

Bentonite Performance Minerals  
 Permit 267C –WY State Lease 42804 Amendment  
 Supporting Information-2.9

**Section 2.9.3.45 WY State Lease 42804 (WSL04) Wildlife Report**

This section comprise the wildlife baseline study for the Wyoming State Lease 42804 permit area. The methodology and data presented conform to those specified in Section 2.9.2.

The claims that are included in WSL04 permit area are as follows (also refer to the Project Boundary Map 1.7-1)

<b>Amendment Areas</b>	<b>Legal</b>	<b>Total Acres</b>
	SE4SW4, SW4SE4 Section 30 T57N R62W	80
<b>Wyoming State Lease 42804</b>	NE4, E2NW4, SW4, NW4SE4 Section 31T57N R62W	440
	W2NW4 Section 32 T57N R62W	80
		<b>600</b>

The wildlife information for the WY State Lease 42804 permit area was prepared by Amber Travsky of Real West Natural Resource Consulting, in 2014.

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## **1.0 INTRODUCTION**

Bentonite Performance Minerals (BPM) proposes to amend their existing 267C mine permit to include the Wyoming State Lease 42804 claim. This 600-acre site is approximately 8 miles west of the BPM plant at Colony. It is located in T57N, R62W, SE ¼ SW ¼ and SW ¼ SE ¼ Section 30; W ½ NW ¼ Section 32; and most of Section 31. The purpose of this report is to document the pre-mining wildlife on the site and identify potential areas of concern.

## **2.0 HABITAT DESCRIPTION**

The WSL04 amendment site covers 600 acres on rolling to hilly terrain approximately 8 miles west of the BPM processing plant at Colony. The Belle Fourche River is located 0.6 miles to the east, 1.35 miles to the north and 1.6 miles to the northeast since it forms an inverted U-shaped meandering corridor near the permit area. Green Mountain is located in the northwest quarter of the amendment area where the elevation rises to 3,754 feet at the summit. The lowest elevation on the site is 3,585 feet at the southern edge of the site.

As shown in Table 2-1, the dominant habitat on the site is woodland followed by mixed grass prairie. Other habitats include bottomland meadow, open water/marsh and disturbed. Photographs of all habitat types are in Addendum A. The woodland habitat is found throughout the permit area but is most prevalent on steeper hillsides and hill summits. The mixed grass prairie habitat is found in the basins between the timbered hillsides. A large reservoir is located in the center of the site along the eastern border while three small livestock ponds are also on the site, with one in the north, one in the south, and one on the west-central boundary. Marsh habitat is found on the perimeter of the four reservoirs. A strip of bottomland meadow follows the drainage bottom as it exits the larger reservoir.

A second strip of bottomland meadow is in another drainage bottom near the southern boundary of the amendment area. A small patch of disturbed habitat from previous mining is found in the extreme southeastern corner of the site. Each of these habitats is described in more detail below.

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Table 2-1. Approximate acreages and percentages for the habitats on the WSL04 Amendment Site.

Habitat Type	Acreage on the Amendment Area		Disturbance Areas (acres)
	Acres	Percentage	
Woodland Habitat	196.9	32.8%	89.00
Mixed Grass Prairie Habitat	390.63	65.1%	86.23
Bottomland Meadow Habitat	2.8	0.4%	0.23
Open Water/Marsh Habitat	3.32	0.5%	0.20
Disturbed Habitat	6.35	1.0%	1.34
<b>TOTAL</b>	<b>600 acres</b>	<b>100%</b>	<b>177.0</b>

### 2.1.1 Woodland Habitat

The woodland habitat covers approximately 390.63 acres or 65.1 % of the amendment area. This habitat is dominated by an overstory of bur oak (*Quercus macrocarpa*), Rocky Mountain juniper (*Juniperus scopulorum*), and ponderosa pine (*Pinus ponderosa*). Shrubs are sparse but include currant (*Ribes* spp.) and snowberry (*Symphoricarpos albus*). Forbs in the woodland understory include bastard toadflax (*Comandra umbellata*), western yarrow (*Achillea millefolium*), American vetch (*Vicia americana*), threadleaf phacelia (*Phacelia linearis*), and rose pussytoes (*Antennaria rosea*). Grasses include sandberg bluegrass (*Poa secunda*), prairie junegrass (*Koeleria macrantha*), and slender wheatgrass (*Elymus trachycaulus*). Additional species found in this habitat are listed in Appendix D8, Vegetation.

### 2.1.2 Mixed Grass Prairie Habitat

The mixed grass prairie habitat covers approximately 196.9 acres or 32.8% of the amendment area. Big sagebrush (*Artemisia tridentata*) is the most common shrub in this habitat type, although it comprises less than 2% of the coverage. There are scattered patches with higher density sagebrush but these patches were not prevalent and therefore did not constitute a separate habitat type. Grasses include sandberg bluegrass, slender wheatgrass, prairie junegrass, and

buffalograss (*Buchloe dactyloides*). Forbs include bastard toadflax, common yarrow, silvery lupine (*Lupinus argenteus*), and American vetch (*Vicia americana*).

### **2.1.3 Bottomland Meadow Habitat**

The bottomland meadow habitat covers approximately 2.8 acres or 0.4% of the amendment area. It is found along three drainage bottoms. One drainage bottom runs parallel to and then diagonally to the south along the southern amendment area boundary approximately 120 meters north of the boundary. The second can be found along the west-central edge of the permit boundary. The final strip of bottomland meadow is found on the west side of the dam that creates the largest reservoir on the amendment area. The bottomland meadow follows the drainage bottom for approximately 300 meters. As the drainage banks steepen and the drainage bottom narrows, the bottomland meadow habitat disappears or becomes a narrow strip less than a yard wide, alongside the rill of water that might be flowing or small pool patches that might persist into the summer in the drainage bottom.

The bottomland meadow is dominated by hydrophytic plant species including sedges (*Carex* spp.) with Baltic rush (*Juncus balticus*) and patches of bulrush (*Scirpus* spp.). Other species include redtop (*Agrostis gigantea*), meadow foxtail (*Alopecurus pratensis*), and sandberg bluegrass.

### **3.1.4 Open Water/Marsh Habitat**

There are four reservoirs on the amendment area covering a total of 3.32 acres. The largest, covering approximately 2.72 acres, is located near the east-central boundary of the site. The three additional stock ponds cover 0.23, 0.20 and 0.17 acres. The largest of the three is located in the northern portion of the site while the 0.17-acre pond is on the west-central edge of the amendment area and the 0.20 acre pond is in the southern portion. All four reservoirs support emergent vegetation and a perimeter of marsh habitat. This perimeter vegetation is minimal on the three small stock ponds but is significant on the large reservoir. Coverage of open water versus marsh habitat varies not only seasonally but also from year to year. Plant species in the marsh habitat include sedges, Baltic rush, bulrush, and broadleaf cattail (*Typha latifolia*). As the water depth decreases and becomes more variable, the plant species are less water-dependent and

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include foxtail barley (*Hordeum jubatum*), sandberg bluegrass, common dandelion (*Taraxacum officinale*), and redtop.

### **3.1.5 Disturbed Habitat**

Approximately 6.35 acres of the amendment area has been previously disturbed by mining. This habitat is along the southeast boundary. This area includes both bare ground and patches of reclaimed vegetation. Plant species present include yellow sweetclover (*Melilotus officinalis*), slender wheatgrass (*Elymus trachycaulus*), needle-and-thread (*Stipa comata*), sandberg bluegrass, and smooth brome (*Bromus inermis*).

## **3.0 METHODS**

The U.S. Fish and Wildlife Service (USFWS) and Wyoming Game and Fish Department (WGFD) were contacted to obtain information on wildlife species and habitats of concern on the amendment area. Their response letters are in Addendum B.

Additional information on wildlife species expected and previously reported in the area was obtained from the U.S. Fish and Wildlife Service Information, Planning, and Conservation System (IPaC) website (USFWS 2014). Supplemental information on potential big game crucial range and sage-grouse core areas as well as sage-grouse connectivity areas on the site or in the vicinity were obtained through the Wyoming Interagency Spatial Database and Online Management (WISDOM) System (WISDOM 2014). This database also provided habitat type listings and the potential for other wildlife, including mammals, amphibians, reptiles and avian species, to inhabit the area.

Amber Travsky, a biologist with Real West Natural Resource Consulting (Real West), conducted wildlife habitat evaluations and surveys on the amendment site on May 15, June 17, 18 and 19, 2014.

Those species that needed to be addressed by site surveys for individuals and suitable habitat include the greater sage-grouse (*Centrocercus urophasianus*), Sprague's pipit (*Anthus spragueii*), northern long-eared bat (*Myotis septentrionalis*), black-tailed prairie dogs (*Cynomys ludovicianus* spp.), mountain plover (*Charadris montaus*), and all raptor species. The potential

for occurrence of those species identified by the USFWS as “Natural Resources of Concern” were also noted. In addition, all species observed were recorded. The surveys were conducted primarily on foot with some coverage via 4-wheel drive vehicle and mountain bicycle.

## **4.0 RESULTS**

### **4.1 Threatened and Endangered Species**

There are no federally threatened or endangered wildlife species expected within the amendment area. Two candidate species, the greater sage-grouse and Sprague’s pipit and one proposed species, the northern long-eared bat, have the potential in the vicinity and each is discussed in more detail below. Of these three species, only the greater sage-grouse and northern long-eared bat were listed on the IPaC (USFWS 2014).

#### **4.1.1 Greater Sage-Grouse**

The greater sage-grouse was found to be not warranted as a threatened or endangered species by USFW in October 2015. Sage-grouse inhabit foothills, plains, and mountain slopes where sagebrush is present (American Ornithologists' Union 1983) or a mixture of sagebrush, meadows, and aspen is in close proximity.

There are no sage-grouse leks within two miles of the amendment area and the site is outside any sage-grouse core area. Sagebrush coverage is patchy but, overall within the mixed grass prairie habitat, it is less than 2%. While there are areas with higher sagebrush density, these areas are small, typically covering less than 0.10 acre. Due to the lack of sagebrush and other shrub habitat, sage-grouse use of the area would likely be restricted to temporary use as the birds migrate through the area. For this reason, the proposed mining is expected to have “no effect” on the greater sage-grouse.

#### **4.1.2 Sprague’s Pipit**

Sprague’s pipit is a candidate for federal listing (USFWS 2014a). The species is closely tied to native prairie habitat (USFWS 2010). The breeding range is throughout North Dakota; northern



and central Montana east of the Rocky Mountains; northern portions of South Dakota; and northwestern Minnesota. During the breeding season, Sprague's pipits prefer large patches of native grassland with a minimum size requirement thought to be approximately 358 acres to 776 acres. Generally, pipits prefer to breed in well-drained native grasslands with high plant species richness and diversity (Jones, S.L. 2010). They prefer higher grass and sedge cover, less bare ground, and an intermediate average grass height when compared to the surrounding landscape.

Native grassland is present on the amendment area; however, it is intermixed with woodland. The lack of any large open native grassland makes it unlikely the Sprague's pipit would inhabit the site. The location is also on the very edge of the birds' range, making it even less likely pipits would inhabit the amendment area. For this reason the proposed mining will have "no effect" on the Sprague's pipit.

#### **4.1.3 Northern Long-Eared Bat**

These bats were listed as Threatened in April 2015. These bats roost predominantly in trees and, to a lesser extent, in man-made structures (USFWS 2013).

The greatest threat to this bat species is the white-nose syndrome disease (USFWS 2013). Other factors impacting the species are loss of forest habitat through development and timber management, mine-land reclamation that closes hibernacula, and wind turbine operations.

Woodland habitat makes up more than half of the amendment area. There is the potential for northern long-eared bats in the area and roosting under bark or within tree crevices.

It was decided through telephone consultation between BPM and WG&F that mitigation was not necessary for this case where no White Nose Syndrome has been recorded. The proposed mining will have "no effect" on the northern long-eared bat.

## **4.2 Species of Concern**

The USFWS response (Addendum B) lists two Species of Concern as potentially occurring in the area: the black-tailed prairie dog (*Cynomys ludovicianus*) and mountain plover (*Charadrius montanus*).

### **4.2.1 Black-Tailed Prairie Dogs**

The black-tailed prairie dog is native to short-grass prairie habitats of western North America where they play an important role, both as an herbivore and as a prey species, in the prairie ecosystem (Hoogland 1995). They avoid heavy brush and tall grass areas due to the reduced visibility these habitats impose.

No prairie dogs or their burrows were observed on or within 0.25 mile of the amendment area although suitable habitat is present. No evidence of past or recent use by this species was found; therefore no impacts to this species will occur with the proposed mining.

### **4.2.2 Mountain Plovers**

The mountain plover was proposed for listing as a threatened species in 1999. On May 11, 2011 the USFWS determined that the mountain plover is not threatened or endangered throughout all or a significant portion of its range. While it is not protected under the Endangered Species Act, it is a migratory bird and, as a result, remains protected under the Migratory Bird Treaty Act. It is also considered a Sensitive Species in the State of Wyoming.

This ground nesting species is typically found in areas of short (less than four inches) vegetation on slopes of less than five percent. Any short grass, very short shrub, or cushion plant community could be considered plover nesting habitat (Parrish et al. 1993), however, mountain plovers prefer shortgrass prairie with open, level or slightly rolling areas dominated by blue grama (*Bouteloua gracilis*) and buffalograss (*Buchloe dactyloides*) (Dinsmore 1981, Kantrud and Kologiski 1982). While there is mixed grass prairie on the amendment area, it is well vegetated and would not provide suitable habitat for mountain plovers. Due to the lack of suitable habitat, the proposed mining is unlikely to impact this species.

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### 4.3 Migratory Birds of Concern

The USFWS IPAC identified 19 migratory bird species potentially occurring in the amendment area that are identified as Natural Resources of Concern. The species and their preferred habitat are listed in Table 4-1. Also listed is the potential for the species to occur on the amendment area based on suitable habitat. Those species that could occur on the amendment area are discussed in more detail.

Table 4-1. Migratory Birds of Concern potentially within the amendment area.

Common Name	Scientific Name	Preferred Habitat <sup>1</sup>	Potential on Site
American bittern	<i>Botaurus lentiginosus</i>	Freshwater marshes with tall vegetation	Unlikely
Bald eagle	<i>Haliaeetus leucocephalus</i>	Near lakes, reservoirs, rivers, marshes and coasts.	Possible
Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>	Deciduous woods and thickets, especially along large streams.	Unlikely
Brewer's sparrow	<i>Spizella breweri</i>	Strongly associated with sagebrush.	Unlikely
Burrowing owl	<i>Athene cunicularia</i>	In active or active prairie dog burrow.	Unlikely
Cassin's finch	<i>Carpodacus cassinii</i>	Open coniferous forest.	Possible
Dickcissel	<i>Spiza americana</i>	Grassland with dense, moderate to tall vegetation and moderately deep litter.	Possible
Ferruginous hawk	<i>Buteo regalis</i>	Open country; nests in tall trees, on cliff ledges, river-cut banks, hillsides.	Possible
Golden eagle	<i>Aquila chrysaetos</i>	Inhabits open and semi-open country; nests on rock ledges of cliffs or in larger trees.	Possible
Grasshopper sparrow	<i>Ammodramus svannarum</i>	Grassland of intermediate height.	Possible
Lewis's woodpecker	<i>Melanerpes lewis</i>	Open forest and woodland.	Possible
Loggerhead shrike	<i>Lanius ludovicianus</i>	Open country with scattered trees and shrubs.	Possible
Long-billed curlew	<i>Numenius americanus</i>	Breeds on prairies and grassy meadows near water.	Possible

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Common Name	Scientific Name	Preferred Habitat <sup>1</sup>	Potential on Site
Prairie falcon	<i>Falco mexicanus</i>	Nests on rocky cliff or steep embankment.	Unlikely
Red-headed woodpecker	<i>Melanerpes erythrocephalus</i>	Cottonwood bottoms.	Unlikely
Sage thrasher	<i>Oreoscoptes montanus</i>	Sagebrush plains.	Unlikely
Short-eared owl	<i>Asio flammeus</i>	Generally nests on high ground or upland sites; forage and nests on open land with low vegetation.	Possible
Swainson's hawk	<i>Buteo swainsoni</i>	Nests in trees; forages on open terrain with scattered trees.	Possible
Upland sandpiper	<i>Bartramia longicauda</i>	Short grassland habitat; nests on ground among grasses.	Possible

<sup>1</sup>Habitat information obtained from:

NatureServe. 2014. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1.

NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>.

Dorn J.L and R.D. Dorn. 1990. Wyoming Birds. Mountain West Publishing, Cheyenne, WY. 139 pp.

#### 4.3.1 Bald Eagle

Winter roosting habitat for bald eagles most commonly includes areas close to (within 4 km) of coastal areas, bays, rivers, lakes, or other bodies of water that reflect the general availability of primary food sources including fish, waterfowl, and seabirds (Andrew and Mosher 1982, Green 1985, Campbell et al. 1990). Bald eagles preferentially roost in conifers or other sheltered sites in winter in some areas and they typically select larger, more accessible trees (Buehler et al. 1991, 1992).

Woodland habitat is plentiful on the amendment area although the site lacks large bodies of water to provide a winter food source. Due to the plentiful woodland habitat, there is the potential for temporary winter roosting on the site and in the vicinity. It is unlikely bald eagles would inhabit the area for any length of time due to the lack of winter food sources. The selection of this area by an individual bald eagle would be due to chance rather than being attracted to any habitats in the area. Eagle roost surveys were performed by BPM Environmental Specialist, Jennifer Hartman, according to the Newcastle, WY BLM field office protocols. No eagle roosts were observed during these surveys. For this reason, while an individual bird could

be displaced by mining activities, the proposed mining is expected to have no impact on bald eagles.

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#### **4.3.2 Cassin's Finch**

The Cassin's finch inhabits coniferous and mixed forests that are usually somewhat open. They are also known to enter towns in the winter. They are known to occur in all the mountain ranges of Wyoming with the exception of the Black Hills (Dorn and Dorn, 1990). Since the amendment area is within the Black Hills region of Wyoming, while suitable habitat is present, the occurrence of this species is unlikely except when migrating through the area.

#### **4.3.3 Dickcissel**

Dickcissels typically inhabit tall grass habitat and are found along the eastern edge of Wyoming (Dorn and Dorn 1990). Nests are elevated in grasses, forbs, shrubs, or trees and are less commonly found on the ground (NatureServe 2014). The primary threat to these birds appears to be heavy mortality during the non-breeding season when the birds are very concentrated in relatively few nocturnal roosts. Suitable habitat is present on the amendment area and there is the potential for this species within the site or in the vicinity.

#### **4.3.4 Ferruginous Hawk**

This species prefers unbroken, semiarid grassland with elevated nesting sites such as trees, rock outcrops, hills and ridgelines (Johnsgard 1990). Ferruginous hawks are closely associated with areas that contain high densities of rodents and lagomorphs (Johnsgard 1990).

Suitable nesting habitat, in the form of trees, is common on the amendment area and there is the potential for this species to both nest and forage in the area. No nests were observed during the 2014 surveys by Real West and no ferruginous hawks were observed on the amendment area or in the vicinity. However, there is the potential for these raptors to nest in the vicinity. Should an active raptor nest become established prior to the initiation of mining activities, construction should be avoided within 1.0 mile of any active ferruginous hawk nest during the nesting season.

#### **4.3.5 Golden Eagle**

Golden eagles typically nest on the rock ledges of cliffs but they also nest occasionally in large trees (NatureServe 2014). Due to the prevalence of woodland habitat on the amendment area, there is the potential for this species to nest in the area. No golden eagles or nests were observed during the May and June 2014 surveys and it is unlikely eagles were nesting in the vicinity at that time since no golden eagles were observed. However, there is the potential for golden eagles to nest in the vicinity. Should an active raptor nest become established prior to the initiation of mining activities, construction should be avoided within 0.5 mile of any active golden eagle nest during the nesting season.

#### **4.3.6 Grasshopper sparrow**

These sparrows prefer grasslands of intermediate height and are often associated with clumped vegetation interspersed with patches of bare ground (Bent 1968, Blankespoor 1980, Vickery 1996). Other habitat requirements include moderately deep litter and sparse coverage of woody vegetation (Smith 1968, Bent 1968). The sparrow prefers moderately open grasslands and prairies with patchy bare ground, avoiding extensive shrub cover (Vickery 1996). Suitable habitat is present on the amendment area and there is the potential for this bird on the site.

#### **4.3.7 Lewis's Woodpecker**

This woodpecker breeds in open forest and woodland that have often been logged or burned, including oak, coniferous forest (primarily ponderosa pine), riparian woodland and orchards (AOU 1983). It is found less commonly in pinyon-juniper. Since suitable habitat is present on the site and in the vicinity, there is the potential for this species to occur on the amendment area.

#### **4.3.8 Loggerhead Shrike**

This species prefers relatively open country with scattered trees and shrubs, savanna, desert scrub (southwestern U.S.), and, occasionally, open woodland; it often perches on poles, wires or fenceposts (AOU 1983). Suitable hunting perches are an important part of the habitat (Yosef and Grubb 1994). Loggerhead shrikes nest in shrubs or small trees (deciduous or coniferous) and, in northern latitudes, nest sites include spruce and fir trees (Bent 1950, Brooks 1988). Suitable habitat is present on the site and in the vicinity; therefore, it is possible that this species inhabits the amendment area.

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#### **4.3.9 Long-billed Curlew**

This shorebird breeds on prairies and grassy meadows, generally near water and it nests in dry prairies and moist meadows (AOU 1983). Nests are usually on the ground in flat area with short grass, sometimes on more irregular terrain, often near rock or other conspicuous structures.

Grassland structure is an important component of long-billed curlew habitat. Long-billed curlews in Nebraska used areas in which 75 percent of the total vertical vegetation density (number of plant contacts with a thin rod inserted vertically into the canopy) was found at heights <10 cm (Dechant et. al. 2003). Preference for areas in which vegetation density is concentrated near ground level may be important in terms of the feeding behavior of long-billed curlews or their ability to see potential predators. Suitable habitat is present on the amendment area and in the vicinity; therefore, it is possible this species inhabits the site.

#### **4.3.10 Short-eared Owl**

The short-eared owl ranges over mid and tall grasses and marshes, often hunting during daylight (Sibley 2000). Small rodents, especially voles (*Microtis spp.*), compose a preponderance of its diet, and there have been strong shifts between years in the density and location of breeding owls, depending on fluctuating food resources (Wiggins 2004). The abundance of prairie voles in central South Dakota was positively correlated with vegetation variables that measured the height and density of the vegetation and litter, although vole abundance seemed to be correlated with litter rather than the seral stage of prairie vegetation (Fritcher 1998). Short-eared owls build their nests on the ground in open country (Clark 1975), and nests found in the Dakotas have been in cover about 12 to 24 inches high and were well concealed from the sides (Duebbert and Lokemoen 1977). Suitable habitat is present on the amendment area and in the vicinity; therefore, it is possible this species inhabits the site. Should an active nest become established prior to the initiation of mining activities, construction should be avoided within 0.25 mile of any active short-eared owl nest during the nesting season.

#### **4.3.11 Swainson's Hawk**

Swainson's hawks inhabit open country such as grassland, shrubland, and agriculture areas (NatureServe 2014). They also are found within urban areas. These raptors nest in trees, usually

those bordering agricultural fields, in wetland borders, and on abandoned farms. Due to the prevalence of woodland habitat on the amendment area, there is the potential for this species to nest in the area. No Swainson's hawks or nests were observed during the May and June 2014 surveys and it is unlikely these hawks were nesting in the vicinity at that time since none were observed flying in the area. However, there is the potential for Swainson's hawks to nest in the vicinity. Should an active nest become established prior to the initiation of mining activities, construction should be avoided within 0.25 mile of any active nest during the nesting season.

#### **4.3.12 Upland Sandpiper**

The upland sandpiper prefers meadows and hay fields (Dorn and Dorn 1990). Since mixed grass prairie is common on the site and in the vicinity, there is the potential for this species on the amendment area.

#### **4.4 Big Game**

Four big game species occur in the amendment area: elk (*Cervus canadensis*), pronghorn antelope (*Antilocapra americana*), mule deer (*Odocoileus hemionus*), and white-tailed deer (*Odocoileus virginianus*). All four species were observed on the amendment area during the May and June 2014 surveys. The amendment area lacks designated crucial range, parturition areas, or migration routes for all of these big game species (WISDOM 2014).

The proposed amendment area is within yearlong range for the North Black Hills pronghorn herd and the Black Hills mule deer herd. The proposed mining is unlikely to have a permanent effect on big game since no crucial habitats are present. Displacement of individuals is possible during mining but suitable habitat is in the vicinity.

In the correspondence from the WGFD (Addendum B), it is recommended that reclamation efforts include legume, shrub and tree planting that will benefit mule deer. In addition, they suggest reclamation efforts should not emphasize pond construction on abandoned mine sites. Instead, upland reclamation is preferred. This will reduce habitat available for the arthropod vectors of West Nile Virus, Blue Tongue Virus, and Epizootic Hemorrhagic Disease which can severely impact local sage-grouse and mule deer populations. Pond re-construction has been



requested by the surface owner, ponds will be designed with steeper banks, than existing, to reduce mud flat development and minimize mosquito and midge reproduction.

#### **4.4 Upland Game Birds**

Wild turkeys (*Meleagris gallopavo*) inhabit somewhat open woodlands, especially ponderosa pine or riparian areas (Dorn and Dorn 1990). Wild turkeys were observed on the amendment area during the May and June 2014 surveys. Individual birds could be displaced by mining activity but similar woodland habitat is common in the vicinity.

Sharp-tailed grouse (*Tympanuchus phasianellus*) require a mosaic of dense grass and shrubs with rich forb and insect foods during nesting and brood-rearing. During winter, sharp-tails often rely on riparian areas and other sites that support deciduous trees and shrubs for feeding, roosting, and escape cover; they also utilize non-native cultivated grains and hedgerow species (Parker 1970, Oedekoven 1985). Suitable habitat is present but is not abundant on the amendment area; therefore the proposed mining is not expected to have any impact on this species.

#### **4.5 Raptors**

No active raptor nests were located on the amendment area. One small stick nest was observed approximately 0.10 mile outside the extreme northeast corner of the amendment area (Latitude 44.8995; Longitude 104.33588). This stick nest, approximately 25 feet off the ground, is shown in Photo A-12, Addendum A. The nest was in fair condition but, based on the size, may have been an old black-billed magpie (*Pica hudsonia*) nest instead of a raptor nest.

Three raptors were observed flying over the amendment area during the May and June 2014 surveys: golden eagle, northern harrier (*Circus cyaneus*), and turkey vulture (*Cynomys ludovicianus*). Vocalizations from a great horned owl (*Bubo virginianus*) were heard at night but no owls were observed. During the January and February 2016 surveys, one golden and one bald eagle were observed flying over and vocalizations from a great horned owl were heard in the evening, but no owls were observed.

Suitable raptor nesting habitat is plentiful on the amendment area in the woodland habitat. Additional raptor species that could utilize the site and vicinity for foraging and nesting include red-tailed hawks (*Buteo jamaicensis*), Swainson's hawks, American kestrels (*Falco sparverius*), ferruginous hawks, and prairie falcons (*Falco mexicanus*). Rough-legged hawks (*Buteo lagopus*) likely forage in the area during the winter.

No active raptor nests were observed during the 2014 surveys and it is unlikely raptors were nesting in the vicinity at that time since none were seen or heard. However, there is the potential for raptors to nest in the vicinity. Should an active nest become established prior to the initiation of mining activities, construction should be avoided within 0.25 mile of any active raptor nest during the nesting season. The exception is a 1-mile buffer for ferruginous hawks. If an active bald eagle nest is found, the USFWS should be contacted to determine the spatial buffer distance.

#### **4.6 Waterfowl and Shorebirds**

There are four reservoirs within the amendment area, as described in Section 3.1.4. Waterfowl were most abundant on the largest reservoir but mallards (*Anas platyrhynchos*) were observed on the northern and southern ponds as well. Mallards with chicks were observed on the large reservoir, indicating nesting occurred at that body of water. The only other waterfowl observed were Canada geese (*Branta canadensis*) but it is likely a number of other species utilize the ponds either as nesting areas or as temporary resting areas. The only shorebird observed was the killdeer (*Charadrius vociferous*), while sandhill crane (*Grus canadensis*) vocalizations were heard in the early evening.

#### **4.7 Passerine Birds**

A number of passerine bird species were observed on the amendment area and are listed in Table 4-2. Species observed and expected are those typically inhabiting prairie and woodland habitats.

There is the potential for mining activities to disturb and destroy active passerine bird nests if construction occurs during the nesting season, typically from May 1 through July 15. Due to the abundance of similar habitat in the vicinity, no impacts to passerine bird populations are expected.

#### **4.8 Other Mammals**

During the site surveys all wildlife species observed were noted and identified. The only mammals observed that have not been mentioned in previous sections is the desert cottontail (*Sylvilagus audubonii*), white-tailed jackrabbit (*Lepus townsendii*), and red squirrel (*Tamiasciurus hudsonicus*). In addition, sign was observed for the coyote (*Canis latrans*) and the northern pocket gopher (*thomomys talpoides*).

Based on geography and habitat, those mammal species potentially occurring on the site not counting big game species already mentioned are listed in Table 4-3.

While individual animals may be disturbed during mining operations, similar habitat is in the vicinity; therefore the proposed mining is not expected to impact any small mammal populations.

Table 4-3. Additional mammal species potentially occurring within the WSL04 amendment area.

<b>Common Name</b>	<b>Scientific Name</b>
Long-legged myotis	<i>Myotis volans interior</i>
Big brown bat	<i>Eptesicus fuscus</i>
Townsend's big-eared bat	<i>Plecotus townsendii pallescens</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Hoary bat	<i>Lasiurus cinereus</i>
Long-eared myotis	<i>Myotis evotis</i>
Northern grasshopper mouse	<i>Onychomys leucogaster</i>
White-footed mouse	<i>Peromyscus leucopus</i>
Deer mouse	<i>Peromyscus maniculatus</i>
Western harvest mouse	<i>Reithrodontomys megalotis</i>
Thirteen-lined ground squirrel	<i>Spermophilus tridecemlineatus</i>
Least chipmunk	<i>Tamias minimus</i>
Plains pocket gopher	<i>Geomys bursarius</i>
Northern pocket gopher	<i>Thomomys talpoides</i>
Hispid pocket mouse	<i>Chaetodipus hispidus</i>
Olive-backed pocket mouse	<i>Perognathus fasciatus</i>
Prairie vole	<i>Microtus ochrogaster</i>
Meadow vole	<i>Microtus pennsylvanicus</i>
Long-tailed vole	<i>Microtus longicaudus longicaudus</i>
Bushy-tailed woodrat	<i>Neotoma cinerea</i>
White-tailed jackrabbit	<i>Lepus townsendii</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
Porcupine	<i>Erethizon dorsatum</i>
Long-tailed weasel	<i>Mustela frenata</i>
Striped skunk	<i>Mephitis mephitis</i>
Badger	<i>Taxidea taxus</i>
Raccoon	<i>Procyon lotor</i>
Coyote	<i>Canis latrans</i>
Swift fox	<i>Vulpes velox</i>
Red fox	<i>Vulpes vulpes</i>
Bobcat	<i>Lynx rufus</i>

#### **4.9 Reptiles and Amphibians**

Boreal chorus frogs (*Pseudacris maculata*) were present in the reservoirs on the amendment area. It is possible that the northern leopard frog (*Lithobates pipiens*) is also present in the largest reservoir but a positive identification was not made. It is also possible that tiger salamanders (*Ambystoma myvortium*) are present, although none were observed.

The only lizard species expected on the amendment area is the short-horned lizard (*Phrynosoma douglassi*). Snake species potentially occurring in the region are the plains hognose snake (*Heterodon nasicus*), eastern yellowbelly racer (*Coluber constrictor*), pale milk snake (*Lampropeltis triangulum*), bullsnake (*Pituophis melanoleucas*), wandering garter snake (*Thamnophis elegans*), and prairie rattlesnake (*Crotalus viridis*). While individual reptile and amphibian species could be disturbed or even destroyed during mining operations, there is additional suitable habitat in the area. No impacts to reptile or amphibian populations are anticipated.

#### **4.10 Fish**

While there are four reservoirs on the amendment area, no evidence of fish in any of the reservoirs was found. It is likely water levels fluctuate considerably and, should water remain during the winter, it likely freezes and prevents the propagation of any fish species.

### **5.0 MITIGATION**

Potential impacts and mitigation measures for wildlife on the WY State Lease 42804 amendment are listed in Table 5-1. Mining activities will result in “no effect” to threatened or endangered wildlife species since none are expected in the area. The site is outside any sage-grouse core area and more than two miles from any occupied lek; therefore no stipulations are needed for this species. Habitat for the Sprague’s pipit is lacking or of minimal size to preclude any use aside from temporary migrations through the area; therefore the proposed mining will have “no effect” on this species.

Habitat for the northern long-eared bat is present. It was decided through BPM consultation with WYG&F (via telephone) that mitigation was not necessary for this case where no White Nose Syndrome has been recorded. The proposed mining will have “no effect” on the northern long-eared bat.

No raptor nests were found on the claim site but one small nest in fair conditions was found 0.10 mile outside the permit boundary. Based on the condition and size of the nest, it is unlikely the nest will become active in the future but, should that occur or if any new nest or previously undocumented nest is found prior to the initiation of mining activities, construction should be avoided within 0.25 mile of any active raptor nest during the nesting season. The spatial buffer is 1.0 mile for ferruginous hawks and the distance for bald eagles is variable and should be determined through consultation with the USFWS.

Winter roosting habitat for bald eagles is present although its use by bald eagles is likely only for short-term resting sites due to the lack of any large bodies of water or big game concentration areas that might provide a winter food supply. Bald eagles are more likely to roost along the Belle Fourche River, approximately 0.6 miles northwest of the amendment area. Winter surveys were conducted by BMP personnel in January and February 2016. One bald eagle was confirmed more than 1.0 mile from the site but no bald eagles were observed roosting within the amendment area. If bald eagles are observed consistently on the site, indicating a communal roost might be present, USFWS personnel will be contacted to determine if mitigation is needed. The area will be surveyed for winter bald eagle roost sites prior to and throughout mine activity.

Table 5-1. Summary of Environmental Consequences and Mitigation Measures for the WY State Lease 42804 Amendment Area.

<b>Resource/Impact</b>	<b>Mitigation</b>
<b>Threatened and Endangered Species:</b> No federally listed species are expected on the site.	No mitigation needed.
<b>Proposed Species:</b> Northern long-eared bat	No mitigation needed.
<b>Candidate Species:</b> Sage-grouse: the site is outside any core area and more than two miles from any occupied lek. Sprague’s pipit: Suitable habitat is lacking.	No mitigation needed.
<b>Resource/Impact</b>	<b>Mitigation</b>

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<p><b>Bald Eagles</b>          Roosting habitat is present but winter food source is lacking; use limited to temporary roosting only.</p>	<p>Winter roosting surveys were conducted. Due to the lack of a winter food supply, the establishment of a communal roost site is unlikely. No communal roosts were observed. If a bald eagle nest is found, contact USFWS to determine spatial buffer distance.</p>
<p><b>Mountain Plover</b>          Habitat is lacking and no impacts are expected.</p>	<p>No mitigation needed.</p>
<p><b>Black-tailed prairie dogs</b>          Habitat is present but no prairie dogs or their burrows were observed.</p>	<p>No mitigation needed.</p>
<p><b>Migratory Birds of Concern</b>          Habitat is present for several avian species considered migratory birds of concern.</p>	<p>To minimize potential for destruction of active nests, remove shrub habitat prior to or after the nesting season.</p>
<p><b>Big Game</b>          No crucial or critical range is present.</p>	<p>Reclamation efforts should include legume, shrub and tree planting. Reclamation efforts should not emphasize pond construction. If any ponds are constructed, they should be designed with steep banks to reduce mud flat development.</p>
<p><b>Game Birds</b>          Sharp-tailed grouse: Suitable habitat is lacking.          Wild turkeys: Suitable habitat is present and this species was observed in the area.</p>	<p>No mitigation needed.</p>
<p><b>Raptors</b>          No active raptor nests found.</p>	<p>Should an active raptor nest become established prior to the initiation of mining activities, construction should be avoided within 0.25 mile of any active raptor nest during the nesting season and 1.0 mile for ferruginous hawks.</p>
<p><b>Waterfowl and Shorebirds</b>          Stock ponds present; habitat is present but similar habitat is in adjacent areas.</p>	<p>No mitigation needed.</p>
<p><b>Passerine Birds</b>          Prairie and woodland species common; habitat is plentiful in the area.</p>	<p>No mitigation needed.</p>
<p><b>Other Mammals</b>          Prairie and woodland species expected; habitat is plentiful in the area.</p>	<p>No mitigation needed.</p>
<p><b>Amphibians and Reptiles</b>          Amphibian and reptile species possible are those typically found in prairie and woodland habitats; similar habitat is plentiful in the area.</p>	<p>No mitigation needed</p>
<p><b>Fish</b>          Stock ponds are present but fisheries are not established.</p>	<p>No mitigation needed</p>

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**ADDENDUM A**

**Photographs of the Wyoming State Lease 42804 Amendment Site**

2.9.3.45- 28

Photo A-1. The WSL04 amendment site is dominated by a combination of mixed grass prairie and woodland habitats.



Photo A-2. The woodland habitat varies in tree density across the claim site. Stands of bur oak tend to have higher density in areas of new growth.





Photo A-5. Mixed grass prairie is found throughout the permit area.



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Photo A-6. Patches of mixed grass prairie include big sagebrush.



Photo A-7. Disturbed habitat is found along the southern boundary of the permit area.



Photo A-8. Bottomland meadow habitat is found immediately west of the largest reservoir on the permit areas.



Photo A-9. A narrow strip of bottomland meadow is found within three drainage bottoms within the claim site.





Photo A-10. Open water is found in several reservoirs on the permit area that also support a perimeter of emergent vegetation.



Photo A-10. The largest reservoir on site covers 2.72 acres and includes open water as well as emergent wetland and marsh around the perimeter.



Photo A-12. A small stick nest was observed in a bur oak tree.



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**ADDENDUM B**

**Correspondence from:**

**Wyoming Game and Fish Department**

**U.S. Fish and Wildlife Service**

2.9.3.45- 35



## WYOMING GAME AND FISH DEPARTMENT

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August 26, 2014

WER 8390.33  
Real West Natural Resource Consulting  
Permitting Amendment Requirements  
Wyoming State Lease 42804 Permit Amendment  
760 –acre site approximately 8 miles west of the Colony plant  
Bentonite Performance Minerals  
Permit 267C  
Crook County

Amber Travsky  
Owner/Wildlife Biologist  
Real West Natural Resource Consulting  
1116 Albin Street  
Laramie, WY 82072

Dear Ms. Travsky:

The staff of the Wyoming Game and Fish Department has reviewed the Wyoming State Lease 42804 permit amendment for Bentonite Performance Minerals, Inc's 760-acre site which is approximately 8 miles west of the Colony plant in Crook County. We offer the following comments for your consideration.

### **Terrestrial Considerations:**

We have concerns about cumulative losses of winter habitat for deer, especially mule deer, in this part of Wyoming. To minimize impacts to winter habitat, we recommend reclamation measures include legume, shrub and tree plantings that will benefit mule deer. In addition, we suggest reclamation efforts should not emphasize pond construction on abandoned mine sites. Rather, upland reclamation should occur. This also will reduce habitat available for the arthropod vectors of West Nile Virus, Blue Tongue Virus, and Epizootic Hemorrhagic Disease which can severely impact local sage-grouse and mule deer populations, respectively. If any ponds are constructed, they should be designed with steep banks to reduce mud flat development and minimize mosquito and midge reproduction.

The permit area should be surveyed for winter, bald eagle roost sites and for those species of greatest conservation need with delineated seasonal ranges and potential habitat within the permit boundary. The online WISDOM can facilitate wildlife surveys needs.

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*"Conserving Wildlife - Serving People"*

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2.9.3.45- 36

Amber Travsky  
August 26, 2014  
Page 2 of 3 – WER 8390.33

**Aquatic Considerations:**

To minimize impacts to the aquatic resources of nearby waterways, we recommend the following:

- Accepted best management practices be implemented to ensure that all sediments and other pollutants are contained within the boundaries of the work area. Disturbed areas that are contributing sediment to surface waters as a result of project activities should be promptly re-vegetated to maintain water quality.
- Equipment should be serviced and fueled away from streams and riparian areas. Equipment staging areas should be at least 300 feet from riparian areas.
- Preventing the spread of aquatic invasive species (AIS) is a priority for the State of Wyoming, and in many cases, the intentional or unintentional spread of organisms from one body of water to another would be considered a violation of State statute and Wyoming Game and Fish Commission Regulation. To prevent the spread of AIS, the following is required:
  1. If equipment has been used in a high risk infested water [a water known to contain Dreissenid mussels (zebra/quagga mussels)], the equipment must be inspected by an authorized aquatic invasive species inspector recognized by the state of Wyoming prior to its use in any Wyoming water during all times of year.
  2. Any equipment entering the state by land from March through November (regardless of where it was last used), must be inspected by an authorized aquatic invasive species inspector prior to its use in any Wyoming water.
  3. If aquatic invasive species are found, the equipment will need to be decontaminated by an authorized aquatic invasive species decontaminator.
  4. Any time equipment is moved from one 4<sup>th</sup> level (8-digit Hydrological Unit Code) watershed to another within Wyoming, the following guidelines are recommended:  
DRAIN: Drain all water from watercraft, gear, equipment, and tanks. Leave wet compartments open to dry.  
CLEAN: Clean all plants, mud, and debris from vehicle, tanks, watercraft, and equipment.  
DRY: Dry everything thoroughly. In Wyoming, we recommend drying for 5 days in summer (June - August); 18 days in Spring (March - May) and Fall (September - November); or 3 days in Winter (December - February) when temperatures are at or below freezing.
  5. Any equipment used in a Wyoming water that contains AIS, must be inspected before use in another water. Species currently found in Wyoming waters include New

Amber Travsky  
August 26, 2014  
Page 3 of 3 – WER 8390.33

Zealand mudsnail, Asian clam, and curly pondweed. Information on currently affected waters can be found at:  
[http://wgfd.wyo.gov/web2011/Departments/Fishing/pdfs/AIS\\_WYWATER\\_MONITOR130005236.pdf](http://wgfd.wyo.gov/web2011/Departments/Fishing/pdfs/AIS_WYWATER_MONITOR130005236.pdf)

\*A list of high risk infested waters and locations in Wyoming to obtain an AIS inspection can be found at: [wgfd.wyo.gov/AIS](http://wgfd.wyo.gov/AIS).

Thank you for the opportunity to comment. If you have any questions or concerns, please contact Paul Mavrakis, Sheridan Region Fisheries Supervisor, at 307-672-7418 Ext. 236, or Joe Sandrini, Senior Wildlife Biologist, at 307 746-4646.

Sincerely,



*JK*  
John Kennedy  
Deputy Director

JK/mf/gb

cc: USFWS  
Chris Wichmann, Wyoming Department of Agriculture, Cheyenne  
Paul Mavrakis, Sheridan Region  
Justin Binfet, Casper Region  
Joe Sandrini, Casper Region

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**From:** [Joe Sandrini](#)  
**To:** [Jennifer Hartman](#)  
**Cc:** [Tyler Tebault](#)  
**Subject:** [EXTERNAL] Re: WYG&F Letter WER 8390.33  
**Date:** Tuesday, May 03, 2016 11:44:13 AM

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Since it is private surface it is really up the landowner.

But, I would encourage you all to look at stock dam designs / fencing options to see if there are some ways to reduce the surface area of shallow water and especially mud forming areas. The mosquito concern is for west Nile virus (which may not be an issue here as you noted few sage grouse in the area) However, the mud leads to concerns with epizootic hemorrhagic disease or EHD in deer and antelope. A little note on EHD from an article in press that I just reviewed:

"EHD is transmitted by the gnat *Culicoides sonorensis*. Deer are particularly susceptible. Whitetail herds can sometimes suffer up to 95 percent mortality. The disease has a fairly simple method of transmission. In late summer and early fall, the gnat breeds in mud around the edges of receding water holes. As animals come to water, they encounter the gnats. Stock ponds expose mud as they dry out and stock tanks that run continuously and overflow also create mud – both contribute to conditions favored by gnats."

Also - cattle and horses can get EHD, but normally it is not a big deal and producers do not even know the animals are sick. All depends upon the strain. EHD is also related to Blue Tongue virus which is spread the same way and can be a problem in sheep.

Hope this helps,

*Joe Sandrini*  
*wildlife biologist*  
*Wyoming Game & Fish Dept.*  
*Newcastle, WY*  
*307-746-4646*

On Tue, May 3, 2016 at 11:08 AM, Jennifer Hartman  
<[Jennifer.Hartman@halliburton.com](mailto:Jennifer.Hartman@halliburton.com)> wrote:

Good morning Joe,

I am writing for more clarification regarding WYG&F Letter WER 8390.33. I have submitted the amendment application for which the letter was requested to DEQ/LQD District III in Sheridan, WY and we (BPM and DEQ) would like to get WYG&F opinion on the matter of the recommendation that no stock ponds be created in this area. The amendment lands are privately owned and contain state mineral lease. The landowner has requested replacement of all of the ponds that are mined through. Bentonite Performance Minerals (BPM) would like to replace these established ponds for the surface owner as our relationships with



landowners is very important to our business. It is noted that the recommendation states that ponds may be replaced with steep sides slopes, however this practice is not conducive to livestock use and that is what these ponds are constructed for. Establishing steep slopes is a slipping hazard for livestock that utilize the water, we have concern over that and prefer to avoid steep slope construction on stock ponds.

In addition, this area is not located in Sage Grouse Connectivity or Core and none of the amendment area contains sage grouse habitat. Therefore it should have little to no effect on sage grouse.

What is WYG&F's stance on reclaiming pre-mine stock ponds for private landowners? For this case specifically may BPM move forward with stock pond re-establishment as requested by the surface owner?

Jennifer Hartman  
Environmental Specialist

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## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

Ecological Services  
5353 Yellowstone Road, Suite 308A  
Cheyenne, Wyoming 82009



In Reply Refer To:  
06E13000/WY14CPA0161

AUG 13 2014

Amber Travsky, Owner/Biologist  
Real West Natural Resource Consulting  
1116 Albin Street  
Laramie, Wyoming 82072

Dear Ms. Travsky:

Thank you for your letter dated July 28, 2014, received in our office on July 30, regarding the proposed permit amendment identified as Wyoming State Lease 42804 for Bentonite Performance Minerals, Inc. (BPM). The permit amendment area is a 760-acre site located 8 miles west of the BPM plant in Colony, Wyoming at T57N, R62W, SE1/4SW1/4 and SW1/4SE1/4 of Section 30, W1/2NW1/4 of Section 32, and most of Section 31 in Crook County.

You have requested information regarding species listed under the Endangered Species Act of 1973, as amended (ESA), 16 U.S.C. 1531 *et seq.* In response to your request, the U.S. Fish and Wildlife Service (Service) is providing recommendations for protective measures for threatened and endangered species in accordance with the ESA. We are also providing recommendations concerning migratory birds in accordance with the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, and the Bald and Golden Eagle Protection Act (Eagle Act), 16 U.S.C. 668. Wetlands are afforded protection under Executive Orders 11990 (wetland protection) and 11988 (floodplain management), as well as section 404 of the Clean Water Act. Other fish and wildlife resources are considered under the Fish and Wildlife Coordination Act, as amended, 16 U.S.C. 661 *et seq.*, and the Fish and Wildlife Act of 1956, as amended, 16 U.S.C. 742a-742j.

The Service has transitioned to a new online program to deliver species lists: the Information, Planning, and Conservation (IPaC) system. To obtain a current list of endangered, threatened, proposed, and candidate species and their designated and proposed critical habitat that occur in or may be affected by actions associated with your proposed project, please visit our website at <http://ecos.fws.gov/ipac/>. This website will provide you with an immediate response to your species list request. The response will also include information regarding other Service trust authorities.

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We also request that you address the potential for Migratory Birds of High Federal Interest (MBHFI) to nest within or adjacent to the proposed permit area. The Service does not maintain site-specific information on the nesting locations of the birds on the MBHFI list (copy enclosed). Site-specific nest location information may be available from the Wyoming Game and Fish Department (WGFD), applicable land management agencies, or through species-specific surveys conducted on site. If site-specific information indicates that MBHFI do occur at or in the vicinity (e.g., 1 mile) of the proposed project area, we can provide additional site and species-specific recommendations.

In accordance with section 7(c) of the ESA, we have determined that the following species or their designated habitat may be present in the proposed project area. We would appreciate receiving information as to the current status of each of these species within the proposed project area.

**Endangered, Threatened, Proposed, and Candidate Species  
 and Their Designated and Proposed Critical Habitat That Occur  
 In or May Be Affected by Actions in the Proposed Project Area**

August 2014

<u>Species</u>	<u>Scientific Name</u>	<u>Status</u>	<u>Habitat</u>
Ute Ladies'-tresses	<i>Spiranthes diluvialis</i>	Threatened	Seasonally moist soils and wet meadows of drainages below 7,000 ft. elevation
Greater Sage-grouse	<i>Centrocercus urophasianus</i>	Candidate	Sagebrush communities
Sprague's Pipit	<i>Anthus spragueii</i>	Candidate	Open grasslands/prairies
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	Proposed	Under bark, in cracks, crevices, and cavities of trees in upland forests; also in buildings and under bridges

**Ute Ladies'-tresses:** Ute ladies'-tresses (*Spiranthes diluvialis*) is a perennial orchid, 8 to 20 inches tall, with white or ivory flowers clustered into a spike arrangement at the top of the stem. Ute ladies'-tresses typically blooms from late July through August. However, it may bloom in early July or still be in flower as late as early October, depending on location and climatic conditions. Ute ladies'-tresses is endemic to moist soils near wetland meadows, springs, lakes, and perennial streams where it colonizes early successional point bars or sandy edges. The elevation range of known occurrences is 4,200 to 7,000 feet (although no known populations in Wyoming occur above 5,500 feet). Soils where Ute ladies'-tresses have been found typically range from fine silt/sand, to gravels and cobbles, as well as to highly organic and peaty soil types. Ute ladies'-tresses is not found in heavy or tight clay soils or in extremely saline or alkaline soils. Ute ladies'-tresses typically occurs in small, scattered groups found primarily in areas where vegetation is relatively open.

Many orchid species take 5 to 10 years to reach reproductive maturity; this appears to be true for Ute ladies'-tresses (FR 57 2048). Furthermore, reproductively mature plants do not flower every year. For these reasons, 2 to 3 years of surveys are necessary to determine presence or absence of Ute ladies'-tresses. Surveys should be conducted by knowledgeable botanists trained in conducting rare plant surveys.

**Greater Sage-grouse:** The greater sage-grouse (*Centrocercus urophasianus*) is a candidate for listing under the Act (75 FR 13910, March 23, 2010). Please see our recent *Federal Register* notice for detailed information concerning the status of the species; this notice is available at [http://www.fws.gov/wyominges/Pages/Species/Findings/GrtSageGrouse\\_CandidateBulletin.html](http://www.fws.gov/wyominges/Pages/Species/Findings/GrtSageGrouse_CandidateBulletin.html). Greater sage-grouse are dependent on sagebrush habitats year-round. Habitat loss and degradation, as well as loss of population connectivity, have been identified as important factors contributing to the decline of greater sage-grouse populations rangewide. Therefore, any activities that result in loss or degradation of sagebrush habitats that are important to this species should be closely evaluated for their impacts to sage-grouse.

We recommend you contact the Wyoming Game and Fish Department to identify important greater sage-grouse habitats, recommended seasonal restrictions within the project area, and appropriate measures to minimize potential impacts from the proposed project. The Service recommends surveys and mapping of important greater sage-grouse habitats where local information is not available. The results of these surveys should be used in project planning to minimize potential impacts to this species. No project activities that may exacerbate habitat loss or degradation should be permitted in important habitats.

**Sprague's Pipit:** Sprague's pipit (*Anthus spragueii*) is a candidate for listing under the Act (75 FR 56028; Sept. 15, 2010). Sprague's pipit is a relatively small ground nesting passerine bird that breeds in open grasslands of the Northern Great Plains. Males and females are similar in appearance with buff and blackish streaking on the crown, nape, and underparts, and a plain buff-colored face with a large eye-ring. Sprague's pipit is closely tied to native prairie habitat and breeds in the north-central United States in Minnesota, Montana, North Dakota, and South Dakota, as well as south-central Canada. Wintering occurs in Arizona, Texas, Oklahoma, Arkansas, Mississippi, Louisiana, and New Mexico. A number of threats to its continued existence have been identified including: habitat fragmentation on the breeding grounds, energy development, roads, and the inadequacy of existing regulatory mechanisms.

**Northern Long-Eared Bat:** The northern long-eared bat (*Myotis septentrionalis*) is proposed for listing under the ESA as an endangered species (October 2, 2013; 78 FR 61046). Critical habitat is not proposed at this time. This bat is a medium-sized bat, distinguished from other *Myotis* species by its characteristically large ears and long, pointed tragus (projection of skin in front of the external ear). Northern long-eared bats are found throughout eastern and central North America and occur in the extreme northeastern portions of Wyoming. Northern long-eared bats emerge at dusk to fly through the understory of forested hillsides and ridges feeding on moths, flies, leafhoppers, caddisflies, and beetles, which they catch in flight using echolocation, or by gleaning (picking) from vegetation. In the summer, male and reproductive female bats roost singly or in colonies in cracks, crevices, cavities, and under the bark of live and dead trees, while other males and non-reproductive females roost in cooler places like caves and

mines. Northern long-eared bats can also be found roosting in buildings and under bridges. Breeding occurs in late summer and fall when bats swarm at entrances of hibernacula; however, females delay fertilization until spring when they emerge from hibernation.

The northern long-eared bat is threatened by white-nose syndrome (WNS), a disease caused by the cold-loving fungus, *Pseudogymnoascus (Geomyces) destructans*. First observed in New York in 2006, WNS has spread rapidly across the Northeast and into the Midwest and Southeast. Throughout the range of WNS, up to 99 percent of infected bats die from the disease. Although there is uncertainty about the spread of WNS, experts agree that the fungus will likely spread throughout the United States. The northern long-eared bat is also threatened by the loss and degradation of summer habitat caused by human development, and by collision with or barotrauma (injury to the lungs due to a change in air pressure) caused by wind turbines. Mine closures and vandalism of winter roosts and hibernacula also pose threats to this species. In areas that may provide potential habitat for the northern long-eared bat, we recommend tree-clearing and controlled burns be avoided during the roosting season (approximately March through September) unless an emergence or other survey developed in coordination with the Service determines that no northern long-eared bats are using the area. Actions to benefit the northern long-eared bat include installing bat boxes in a safe, sunny location (instructions at <http://www.fws.gov/midwest/endangered/mammals/inba/pdf/BatBoxPlanForIN.pdf>), protecting hibernacula, and reducing insecticide use that targets prey species of the northern long-eared bat.

#### SPECIES OF CONCERN

**Black-tailed Prairie Dog:** The range of the black-tailed prairie dog (*Cynomys ludovicianus*) once spanned the short and mixed grass prairies of North America east of the Rockies from southern Canada to northern Mexico. This species still occurs over much of its historic range; although, in more widely scattered large colonies. Black-tailed prairie dogs occur within the eastern third of Wyoming. A population thought to have been intentionally introduced outside of this range also occurs in the Bighorn Basin. We encourage the conservation of prairie dog colonies for their value to the prairie ecosystem and the many species that rely on them. Threats that may be significant to conserving black-tailed prairie dog populations include disease (sylvatic plague) and some control programs (poisoning). Prairie dogs serve as the primary prey species for the black-footed ferret (*Mustela nigripes*) and several raptors, including the golden eagle (*Aquila chrysaetos*) and ferruginous hawk (*Buteo regalis*). Prairie dog colonies and burrows also provide shelter or nest sites for species like the mountain plover (*Charadrius montanus*) and burrowing owl (*Athene cunicularia*). Because black-tailed prairie dog colonies in Wyoming do not currently support any ferret populations, black-footed ferret surveys are not necessary within Wyoming. However, we do encourage evaluating black-tailed prairie dog colonies for the potential reintroduction of black-footed ferrets.

**Mountain Plover:** On May 12, 2011, the Service announced the decision to withdraw the proposed listing of the mountain plover (*Charadrius montanus*) as a threatened species under the Act (76 FR 27756). The mountain plover is a migratory, terrestrial shorebird averaging 8 inches (21 centimeters) in body length. Mountain plovers are light brown above and white below, but lack the contrasting band characteristic of other plovers. They feed on invertebrates, primarily beetles, crickets, and ants. Mountain plovers arrive at their breeding grounds in the

western Great Plains and Rocky Mountain states in the spring. Southbound migration is prolonged, starting in late June and continuing through October.

We encourage project planners to develop and implement protective measures if mountain plovers, or suitable mountain plover habitat, occur within project areas. Measures to protect the mountain plover from further decline may include: (1) avoidance of suitable habitat during the plover nesting season (April 10 through July 10), (2) prohibition of ground disturbing activities in prairie dog towns, and (3) prohibition of any permanent above ground structures that may provide perches for avian predators or deter plovers from using preferred habitat. Suitable habitat for nesting mountain plovers includes grasslands, mixed grassland areas and short-grass prairie, shrub-steppe, plains, alkali flats, agricultural lands, cultivated lands, sod farms, and prairie dog towns.

#### **MIGRATORY BIRDS**

The MBTA, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs, except as permitted by regulations, and does not require intent to be proven. Section 703 of the MBTA states, “Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird...” The Eagle Act prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagles or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing. Work that could lead to the take of a migratory bird or eagle, their young, eggs, or nests (for example, if you are going to erect new roads, or power lines in the vicinity of a nest), should be coordinated with our office before any actions are taken.

Removal or destruction of such nests or causing abandonment of a nest could constitute violation of one or both of the above statutes. Removal of any active migratory bird nest or nest tree is prohibited. For golden eagles, inactive nest permits are limited to activities involving resource extraction or human health and safety. Mitigation, as determined by the local Service field office, may be required for loss of these nests. No permits will be issued for an active nest of any migratory bird species, unless removal of an active nest is necessary for reasons of human health and safety. Therefore, if nesting migratory birds are present on, or near the project area, timing is a significant consideration and needs to be addressed in project planning.

If nest manipulation is proposed for this project, the project proponent should contact the Service’s Migratory Bird Office in Denver at 303-236-8171 to see if a permit can be issued for this project. No nest manipulation is allowed without a permit. If a permit cannot be issued, the project may need to be modified to ensure take of a migratory bird or eagle, their young, eggs or nest will not occur.

The Service’s Wyoming Field Office has compiled a list of Migratory Bird Species of High Federal Interest (Enclosure) from the ongoing work among State and Federal agencies, non-governmental organizations, and the interested public that produced the Wyoming Bird Conservation Plan. This list will now serve as our list of Migratory Bird Species of Management

Concern in Wyoming, in place of the previous list based on the Migratory Nongame Birds of Management Concern in the United States: the 1995 List.

**EAGLE/RAPTOR**

Enclosed please find our general recommendations for the protection of eagles and other raptor species. We strongly encourage project proponents to fully implement the protective measures described in the enclosures in order to help ensure compliance with the MBTA and the Eagle Act. We are also available to assist you in developing a project specific plan to address the MBTA and Eagle Act concerns.

**WETLANDS/RIPARIAN AREAS**

Wetlands or riparian areas may be impacted by the proposed project. Wetlands perform significant ecological functions which include: (1) providing habitat for numerous aquatic and terrestrial wildlife species, (2) aiding in the dispersal of floods, (3) improving water quality through retention and assimilation of pollutants from storm water runoff, and (4) recharging the aquifer. Wetlands also possess aesthetic and recreational values. If wetlands may be destroyed or degraded by the proposed action, those wetlands in the project area should be inventoried and fully described in terms of their functions and values. Acreage of wetlands, by type, should be disclosed and specific actions should be outlined to avoid, minimize, and compensate for all unavoidable wetland impacts.

Riparian or streamside areas are a valuable natural resource and impacts to these areas should be avoided whenever possible. Riparian areas are the single most productive wildlife habitat type in North America. They support a greater variety of wildlife than any other habitat. Riparian vegetation plays an important role in protecting streams, reducing erosion and sedimentation as well as improving water quality, maintaining the water table, controlling flooding, and providing shade and cover. In view of their importance and relative scarcity, impacts to riparian areas should be avoided. Any potential, unavoidable encroachment into these areas should be further avoided and minimized. Unavoidable impacts to streams should be assessed in terms of their functions and values, linear feet and vegetation type lost, potential effects on wildlife, and potential effects on bank stability and water quality. Measures to compensate for unavoidable losses of riparian areas should be developed and implemented as part of the project.

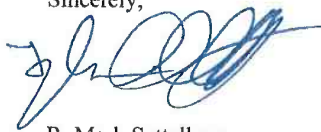
Plans for mitigating unavoidable impacts to wetland and riparian areas should include mitigation goals and objectives, methodologies, time frames for implementation, success criteria, and monitoring to determine if the mitigation is successful. The mitigation plan should also include a contingency plan to be implemented should the mitigation not be successful. In addition, wetland restoration, creation, enhancement, and/or preservation does not compensate for loss of stream habitat; streams and wetlands have different functions and provide different habitat values for fish and wildlife resources.

Best Management Practices (BMPs) should be implemented within the project area wherever possible. BMPs include, but are not limited to, the following: installation of sediment and erosion control devices (*e.g.*, silt fences, hay bales, temporary sediment control basins, erosion control matting); adequate and continued maintenance of sediment and erosion control devices to insure their effectiveness; minimization of the construction disturbance area to further avoid streams, wetlands, and riparian areas; location of equipment staging, fueling, and maintenance areas outside of wetlands, streams, riparian areas, and floodplains; and re-seeding and re-planting of riparian vegetation native to Wyoming in order to stabilize shorelines and streambanks.

For our internal tracking purposes, the Service would appreciate notification of any decision made on this project (such as issuance of a permit or signing of a Record of Decision or Decision Memo). Notification can be sent in writing to the letterhead address or by electronic mail to [FW6\\_Federal\\_Activities\\_Cheyenne@fws.gov](mailto:FW6_Federal_Activities_Cheyenne@fws.gov).

We appreciate your efforts to ensure the conservation of endangered, threatened, and candidate species and migratory birds. If you have questions regarding this letter or your responsibilities under the ESA and/or other authorities or resources described above, please contact Kim Dickerson of my office at the letterhead address or by phone at (307) 772-2374, extension 230.

Sincerely,



*For* R. Mark Sattelberg  
Field Supervisor  
Wyoming Field Office

Enclosures (2)

cc: WGFD, Interim Non-game Coordinator, Lander, WY (M. Grenier)  
WGFD, Statewide Habitat Protection Coordinator, Cheyenne, WY (M. Flanderka)