3.1.1 Habitat

This species was listed as endangered on September 6, 1990 (55 FR 36641). They are found in large rivers with high turbidity and a natural flow with rocky or sandy substrates (Forbes and Richardson 1905). They evolved in large rivers with high turbidity and a natural hydrograph that included spring flooding and other high runoff events. Preferred habitat has a

diversity of depths and velocities formed by braided channels, sandbars, islands, sand flats and gravel bars (Erickson 1992, Gilbraith et al. 1988). Pallid sturgeon are usually found now in deeper holes below sandbars and in riverine reaches of reservoirs (Kallemeyn 1983, Erickson 1992, Clancey 1991).

4.3.1.2 Distribution

Historically, pallid sturgeon were found in the Missouri River from Fort Benton, Montana, to St. Louis, Missouri; in the Mississippi River from above St. Louis to the Gulf of Mexico; in the lower reaches of other large tributaries, such as the Yellowstone, Platte, Kansas, Ohio, Arkansas, Red, and Sunflower Rivers; and in the first 60 miles of the Atchafalaya River (Bailey and Cross 1954, Kallemeyn 1983).

4.3.1.3 Status in the Project Area

Historically in Montana, pallid sturgeon occupied reaches of the Missouri River from Fort Benton downstream and in the Yellowstone River from about Forsyth (river mile 183) to the Missouri River (USFWS 1993, Montana Natural Resource Information System 2005). Natural water flow and natural flooding events have been changed by channel developments and hydroelectric projects. These changes, coupled with pollution and fishing, are believed to be the main reason for the decline in this species. There are two pallid sturgeon recovery priority management areas (RPMAs) in Montana, with one (RPMA 1) located upstream of Fort Peck Dam on the Missouri River, and the other (RPMA 2) including the Missouri River reach downstream of Fort Peck Dam and the lower Yellowstone River (upstream to the mouth of the Tongue River). Thus, portions of the Project Area occur in RPMA 2. While the lower Yellowstone River is believed to support relatively high survival of hatchery-reared pallid sturgeon, no known recruitment has occurred in the Yellowstone River for at least 30 years. Thus this species will likely be extirpated from this area by 2018 (Jaeger et al. 2005).

4.3.1.4 Project Impact

There could be minimal, temporary effects through construction of stream crossings and erosion generated by construction activities. The proposed action contains requirements designed to protect hydrologic resources by combining management options of CBNG-produced water so that no degradation of water quality would be allowed in any watershed. CBNG operators would be required to develop a Water Management Plan as part of their

overall Project POD that describes how impacts on surface resources would be minimized or mitigated, and how a discharge (if proposed by the operator) could occur without damaging the watershed—in accordance with a required and approved NPDES Permit and water quality laws. Stipulations prohibiting surface occupancy or use of water bodies, floodplains of major rivers, riparian areas, and steep slopes would further avoid impacts. These measures would avoid water quality impacts to the pallid sturgeon. In addition, release of adequate quality water from production may improve habitat that has been degraded through water withdrawals.

The Water Management Plans would also establish site-specific thresholds for the volume of untreated produced water that could be discharged to surface waters from federal CBNG wells. These requirements would be in addition to the surface water quality and discharge volume limitations stipulated in the Montana Pollutant Discharge Elimination System (MPDES) discharge process. The total allowable untreated discharge volume would be based on 10 percent of the 7Q10 flow rate, unless specific surface water quality monitoring is conducted upstream and downstream of the particular outfall. If monitoring indicates that water quality thresholds would be exceeded, no further untreated discharge would be allowed, regardless of the total discharge volume to the water body. MPDES water quality and quantity monitoring data and reports are available on the Montana BLM CBNG monitoring website (http://www.blm.gov/mt/fo/miles_city_field_office/cbng/monitoring.html).

Long-term effects on pallid sturgeon associated with discontinued activities, such as sediment delivery from roads, would subside as disturbed areas are reclaimed. Agency mitigation measures implemented during abandonment would reduce erosion potential, prevent water pollution, facilitate reclamation of disturbed lands, and further reduce the potential for long-term impacts on pallid sturgeon.

4.3.1.5 Conservation Measures

There are no specific conservation measures identified; however, the BLM will develop, include, and enforce appropriate mitigation measures for aquatic resources, including pallid sturgeon, during the site-specific, plan-approval stage. Measures to further avoid or reduce impacts in addition to those included at the plan-approval stage may be recommended. The state will apply additional mitigation measures on a case-by-case basis through the use of field rules.

4.3.1.6 Determination

If conservation measures are implemented, this project "may affect but is not likely to adversely affect" pallid sturgeon.

4.3.2 MONTANA ARCTIC GRAYLING (*THYMALLUS ARCTICUS Montanus*)

4.3.2.1 Habitat

This species is currently a candidate for listing under the ESA. On October 2, 1991, a petition requested that the "fluvial Arctic grayling" be listed as an endangered species throughout its historic range in the lower 48 states. The petitioners stated that the decline of the fluvial Arctic grayling was a result of many factors, including habitat degradation from domestic livestock grazing and stream diversions for irrigation, competition with non-native trout species, and past over-harvesting by anglers. Additionally, the petition stated that much of the annual recruitment is lost in irrigation ditches.

4.3.2.2 Distribution

Historically, the fluvial Arctic grayling DPS occurred throughout the streams and rivers of the upper Missouri River drainage, above Great Falls Montana (USFWS 2005e). However, the current distribution is estimated to represent about 5 percent of this historic range. While the lake-dwelling form is fairly common in 30 or more lakes across the western half of the state, the native fluvial or river-dwelling population is believed restricted to the upper Big Hole River.

4.3.2.3 Status in the Project Area

In Montana, Arctic grayling are generally found at relatively high and cold headwater locations. Within the project area these locations include headwaters in the Clarks Fork of the Yellowstone River. However, studies by the MFWP show that the relative abundance of grayling in this area is "rare" (Montana Natural Resource Information System 2005).

4.3.2.4 Project Impact

There could be minimal, temporary effects through construction of stream crossings and erosion generated by construction activities. The proposed action contains requirements designed to protect hydrologic resources by combining management

options of CBNG-produced water so that no degradation of water quality would be allowed in any watershed. CBNG operators would be required to develop a Water Management Plan as part of their overall Project POD that describes how impacts on surface resources would be minimized or mitigated, and how a discharge (if proposed by the operator) could occur without damaging the watershed—in accordance with a required and approved NPDES Permit and water quality laws. Stipulations prohibiting surface occupancy or use of water bodies, floodplains, riparian areas, and steep slopes would further avoid impacts. These measures would avoid water quality impacts to the Arctic grayling. In addition, release of adequate quality water from production may improve habitat that has been degraded through water withdrawals.

The Water Management Plans would also establish site-specific thresholds for the volume of untreated produced water that could be discharged to surface waters from federal CBNG wells. These requirements would be in addition to the surface water quality and discharge volume limitations stipulated in the MPDES discharge process. The total allowable untreated discharge volume would be based on 10 percent of the 7Q10 flow rate, unless specific surface water quality monitoring is conducted upstream and downstream of the particular outfall. If monitoring indicates that water quality thresholds would be exceeded, no further untreated discharge would be allowed, regardless of the total discharge volume to the water body. MPDES water quality and quantity monitoring data and reports are available on the Montana BLM CBNG monitoring website (http://www.blm.gov/mt/fo/miles_city_field_office/cbng/monitoring.html).

Long-term effects on Arctic grayling associated with discontinued activities, such as sediment delivery from roads, would subside as disturbed areas are reclaimed. Agency mitigation measures implemented during abandonment would reduce erosion potential, prevent water pollution, facilitate reclamation of disturbed lands, and further reduce the potential for long-term impacts on Arctic grayling.

4.3.2.5 Conservation Measures

There are no specific conservation measures identified; however, the BLM will develop, include, and enforce appropriate mitigation measures for aquatic resources, including Arctic grayling, during the site-specific, plan-approval stage. Measures to further avoid or reduce impacts in addition to those included at the plan-approval stage may be recommended. The state will apply additional mitigation measures on a case-by-case basis through the use of field rules.

4.3.2.6 Determination

As this species is not expected to occupy areas where CBNG activities are likely to occur, along with the implementation of appropriate best management practices (BMPs) and conservation measures, the proposed action is not “likely to significantly affect Arctic grayling populations, individuals, or their suitable habitat.”

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Attachment A

Correspondence with USFWS

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Parametrix

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411 108th AVENUE NE, SUITE 1800
BELLEVUE, WA 98004-5571
T. 425 • 458 • 6200 F. 425 • 458 • 6363
www.parametrix.com

September 15, 2005

R. Mark Wilson
Field Supervisor
USFWS – Ecological Services
100 North Park, Suite 320
Helena, Montana 59601

Re: BLM project notification and request for species

Dear Mr. Wilson:

The Bureau of Land Management (BLM), Miles City Field Office, is preparing a Supplemental Environmental Impact Statement (SEIS) for the Montana Statewide Oil and Gas EIS and Amendment of the Powder River and Billings Resource Management Plans. Parametrix, Inc. is a contractor for this project.

This letter is to request an updated list of threatened and endangered species, pursuant to Section 7 of the Endangered Species Act (ESA), that should be addressed in the Biological Assessment associated with this SEIS. The planning area for SEIS is located in southeastern and south-central Montana, including Powder River, Treasure, Carbon, Golden Valley, Musselshell, Stillwater, Sweet Grass, Wheatland, Yellowstone, and Big Horn counties, as well as portions of Carter, Custer, and Rosebud counties. A figure indicating the SEIS planning area is attached.

If you have any questions, please contact me at 509-996-2402 or jgrialou@parametrix.com.

Thank you,

Julie Grialou
Wildlife Biologist
Parametrix

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United States Department of the Interior
FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
100 N. PARK, SUITE 320
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

M.02 BLM Coal Bed Methane

November 4, 2005

Ms. Julie Grialou
Wildlife Biologist
Parametrix
411 108th Avenue NE, Suite 1800
Bellevue, WA 98004-5571



Dear Ms: Grialou:

This responds to your letter received in the Billings Sub Office on September 23, 2005, requesting an updated species list for the preparation of a Biological Assessment. The Bureau of Land Management (BLM), Miles City Field Office, is preparing a Supplemental Environmental Impact Statement (SEIS) for the Montana Statewide Oil and Gas EIS and Amendment of the Powder River and Billings Resource Management Plans.

The planning area for the SEIS is located in southeastern and south-central Montana, including Treasure, Powder River, Wheatland, Golden Valley, Musselshell, Sweet Grass, Stillwater, Yellowstone, Big Horn, Carbon Counties, as well as portions of Carter, Custer, and Rosebud counties.

In accordance with section 7(c) of the Endangered Species Act of 1973, as amended (Act), my staff has determined that the following threatened or endangered species, or species proposed for listing under the Act, may be present in the project area.

<u>Listed Species</u>	<u>Status</u>	<u>Expected occurrence</u>
Black-footed Ferret (<i>Mustela nigripes</i>)	E/XN	Prairie dog complexes; Eastern Montana
Gray Wolf (<i>Canis lupus</i>)	T/XN	Forests; Western Montana
Grizzly Bear (<i>Ursus arctos horribilis</i>)	T	Alpine/subalpine coniferous forest; western Montana

Canada Lynx (<i>Lynx canadensis</i>)	T	Montane spruce/fir forest; western Montana
Whooping Crane (<i>Grus Americana</i>)	E	Wetlands, croplands; transient statewide
Least Tern (<i>Sterna antillarum</i>)	E	Yellowstone, Missouri River sandbars, beaches; Eastern Montana
Pallid Sturgeon (<i>Scaphirhynchus albus</i>)	E	Bottom dwelling; Missouri, Yellowstone Rivers
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	T	Forested riparian; statewide

Pursuant to Section 7 of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.), the BLM, as the responsible Federal agency, must determine if the proposed actions may affect these listed species and if so, initiate formal consultation with the Fish and Wildlife Service (Service). Guidance for preparation of a biological assessment for the *2002 Montana Statewide Draft Oil and Gas Environmental Impact Statement (EIS) and Amendment of the Powder River and Billings Resource Management Plans (RMPs)*, was provided to the BLM by the Service in a letter dated April 2001. Comments on the Draft Oil and Gas Environmental Impact Statement (DEIS) were provided to the BLM's Miles City office in a memorandum dated May 15, 2002.

We also recommend that Parametrix utilize information and data gathered by federal and state agencies that comprise the Powder River Basin Coal Bed Natural Gas Interagency Working Group and Task Groups; and monitoring through the implementation of a *Coal Bed Methane Programmatic Wildlife Monitoring and Protection Plan for the Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans* (Wildlife Monitoring Protection Plan) in determining the impacts of the BLM's action on listed and proposed species. The new determination should include possible downstream effects on the pallid sturgeon and least tern.

The Service also advocates that the BLM considers a spatio-temporal based alternative in its analysis of the effects of coal bed methane production on listed and proposed species as outlined in comments made by our biologist involved the DEIS development process. A spatio-temporal alternative would open some area for development and production while leaving other areas free from production until reclamation activities have been completed on earlier phases.

The effects of high-intensity Coal Bed Methane (CBM) development on fish and wildlife resources are largely unknown, but are suspected to reduce the utility of habitat for some species, including listed species and those on the BLM sensitive species list. Species will vary in their

reaction to development, but it will affect how species utilize the landscape. There are currently ongoing studies in Wyoming and Montana that address questions about the effects of CBM development on a variety of species. When these studies are completed, we will have a better foundation on which to base conservation measures in planning this development, until then, it seems prudent to analyze a range of alternatives that includes one based on spatio-temporal phasing as a conservative approach that will have conservation benefits for species for which little is known.

If you have any questions regarding this letter, please contact Lou Hanebury at (406) 247-7367 or Shawn Sartorius at (406) 247-7369 in our Billings Sub Office. We appreciate your efforts to consider endangered species in your project planning.

Sincerely,



R. Mark Wilson
Field Supervisor
Montana Field Office

cc: USFWS, SO, MT (Attn: Lou Hanebury)
USFWS, FO, WY (Attn: Brad Rogers)
BLM, Miles City Office, MT (Larry Apple)

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1310 CBMP

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Miles City Field Office
111 Garryowen Road
Miles City, Montana 59301
<http://www.mt.blm.gov/mcfo>



November 20, 2006

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

R. Mark Wilson
Field Supervisor
USFWS - Ecological Services
100 North Park, Suite 320
Helena, Montana 59601

Dear Mr. Wilson:

The Bureau of Land Management (BLM), Miles City and Billings Field Offices have prepared the *"Supplement to the Final Montana Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Resource Management Plans"* (SEIS). The SEIS primarily addresses alternatives for phased coal bed natural gas development in southeastern and south-central Montana. A copy has been enclosed for your review.

Pursuant to BLM's responsibility under Section 7 of the Endangered Species Act of 1973, and in accordance with the Code of Federal Regulations 50 Part 407.12, we are forwarding a copy of the "Biological Assessment for Coal Bed Natural Gas Production in Montana" for your 90-day review.

Shaded areas in the Biological Assessment indicate changes and additions made as a result of supplementing the original EIS. We have found that there would be "no effect" to Canada lynx, gray wolf, grizzly bear, interior least tern and the warm spring zaitzevian riffle beetle. We have also determined a "may effect, but not likely to adversely impact" finding for the Ute ladies-tresses orchid, black-footed ferret, mountain plover, bald eagle, pallid sturgeon and Montana arctic grayling. The black-tailed prairie dog and sage-grouse are discussed but no finding is made as they are not threatened, endangered or candidate species.

Please respond whether or not you concur with the findings of the Biological Assessment. If changes are made between the Draft SEIS and the Final SEIS that would have an effect on threatened or endangered species other than those described in the draft, the BLM will reinitiate consultation with you.

We appreciate the input already provided to us by Shawn Sartorius and look forward to working with you and your staff to complete consultation for this plan.

Please contact Dale Tribby, Assistant Field Manager, Renewable Resources, in the Miles City Field Office at (406) 233-2812 if you have any questions. Thank you for your assistance.

Sincerely,

A handwritten signature in cursive script that reads "Theresa M. Hanley".

Theresa M. Hanley
Field Manager

2 Enclosures
1-Draft SEIS
2-Biological Assessment

cc: Jay Parks, MT010
Shawn Sartorius, USFWS



United States Department of the Interior
FISH AND WILDLIFE SERVICE

ECOLOGICAL SERVICES
MONTANA FIELD OFFICE
585 SHEPARD WAY
HELENA, MONTANA 59601
PHONE (406) 449-5225, FAX (406) 449-5339

M.02 - BLM

March 25, 2007

Memorandum

To: Field Manager, Bureau of Land Management, Miles City Field Office, Miles City, Montana

From: Field Supervisor, U.S. Fish and Wildlife Service, Montana Field Office,
Helena, Montana *R. Mark Wilson*

Subject: Service concurrence on *Supplement to the Final Montana Statewide Oil and Gas Environmental Impact Statement and amendment to the Powder River and Billings Resource Management Plans*

This is in response to your March 2, 2007 letter transmitting the biological assessment for the *Supplement to the Final Montana Statewide Oil and Gas Environmental Impact Statement and amendment to the Powder River and Billings Resource Management Plans* (SEIS) for the Miles City and Billings Bureau of Land Management (BLM) Field Offices. The proposal would permit coal bed methane gas extraction from federally owned coal seams within the boundaries of the two field offices. The assessment analyzed effects to the threatened grizzly bear (*Ursus arctos*), Canada lynx (*Lynx canadensis*), bald eagle (*Haliaeetus leucocephalus*), endangered pallid sturgeon (*Scaphirhynchus albus*), gray wolf (*Canis lupus*), whooping crane (*Grus Americana*), black-footed ferret (*Mustela nigripes*), and least tern (*Sternula antillarum*). In your assessment you determined that the proposed action would have no effect on the whooping crane and would not be likely to jeopardize the experimental/non-essential population of the gray wolf. When BLM makes a no effect determination or a no jeopardy determination in the case of a designated experimental/non-essential population, concurrence from the U.S. Fish and Wildlife Service (Service) is not required, although we do appreciate inclusion of the information for our records.

The Service concurs with your determination that the proposed action may affect, but is not likely to adversely affect the grizzly bear, bald eagle, pallid sturgeon, black-footed ferret, least tern, and Canada lynx. Formal consultation is not required at this time.

This concludes informal consultation pursuant to regulation 50 CFR Part 402, Interagency Cooperation-Endangered Species Act of 1973, as Amended. This project should be reanalyzed if new information reveals effects of the action that were not analyzed in the biological assessment that may impact listed species or if the project is modified in a manner that causes an effect not considered in this consultation.

The Service recognizes and values the ongoing efforts by the Miles City Field Office to conserve native species and move threatened and endangered species toward recovery.

If you have further questions about this letter or your responsibilities under the Endangered Species Act, please contact me or Shawn Sartorius of my staff at 406-247-7369.