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Appendix B.4

Supporting Data for Wildlife Resources

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2 This appendix could not be made fully Section 508 compliant. For help with any of its content, please contact the Bureau of Land
3 Management, Vale District Office, at 541-473-3144. Please reference Appendix B.4 of the December 2014 *Draft Environmental Impact*
4 *Statement and Land Use Plan Amendments for the Boardman to Hemingway Transmission Line Project.*

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Table B.4-1. Special Status Species Reviewed in the Project Area with Suitable Habitat Present in the Study Corridors

Common Name	Scientific Name	Status	Likelihood of Occurrence
Reptiles			
Common garter snake	<i>Thamnophis sirtalis</i>	ID BLM	May occur
Longnose snake	<i>Rhinocheilus lecontei</i>	ID BLM	May occur
Mojave black-collared lizard	<i>Crotaphytus bicinctores</i>	ID BLM	Known to occur
Western ground snake	<i>Sonora semiannulata</i>	ID BLM	Known to occur
Invertebrates			
Crooked Creek springsnail	<i>Pyrgulopsis intermedia</i>	OR BLM	May occur
Fir pinwheel	<i>Radiodiscus abietum</i>	USFS	May occur
Hells Canyon land snail	<i>Cryptoma stixpopuli</i>	OR BLM, USFS	May occur
Intermountain sulphur	<i>Coliaschristina pseudochristina</i>	OR BLM, USFS	Known to occur
Jackson Lake springsnail	<i>Pyrgulopsis robusta</i>	OR BLM	May occur
Johnson's hairstreak	<i>Callophrys johnsoni</i>	USFS	Known to occur
Owyhee springsnail	<i>Pyrgulopsis owyheensis</i>	ID BLM	Known to occur
Owyhee hot springsnail	<i>Pyrgulopsis fresti</i>	OR BLM	May occur
Silver-bordered fritillary	<i>Boloria selene</i>	OR BLM, USFS	May occur
Western bumblebee	<i>Bombus occidentalis</i>	USFS	May occur
Western ridged mussel	<i>Gonidea angulata</i>	OR BLM, USFS	Known to occur
Birds			
American peregrine falcon	<i>Falco peregrinusanatum</i>	OR BLM, ID BLM, USFS, V	Known to occur
American three-toed woodpecker	<i>Picoides dorsalis</i>	SV	Known to occur
American white pelican	<i>Pelecanus erythrorhynchos</i>	OR BLM, V	May occur
Bald eagle	<i>Haliaeetus leucocephalus</i>	OR BLM, ID BLM, USFS, ST	Known to occur
Black-backed woodpecker	<i>Picoides arcticus</i>	SV	Known to occur
Black-throated sparrow	<i>Amphispiza bilineata</i>	ID BLM	Known to occur
Bobolink	<i>Dolichonyx oryzivorus</i>	OR BLM, V	Known to occur
Brewer's sparrow	<i>Spizella breweri</i>	ID BLM	May occur
Common nighthawk	<i>Chordeiles minor</i>	SC	Known to Occur
Ferruginous hawk	<i>Buteo regalis</i>	ID BLM	Known to occur
Flammulated owl	<i>Otus flammeolus</i>	SV	May occur
Golden eagle	<i>Aquila chrysaetos</i>	BEGPA	Known to occur
Grasshopper sparrow	<i>Ammodramus savannarum</i>	OR BLM, V	Known to occur

Common Name	Scientific Name	Status	Likelihood of Occurrence
Great gray owl	<i>Strix nebulosa</i>	SV	May occur
Greater Sage-Grouse	<i>Centrocercus urophasianus</i> (population outside Columbia Basin)	USFWS C, OR BLM, ID BLM, USFS, V	Known to occur
Greater sandhill crane	<i>Grus canadensis tabida</i>	SV	Known to occur
Horned grebe	<i>Podiceps auritus</i>	OR BLM	May occur
Lewis' woodpecker	<i>Melanerpes lewis</i>	OR BLM, ID BLM, USFS, CR	Known to occur
Loggerhead shrike	<i>Lanius ludovicianus</i>	ID BLM	Known to occur
Long-billed curlew	<i>Numenius americanus</i>	SV	Known to occur
Mountain quail	<i>Oreortyx pictus</i>	ID BLM	
Northern goshawk	<i>Accipiter gentilis</i>	ID BLM	Known to occur
Olive-sided flycatcher	<i>Contopus cooperi</i>	SV	Known to occur
Pileated woodpecker	<i>Dryocopus pileatus</i>	SV, MIS	Known to occur
Prairie falcon	<i>Falco mexicanus</i>	ID BLM	May occur
Primary cavity excavators	N/A	MIS	Known to occur
Sage sparrow	<i>Amphispiza belli</i>	ID BLM	Known to occur
Swainson's hawk	<i>Buteo swainsoni</i>	SV	Known to occur
Upland sandpiper	<i>Bartramia longicauda</i>	USFS, CR	Likely to occur
Western burrowing owl	<i>Athene cunicularia</i>	SV	Likely to occur
White-headed woodpecker	<i>Picoides albolarvatus</i>	OR BLM, USFS, CR	May occur
Willow flycatcher	<i>Empidonax traillii</i>	ID BLM	May occur
Mammals			
American marten	<i>Martes americana</i>	SV, MIS	May occur
California bighorn sheep	<i>Ovis canadensis californiana</i>	ID BLM	May occur
Fringed myotis	<i>Myotis thysanodes</i>	OR BLM, USFS, V	Known to occur
Gray wolf	<i>Canis lupus</i> (Northern Rocky Mountains population)	OR BLM, USFS, SE	Known to occur
Long-legged myotis	<i>Myotis volans</i>	SV	Known to occur
Merriam's ground squirrel	<i>Spermophilus canus vigilis</i>	ID BLM	May occur
North american wolverine	<i>Gulo gulo luscus</i>	OR BLM, USFS, ST	May occur
Pallid bat	<i>Antrozous pallidus</i>	OR BLM, V	Known to occur
Pygmy rabbit	<i>Brachylagus idahoensis</i> (population outside Columbia Basin)	OR BLM, ID BLM	Likely to occur
Rocky Mountain elk	<i>Cervus canadensis</i>	MIS	Known to occur
Spotted bat	<i>Euderma maculatum</i>	OR BLM, ID BLM, USFS, V	May occur

Common Name	Scientific Name	Status	Likelihood of Occurrence
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	OR BLM, ID BLM, USFS	Known to occur
Washington ground squirrel	<i>Spermophilus washingtoni</i>	USFWSC, OR BLM, SE	Known to occur
White-tailed jackrabbit	<i>Lepus townsendii</i>	SV	Known to occur

1 *Table Source:* USFWS 2013b.

2 *Table Abbreviations:* OR = Oregon, ID = Idaho, USFS = U.S. Forest Service, USFWS = U.S. Fish and Wildlife Service, MIS =
 3 Management Indicator Species, BGEPA = Bald and Golden Eagle Protection Act, C = Candidate, SOC = Species of Concern,
 4 SC = State Candidate, SE = State Endangered, SV = State Vulnerable, ST = State Threatened, T = Threatened.

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Table B.4-2. Typical Wildlife Species in the Analysis Area by Habitat Type

Habitat Type	Percent of Acres Affected by Proposed Action and Alternatives	Common Wildlife Species
Grasslands (both native and semi-natural)	4.7	Pronghorn, coyote (<i>Canis latrans</i>), badger (<i>Taxidea taxus</i>), white-tailed jackrabbit, Washington ground squirrel (<i>Uroditellus washingtoni</i>), northern pocket gopher (<i>Thomomys talpoides</i>), western harvest mouse (<i>Teithodontomys megalotis</i>), mourning dove (<i>Zenaida macroura</i>), northern harrier (<i>Circus cyaneus</i>), Swainson’s hawk, common nighthawk (<i>Chordeiles minor</i>), horned lark (<i>Eremophila alpestris</i>), vesper sparrow (<i>Pooecetes gramineus</i>), savannah sparrow (<i>Passerculus sandwichensis</i>), western meadowlark (<i>Sturnella neglecta</i>), Columbian sharp-tailed grouse (<i>Tympanuchus phasianellus</i>), short-horned lizard (<i>Phrynosoma douglassii</i>), western skink (<i>Eumeces skiltonianus</i>), striped whipsnake (<i>Masticophis taeniatus</i>), and racer (<i>Coluber constrictor</i>)
Shrublands (disturbed shrubland, sagebrush, saltbrush, greasewood, and other shrubland types)	68.6	Mule deer, elk, pronghorn, coyote, Nuttall’s cottontail (<i>Sylvilagus nuttallii</i>), deer mouse (<i>Peromyscus maniculatus</i>), Washington ground squirrel, sagebrush vole (<i>Lemmiscus curtatus</i>), Merriam’s shrew (<i>Sorex merriami</i>), northern harrier, American kestrel (<i>Falco sparverius</i>), red-tailed hawk (<i>Buteo jamaicensis</i>), Swainson’s hawk, greater sage-grouse, Columbian sharp-tailed grouse, Say’s phoebe (<i>Sayornis saya</i>), horned lark, black-billed magpie (<i>Pica pica</i>), sage thrasher (<i>Oreoscoptes montanus</i>), loggerhead shrike (<i>Lanius ludovicianus</i>), vesper sparrow, Brewer’s sparrow (<i>Spizella breweri</i>), sage sparrow, Great Basin spadefoot toad (<i>Spea intermontana</i>), sagebrush lizard, short-horned lizard, striped whipsnake, and racer
Forests/Woodlands (conifer, deciduous, and juniper vegetation communities)	7.5	Elk, mule deer, bobcat (<i>Lynx rufus</i>), porcupine (<i>Erethizon dorsatum</i>), bushy-tailed woodrat (<i>Neotoma cinerea</i>), least chipmunk (<i>Tamias minimus</i>), yellow-bellied marmot (<i>Marmota flaviventris</i>), deer mouse, little brown bat (<i>Myotis lucifugus</i>), red-tailed hawk, northern goshawk (<i>Accipiter gentilis</i>), great horned owl (<i>Bubo virginianus</i>), common poorwill (<i>Phalaenoptilus nuttallii</i>), American three-toed woodpecker (<i>Picoides dorsalis</i>), northern flicker (<i>Colaptes auratus</i>), Hammond’s flycatcher (<i>Empidonax hammondii</i>), gray flycatcher (<i>E. wrightii</i>), Cassin’s finch (<i>Carpodacus cassinii</i>), Steller’s jay (<i>Cyanocitta stelleri</i>), pine siskin (<i>Carduelis pinus</i>), red crossbill (<i>Loxia curvirostra</i>), chipping sparrow (<i>Spizella passerine</i>), yellow-rumped warbler (<i>Dendroica coronate</i>), sagebrush lizard, short-horned lizard, western skink, striped whipsnake, and racer

Habitat Type	Percent of Acres Affected by Proposed Action and Alternatives	Common Wildlife Species
Wetlands, riparian, and surface water	0.7	Mule deer, white-tailed deer, beaver (<i>Castor canadensis</i>), muskrat (<i>Ondatra zibethicus</i>), mink (<i>Mustela vison</i>), red fox (<i>Vulpes vulpes</i>), western harvest mouse, western jumping mouse (<i>Zapus princeps</i>), water shrew (<i>Sorex palustris</i>), Canada goose (<i>Branta canadensis</i>), mallard (<i>Anas platyrhynchos</i>), gadwall (<i>A. strepera</i>), canvasback (<i>Aythya valisineria</i>), northern harrier, sora (<i>Porzana carolina</i>), red-tailed hawk, eared grebe (<i>Podiceps nigricollis</i>), marsh wren (<i>Cistothorus palustris</i>), yellow warbler (<i>Dendroica petechia</i>), common yellowthroat (<i>Geothlypis trichas</i>), red-winged blackbird (<i>Agelaius phoeniceus</i>), Great Basin spadefoot toad, Pacific treefrog (<i>Pseudacris regilla</i>), sagebrush lizard, western skink, striped whipsnake, racer, and common garter snake
Agricultural lands	17.0	White-tailed deer (<i>Odocoileus virginianus</i>), mule deer, black-tailed jackrabbit (<i>Lepus californicus</i>), northern pocket gopher, Great Basin pocket mouse (<i>Perognathus parvus</i>), western harvest mouse, deer mouse, American kestrel, red-tailed hawk, ring-necked pheasant (<i>Phasianus colchicus</i>), American crow (<i>Corvus brachyrhynchos</i>), horned lark, European starling (<i>Sturnus vulgaris</i>), house finch (<i>Carpodacus cassinii</i>), house sparrow (<i>Passer domesticus</i>), Columbian sharp-tailed grouse, and common garter snake (<i>Thamnophis sirtalis</i>)
Developed/disturbed lands	1.0	Striped skunk (<i>Mephitis mephitis</i>), Norway rat (<i>Rattus norvegicus</i>), house mouse (<i>Mus musculus</i>), big brown bat (<i>Eptesicus fuscus</i>), European starling, rock pigeon (<i>Columba livia</i>), American crow, Vaux's swift (<i>Chaetura vauxi</i>), and house sparrow
Bare ground (including cliff and talus areas)	0.4	Bighorn sheep, golden-mantled ground squirrel (<i>Spermophilus lateralis</i>), pika (<i>Ochotona princeps</i>), yellow-bellied marmot, western small-footed bat (<i>Myotis ciliolabrum</i>), fringed bat (<i>M. thysanodes</i>), Townsend's big-eared bat (<i>Corynorhinus townsendii</i>), spotted bat (<i>Euderma maculatum</i>), pallid bat (<i>Antrozous pallidus</i>), peregrine falcon, prairie falcon (<i>Falco mexicanus</i>), golden eagle, violet-green swallow (<i>Tachycineta thalassina</i>), rock wren (<i>Salpinctes obsoletus</i>), western ground snake (<i>Sonora semiannulata</i>), and fir pinwheel (<i>Radiodiscus abietum</i>)

1 Special status species include plants and animals listed as endangered, threatened, proposed, or
2 candidates for listing pursuant to the Endangered Species Act (ESA) or sensitive by the BLM, USFS, or
3 State of Oregon, and USFS management indicator species (MIS). A preliminary list of special status
4 species potentially occurring within the study corridors was developed based on (1) county-level lists for
5 federally threatened, endangered, proposed, and candidate species (Oregon Department of Fish and
6 Wildlife 2013, Idaho 2011a); (2) county-level lists (Baker, Malheur, Morrow, Umatilla, and Union
7 Counties) of state sensitive species in Oregon (ODWR 2008); (3) the BLM statewide lists of sensitive
8 plant and animal species (Oregon BLM 2011b; Idaho BLM 2010); and (4) the USFS Region 6 list of
9 sensitive species (Oregon USFS 2011c). Based on these lists, 322 special status species could
10 potentially occur in the study corridors (Table B.3-5). Some of these species are assigned a status by
11 multiple agencies. In addition to special status species, a list of MIS species was obtained from the
12 Wallowa-Whitman National Forest Land and Resource Management Plan, as amended (USFS 1990).
13 Species accounts, including habitat requirements, known distribution, recent and historical
14 observations, and the likelihood of occurrence in the analysis area were prepared for special status
15 species and MIS.

16 Based on an assessment of known species distributions and habitats in the analysis area, it was
17 determined that 134 special status species and MIS are likely to occur in the analysis area. Species
18 accounts are presented below.

19 **AMPHIBIANS AND REPTILES**

20 *COLUMBIA SPOTTED FROG (ESA CANDIDATE, OREGON/IDAHO BLM SENSITIVE,*
21 *USFS SENSITIVE, STATE VULNERABLE)*

22 **Regulatory Status**

23 In May 1989, the U.S. Fish and Wildlife Service (USFWS) received a petition to list the Columbia
24 spotted frog under the ESA. In May 1993, the USFWS released their 12-month petition finding in which
25 they stated that the Columbia spotted frog population consisted of five distinct segments:

- 26 1. Main population segment (Alaska, British Columbia, Alberta, Wyoming, Montana, north and
27 central Idaho, eastern Washington, and northeastern Oregon)
- 28 2. Great Basin segment (southern Idaho and Nevada)
- 29 3. West Coast segment (western Washington, Oregon, Idaho, and Nevada)
- 30 4. Wasatch Front segment (Utah)
- 31 5. West Desert segment (Utah)

32 All of the distinct population segments, except for the main population, were classified as candidate
33 species by the USFWS's 12-month petition finding. The global status of the Columbia spotted frog is
34 Apparently Secure, and its IUCN category is Least Concern (NatureServe 2010).

1 Taxonomy and Life History

2 Spotted frogs (*Ranapretiosa*) were first described as a single species and later split into two
3 subspecies, *R. pretiosapretiosa* and *R. pretiosaluteiventris*. More recently, work identifying species-
4 specific genetic and geographic differences has resulted in characterization of populations in western
5 Washington and Oregon and northeastern California as Oregon spotted frogs (*R. pretiosa*) and the
6 remainder of the populations as Columbia spotted frogs (*R. luteiventris*). Based on further geographic
7 and genetic characterization, Columbia spotted frogs in southwest Idaho, southeast Oregon, and
8 northeast and central Nevada are part of the Great Basin population of Columbia spotted frogs. It was
9 previously thought that populations in northeast Oregon were part of the Great Basin population;
10 however, it was later determined that these populations belong to the Northern population (USFWS
11 2011).

12 Males become sexually mature 1-2 years earlier than females, usually at age 2 or 3. Columbia spotted
13 frogs employ a scramble mating system in which males race for access to females and there is little
14 opportunity for female choice or male combat. Females usually lay egg masses in the warmest areas of
15 a pond, typically in shallow water (4–8 inches), and clutch sizes vary (150–2,400 eggs). Successful egg
16 production and the viability and metamorphosis of Columbia spotted frogs are dependent on habitat
17 variables such as temperature, depth, and pH of water, cover, and the presence or absence of
18 predators. Tadpoles usually metamorphose by mid to late summer; however, they have been observed
19 in the tadpole stage as late as October (Bull 2005, Reaser and Pilliod 2005). Once they become adults,
20 male Columbia spotted frogs have lower survival rates than females. While the oldest frogs
21 documented were 12–13 years old, most males live 3–4 years while females typically survive 5–8 years
22 (USFWS 2011).

23 Adult Columbia spotted frogs are opportunistic feeders, consuming many types of insects, mollusks,
24 and even other amphibians. A diet analysis conducted with populations in northeast Oregon found the
25 most common insects consumed were beetles, ants or wasps, and flies. Tadpoles are grazers,
26 consuming algae and detritus (USFWS 2011).

27 Distribution and Habitat Requirements

28 Columbia spotted frogs are found near bodies of slow-moving water, including lakes, ponds, sluggish
29 streams, and marshes. During the summer they may disperse into upland forests, grasslands, and
30 shrublands; however, these upland habitats must still be closely associated with moist vegetated areas.
31 Aquatic habitat for the spotted frog consists of the littoral zone of emergent vegetation, including willows
32 (*Salix* spp.), grasses and sedges, and submerged aquatic plants. The Columbia spotted frog over-
33 winters in or adjacent to perennial waterbodies that remain above freezing temperatures and are well
34 oxygenated, such as streams, springs, and spring-fed lakes.

35 Several studies have identified general associations between National Wetland Inventory classifications
36 and Columbia spotted frog occurrences (Patla and Keinath 2005). The wetland classifications
37 associated with Columbia spotted frogs include palustrine wetlands with shrub-scrub, emergent,
38 aquatic bottom, and intermittent riverine streambed sites and water regimes with seasonally flooded,
39 semi-permanently flooded, or saturated areas.

1 **Threats to Survival**

2 Habitat modification and destruction is a major threat to the Columbia spotted frog. The Great Basin
3 population is particularly susceptible to habitat modification (Noss et al. 2006, Tait 2007). Habitat
4 degradation and fragmentation has resulted from agricultural development, intensive livestock grazing,
5 spring development, urbanization, and mining activities. Additional threats to this species include
6 predation by nonnative species (e.g., bullfrog) and possibly climate change (NatureServe 2010).

7 **Occurrence in the Project Area**

8 The range for this species occurs in eastern Oregon and southern Idaho. Suitable habitat for the
9 Columbia spotted frog is considered to be wetland habitat. There are three ORBIC records for this
10 species within 5 miles of the analysis area along the Timber Canyon alternative. The closest
11 occurrence of Columbia spotted frog is 0.62 miles from the Timber Mountain Alternative at the
12 confluence of Eagle Creek and Powder River; known desert occurrences in Oregon are over 5 miles
13 from the analysis area (67 Federal Register [FR]40657).

14 *COMMON GARTER SNAKE (IDAHO BLM SENSITIVE)*

15 The common garter snake is widespread throughout North America except for extremely arid regions of
16 the southwest United States. It prefers to inhabit wet meadows and forests, but also open valleys and
17 coniferous forests. It feeds on a variety of wildlife including earthworms, frogs, toads, birds, fish, smaller
18 reptiles and salamanders, and small mammals.

19 *LONGNOSE SNAKE (IDAHO BLM SENSITIVE)*

20 The longnose snake is endemic to North America and inhabits a dry and arid environment. Its range is
21 located primarily in the western United States and northern Mexico. It primarily feeds on smaller reptiles
22 and amphibians and occasionally rodents.

23 *MOJAVE BLACK-COLLARED LIZARD (IDAHO BLM SENSITIVE)*

24 The Mojave black-collared lizard, also known as the Great Basin black-collared lizard, is found in the
25 western half of the United States, extending from eastern Oregon and Idaho south to Baja California. In
26 Oregon, it is found in desert habitat with sagebrush-steppe vegetation, among rimrock, ridges, rocky
27 outcrops, road banks, sandy to rocky slopes, rocky washes, boulders and talus slopes. It feeds on other
28 reptiles, insects, and occasionally plants. The closest occurrences of Mojave black-collared lizard
29 are approximately 1.1 miles from the Malheur S Alternative at Negro Rock, and on or near the Malheur
30 A Alternative in Kern Basin.

31 *NORTHERN LEOPARD FROG (OREGON/IDAHO BLM SENSITIVE)*

32 The northern leopard frog can be found throughout North America, but has a greater presence in the
33 northern United States. It can live in marshes, ponds, reservoirs, sloughs, spring fed ditches and slow
34 moving streams and rivers. It prefers to eat insects such as spiders, snails, leeches and small
35 vertebrates such as birds, tadpoles, small frogs and fish. The closest occurrence of northern leopard
36 frog is in the Malheur River, 4.2 miles from the analysis area.

1 *ROCKY MOUNTAIN TAILED FROG (OREGON BLM/USFS SENSITIVE, STATE*
2 *VULNERABLE)*

3 The Rocky Mountain Tailed Frog commonly found in the Pacific Northwest from south British Columbia
4 to Northern California, although restricted in Oregon to the Willowa and Blue Mountains. It prefers
5 permanent, cold, streams, ditches and seeps, adjacent to or within forests. Adults primarily feed on a
6 variety of small invertebrates. Not known to be closer than 2.3 miles from the analysis area in Phillips
7 Ditch, northeast of the Timber Mountain Alternative.

8 *WESTERN GROUND SNAKE (IDAHO BLM SENSITIVE)*

9 The western ground snake is primarily found in the southwestern United States from Oklahoma to
10 northern Mexico, but can occasionally be found in arid regions in the northwest. It is found in dry and
11 arid areas with grass or scrub vegetation with loose soil. It feeds on small insects such as scorpions,
12 spiders, crickets and grasshoppers and occasionally small mammals. Western ground snake is known
13 within 1.7 miles of the Malheur S Alternative at Haystack Rock and within two miles of the Proposed
14 Action near Snively Hot Spring.

15 *WESTERN TOAD (IDAHO BLM SENSITIVE)*

16 The western toad is found west of the Rocky Mountains from southern Canada to Baja California and is
17 documented from 70 occurrences throughout Oregon. It is able to survive in an array of habitats
18 including deserts, chaparral, grasslands, and forests. The adults feed mainly on insects and
19 invertebrates such as ants, beetles, spiders, earth worms and crayfish. The closest occurrences of
20 western toad in Oregon are at Goose Lake, within one mile of the Timber Canyon Alternative.

21 *WOODHOUSE'S TOAD (OREGON/IDAHO BLM SENSITIVE)*

22 The woodhouse's toad can be found throughout the United States but are concentrated east of the
23 Cascades in the Pacific Northwest. The woodhouse's toad (in Oregon) inhabits emergent marshes with
24 bull rush; rangewide they require constant water sources such as stream, ponds and rivers, contrary to
25 the western toad. The adults feed on a variety of small invertebrates and insects. Woodhouse's toad is
26 present north of Whisye Spring No. 2, two miles from the Burnt River Mountain Alternative.

27 **INVERTEBRATES**

28 *OWYHEE SPRINGSNAIL (OREGON BLM SENSITIVE)*

29 Owyhee springsnail (*Pyrgulopsisowyheensis*) is a freshwater snail endemic to nine occurrences in
30 Malheur County. It lives in spring sources and stream outflows, some of which are thermal, and is found
31 on a variety of hard substrates; reported from 1,400 to 4,000 feet elevation (NatureServe 2013). Known
32 from a population at Kane Springs 2.2 miles from the Malheur S Alternative.

1 *OWYHEE HOT SPRINGSNAIL (OREGON BLM SENSITIVE)*

2 Owyhee hot springsnail (*Pyrgulopsisfresti*), also known as Owyhee springsnail, is a freshwater snail
3 endemic to three occurrences in a short reach of the Owyhee River above Three Forks, Malheur
4 County. It lives on loose cobble and basalt rock faces in very shallow thermal (24-33 degree
5 Centigrade) spring runs; reported at 3,500 to 3,600 feet elevation (NatureServe 2013). The nearest
6 population of Owyhee springsnail occurs more than 53 miles from the analysis area.

7 *CROOKED CREEK SPRINGSNAIL (OREGON BLM SENSITIVE)*

8 Crooked Creek springsnail (*Pyrgulopsisintermedia*) is endemic to nine occurrences in the Owyhee
9 River basin and Barren Valley in Malheur County. Found in springs and creeks; reported at 2861 to
10 4100 feet elevation (NatureServe 2013). The nearest population of Crooked Creek springsnail occurs
11 more than 34 miles from the analysis area.

12 *FIR PINWHEEL (USFS SENSITIVE)*

13 Fir pinwheel (*Radiodiscusabietum*) is a terrestrial snail which occurs in four states, with distribution in
14 the analysis area limited to the Blue Mountains. It feeds on organic detritus and microorganisms on leaf
15 surfaces, such as molds and bacteria; rangewide most often found in moist and rocky
16 *Pseudotsugamenziesii* dominated forest at mid-elevations in valleys and ravines, often in or near talus
17 of a variety of rock types or under fallen logs, preferring moist sites low on slopes or near persistent
18 water sources, but outside of floodplains (Duncan 2009, NatureServe 2013). Reported in Oregon as
19 “north of Weston, Umatilla County,” thus at least 23 miles northeast of the Proposed Action.

20 *HELLS CANYON LAND SNAIL (OREGON BLM/USFS SENSITIVE)*

21 Hells Canyon land snail (*Cryptomastixpopuli*), also known as poplar oregonian or cottonwood
22 oregonian, occurs in less than 20 sites over three states. Rangewide it is found mostly in moderately
23 xeric, rather open and dry, large-scale basalt taluses, usually found at lower elevations on steep, cool
24 (generally north or east-facing) lower slopes in major river basins; in talus disturbed vegetation
25 associated with *Celtis*, *Artemisia*, *Prunus*, *Balsamorhiza*, grasses, *Seligeria*, and some bryophytes,
26 generally surrounded by sagebrush scrub (Stone 2010, NatureServe 2013). Presently, the nearest
27 population of Hells Canyon land snail to the analysis area is along the Snake River, thus at least 27
28 miles from the Timber Canyon Alternative.

29 *INTERMOUNTAIN SULPHUR (OREGON BLM/USFS SENSITIVE)*

30 Intermountain sulphur (*Coliaschristinapseudochristina*), also known as western sulphur
31 (*Coliasoccidentalispseudochristina*), is a butterfly which occurs in four states and restricted to the Blue
32 and Ochoco Mountains in Oregon and along the Snake River in Idaho. It is found on hillsides; reported
33 from 3,800 to 7,300 feet elevation; apparently in sagebrush dominated plant communities (NatureServe
34 2013). Known within 2.0 miles of the Timber Canyon Alternative, from the south slopes of Big Hill above
35 Big Creek.

1 *JACKSON LAKE SPRINGSNAIL (OREGON BLM SENSITIVE)*

2 Jackson Lake springsnail (*Pyrgulopsisrobusta*) occurs in four states. Found (in Oregon) in cold springs
3 and reported from 3,890 to 6,000 feet elevation (NatureServe 2013). The nearest occurrence of
4 Jackson Lake springsnail is over 48 miles from the analysis area.

5 *JOHNSON'S HAIRSTREAK (IDAHO BLM SENSITIVE)*

6 Johnson's hairstreak (*Callophrysjohnsoni*) is a butterfly which occurs in three states and Canada. It is
7 reported from 1200 to 3400 feet elevation; in prairies and generally unspecified plant communities
8 (NatureServe 2013). Known from the Baker City area, approximately 3 miles from the Flagstaff
9 Alternative.

10 *SILVER-BORDERED FRITILLARY (IDAHO BLM SENSITIVE)*

11 Silver-bordered fritillary (*Boloriaselene*) is a butterfly which occurs in 32 states and Canada. It is known
12 in Oregon only from Big Summitt Prairie in Crook County, where a single relict population exists at
13 4,600 feet elevation in a marshy ravine within a typical rangewide habitat of wet, boggy meadow
14 adjoining a prairie (NatureServe 2013). The nearest Oregon population is 125 miles from the analysis
15 area; no occurrence data is available on Idaho populations.

16 *WESTERN BUMBLE BEE (OREGON BLM SENSITIVE)*

17 Western bumble bee (*Bombusoccidentalis*) occurs in 15 states and Canada. Reported (in Oregon) from
18 280 to 7,200 feet elevation, in clover meadows but most commonly in undocumented habitats
19 (NatureServe 2013). Known along the Timber Canyon Alternative, where collected, in the canyon of Big
20 Creek, less than 0.5 miles from the Timber Canyon Alternative, with additional collections within 2 miles
21 to both east and west sides of the Proposed Action center line.

22 *WESTERN RIDGED MUSSEL (IDAHO BLM SENSITIVE)*

23 Western ridged mussel (*Gonideaangulata*) occurs in six states and Canada. Found (in Oregon) most
24 commonly in water courses; in a variety of substrates; reported from sea level to 4,300 feet elevation;
25 associated primarily with cattails, algae and sedge mats (NatureServe 2013). Known from five
26 occurrences along the Proposed Action in Umatilla and Morrow County, including collections from
27 either side of the Proposed Action in Birch Creek, but the nearest documented population being within
28 0.9 miles of the Proposed Action in McKay Creek.

29 **BIRDS**

30 *AMERICAN PEREGRINE FALCON (OREGON/IDAHO BLM AND USFS SENSITIVE)*

31 The American Peregrine falcon is located worldwide and found on every continent except Antarctica. In
32 North America, it mainly breeds in Alaska and the western region and is uncommon in central and east
33 North America. Nesting sites for the peregrine falcon are cliffs overlooking open areas with an
34 abundance of food. They also nest along seacoasts, near marshes and even cities. The peregrine

1 falcon mainly feeds on birds and attacks while they are in flight by performing high speed dives that can
2 exceed 200 MPH. ORBIC data indicates that the peregrine falcon is present within five miles of the
3 analysis area (Csuti et al 2001). The peregrine falcon is known to occur in the analysis area.

4 *AMERICAN THREE-TOED WOODPECKER (OREGON STATE VULNERABLE,*
5 *MIS SPECIES)*

6 The American three-toed woodpecker is limited to western half of North America, extending from
7 southern Canada to central Mexico. In Oregon it is found in higher elevations, above 4,500 feet. It nests
8 in forests of fir-lodgepole pine and mixed conifers. In other areas around the world it is common to find
9 them in spruce and true fir forests. Its diet consists of small insects, larvae from moths and beetles
10 (Csuti et al 2001). The American three-toed woodpecker is known to occur in the analysis area.

11 *AMERICAN WHITE PELICAN (OREGON AND IDAHO BLM SENSITIVE,*
12 *STATE VULNERABLE)*

13 The American white pelican is a migratory species that breeds in southern Oregon near lakes, marshes
14 and other open bodies of water. It winters along the coasts and over open bodies of water near the Gulf
15 of Mexico. It feeds mainly on fish that may vary on location, but include carp, crayfish and occasionally
16 on salamanders (Csuti et al 2001). The American White Pelican may occur in the analysis area.

17 *BALD EAGLE (BALD AND GOLDEN EAGLE PROTECTION ACT, OREGON AND IDAHO*
18 *BLM SENSITIVE, USFS SENSITIVE, STATE THREATENED)*

19 The bald eagle was de-listed on August 8, 2007 (72 FR 37346), but the species continues to receive
20 federal protection through the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act.

21 During breeding season, the eagle can be found in wetland habitats such as sea coasts, rivers, large
22 lakes, or marshes with an abundance of fish. It feeds mainly on fish but is also known to feed on
23 carrion, smaller birds, and small mammals (Csuti et al 2001). The bald eagle is known to occur in the
24 analysis area.

25 *BLACK-BACKED WOODPECKER (OREGON STATE VULNERABLE)*

26 The black-backed woodpecker is found mainly in the western half of North America, but can also be
27 found in north eastern United States. It occurs at lower elevations. It can be found in a variety of forests
28 but prefers ponderosa pine and lodgepole dominated forests. It feeds mainly on wood boring beetles
29 and its larvae but may also feed on fruit, acorns, spiders and ants (Csuti et al 2001). The black-backed
30 woodpecker is known to occur in the analysis area. The black-backed woodpecker is under review by
31 the USFWS for a petition for listing.

32 *BLACK-THROATED SPARROW (IDAHO BLM SENSITIVE)*

33 The black-throated sparrow occurs in the southeastern corner of Oregon. It prefers to nest at the
34 interface of valleys and hills with scattered desert shrub and a grass understory or under pile of rocks.
35 Idaho populations are found in sagebrush, juniper, or salt-desert brush with plants near half a meter in

1 height. During breeding season insects are primarily consumed with seeds being the primary found
2 source after breeding season (Csuti et al 2001). The black-throated sparrow is known to occur in the
3 analysis area.

4 *BOBOLINK (OREGON BLM SENSITIVE, STATE VULNERABLE)*

5 The bobolink breeds throughout the northern United States and southern Canada stretching from coast
6 to coast. It prefers open prairies, grasslands, meadows, and grain crops. In Oregon it occurs in select
7 irrigated hay meadows with willows and other wet open grasslands that facilitate nesting. The bobolink
8 feeds primarily on grasses, seeds and during breeding season insects such as caterpillars, which are
9 abundant during these times. ORBIC data indicates the bobolink is present within one mile of the
10 analysis area (Csuti et al 2001). The bobolink is known to occur in the analysis area.

11 *BREWER'S SPARROW (IDAHO BLM SENSITIVE)*

12 The Brewer's sparrow primarily breeds in western North America from southern Yukon and British
13 Columbia to southern California. Its habitat includes sagebrush with clearings and open coniferous
14 forests and breed in shadscale, greasewood, and grasslands with shrubs. Their diet varies between
15 seeds and insects such as leafhoppers, beetles, aphids and caterpillars depending on the season
16 (Csuti et al 2001). The brewer's sparrow may occur in the analysis area.

17 *COMMON NIGHTHAWK (OREGON STATE SENSITIVE)*

18 The common nighthawk is a species that is found throughout western North America. It breeds in
19 Canada to Baja California and into Central Mexico and winters in South America. It commonly nests in
20 open areas and open forest. It feeds in all habitats present in Oregon such as forest, chaparral,
21 agriculture land, grasslands, dense forests and arid deserts. They mainly feed on a variety of insects
22 such as mosquitoes, grasshoppers, flies and moths. The ORBIC data indicates that the common
23 nighthawk is present within 5 miles of the analysis area (Csuti et al 2001) and is also known to occur in
24 the analysis area.

25 *GREAT GRAY OWL (OREGON STATE VULNERABLE)*

26 The great gray owl is found in the high latitudes of the northern hemisphere, stretching from Eurasia, to
27 northern Africa and North America. They can be found through central and northeast Oregon in
28 meadows and open coniferous forests. They may also be found in ponderosa pine and lodgepole pine
29 forests. They diet consists of small animals such as mice, gophers and squirrels (Csuti et al 2001). The
30 great gray owl may occur in the analysis area.

31 *FERRUGINOUS HAWK (IDAHO BLM SENSITIVE)*

32 The ferruginous hawk is distributed throughout western North America. It occurs in eastern Oregon and
33 prefers open country such as grassland, shrub-steppe, and juniper woodland. It requires cliffs ledges,
34 secluded trees, or riparian woodland to nest in. In Malheur County, there have also been reports of
35 ground nesting. The ferruginous hawk preys on mammals such as jackrabbits, ground squirrels, pocket
36 gophers and kangaroo rats and occasionally birds and small reptiles. ORBIC data indicates the

1 ferruginous hawk is present within one mile of the study corridor (Csuti et al 2001). The ferruginous
2 hawk is known to occur in the analysis area.

3 *FLAMMULATED OWL (OREGON STATE VULNERABLE)*

4 The flammulated owl can be found in western North America, stretching from southern Canada to
5 central Mexico. In Oregon it is found in open forest with a ponderosa pine component. It prefers large
6 trees for roosting adjacent to large open areas where it can forage. It feeds mainly on insects such as
7 beetles, crickets, spiders and occasionally a small mammal (Csuti et al 2001). The flammulated owl
8 may occur in the analysis area.

9 *GOLDEN EAGLE (BALD AND GOLDEN EAGLE PROTECTION ACT)*

10 The Golden Eagle is found throughout the northern hemisphere. In Oregon it can be found on the
11 eastern side of the state. It prefers open country such as grasslands, pasture, desert scrub, open
12 coniferous forests and canyons. The diet includes small mammals such as rabbits, squirrels, mice and
13 small birds. (Csuti et al 2001). The golden eagle is known to occur in the analysis area.

14 *GRASSHOPPER SPARROW (OREGON BLM SENSITIVE, OREGON STATE SENSITIVE)*

15 The grasshopper sparrow is commonly found in central and eastern United States but occurs
16 sporadically in states that border the northern pacific coast. It can be found in northeastern Oregon. It is
17 found in grasslands with occasional shrub vegetation but avoids areas if the shrub cover exceeds thirty
18 five percent. They can occur in woodland areas if the understory is primarily grass. It feeds primarily on
19 insects and occasionally on grasses, seeds and forbs (Csuti et al 2001). The grasshopper sparrow is
20 known to occur in the analysis area.

21 *GREATER SAGE-GROUSE (FEDERAL CANDIDATE, OREGON AND IDAHO BLM*
22 *SENSITIVE, USFS SENSITIVE, OREGON STATE VULNERABLE)*

23 **Regulatory Status**

24 The rangewide population of Greater Sage-Grouse became a candidate species for listing under the
25 ESA as threatened or endangered on March 4, 2010 (75 FR 13909). In addition to its ESA candidate
26 status, the Greater Sage-Grouse is included as a BLM and USFS sensitive species, and is considered
27 vulnerable by the State of Oregon.

28 **Taxonomy and Life History**

29 Division of Greater Sage-Grouse (*C. urophasianus*) into two distinct subspecies along varying
30 geographic lines has been debated (Schroeder et al. 1999), and is considered invalid by many experts
31 (Connelly et al. 2004). The division into two subspecies is not recognized by the USFWS (USFWS
32 2003).

33 Greater Sage-Grouse breeding occurs between late February and early June and centers on a lek or
34 strutting ground, usually located in open areas surrounded by low sagebrush. Mating is thought to

1 occur on the lek, with hens nesting 1 to 2 weeks later (Utah Division of Wildlife Resources [UDWR]
2 2009) under sagebrush within 1 to 2 miles of the lek (Connelly et al. 2004, Knerr 2007, Robinson 2007).
3 Average clutch size for first nests varies from 6.0 to 9.5 throughout the species range (Schroeder 1997;
4 Sveum 1998). Greater Sage-Grouse chicks are dependent on insect prey base after hatching (Johnson
5 and Boyce 1990), but their diet shifts almost entirely to sagebrush as local vegetation dries in the late
6 summer (Schroeder et al. 1999).

7 **Distribution and Habitat Requirements**

8 Historical distribution of the Greater Sage-Grouse includes 13 western states in the United States and
9 three Canadian provinces (British Columbia, Alberta, and Saskatchewan) (Schroeder et al. 1999,
10 Schroeder et al. 2004, Young et al. 2000). Current distribution represents approximately fifty six percent
11 of historical range across 11 western U.S. states and two Canadian providences (Schroeder et al.
12 2004). The distribution of Greater Sage-Grouse is closely aligned with the distribution of sagebrush-
13 dominated landscapes (Schroeder et al. 2004) in foothills, plains, and mountain slopes (Connelly et al.
14 2000). Greater Sage-Grouse require large, intact and connected expanses of sagebrush shrubland to
15 exist (Aldridge et al. 2008; Wisdom et al.2011). Greater Sage-Grouse typically occupy sagebrush
16 vegetation but may also use a variety of other habitats (e.g., riparian meadows, agricultural lands)
17 intermixed in a sagebrush-dominated landscape (Shepard 2006).

18 Greater Sage-Grouse habitat use varies by season. Suitable breeding and brood-rearing habitats
19 include a variety of sagebrush communities that are capable of supporting a continued source of
20 succulent forbs and insects, higher-elevation habitats where forbs are still present, agricultural fields,
21 lower-elevation meadows, moist grassy areas, and riparian areas adjacent to sagebrush communities.
22 Winter habitat consists of relatively large areas of sagebrush that provide cover and forage for Greater
23 Sage-Grouse above the snow level (Connelly et al. 2000). Greater Sage-Grouse populations may be
24 nonmigratory or migratory, moving between or among seasonal use areas (Connelly et al. 2011a).

25 **Threats to Survival**

26 Greater Sage-Grouse numbers have declined rangewide. Population declines have coincided with a
27 decrease in habitat quality. The reasons for habitat loss vary from site to site, but include wildfire, urban
28 expansion, development, agricultural conversion, herbicide treatments, rangeland seeding, noxious
29 weeds and invasive species expansion, conifer encroachment, drought, and improper livestock grazing
30 management (Connelly et al. 2004).

31 **Occurrence in the Project Area**

32 The Western Association of Fish and Wildlife Agencies defined seven Greater Sage-Grouse
33 Management Zones for assessing population and habitat trends independent of administrative and
34 jurisdictional boundaries. The analysis area is located within two management zones. Management
35 Zone VI, Columbia Basin is located at the very north end of the analysis area where there are no extant
36 populations of Greater Sage-Grouse. The south end of the project area is in Management Zone IV,
37 Snake River Plain. Garton et al. (2011) identified five Greater Sage-Grouse populations in Oregon, and

1 two of these are in the project area (the Northern Great Basin population and the Baker population)
2 within Management Zone IV.

3 ODFW recent calculations of 2013 spring trend (moving 5-year average) count for the Baker core
4 population of the Greater Sage-Grouse population estimates only 571 birds, which is 62.6 percent
5 below the 2003 baseline of 2,017 birds. There are 34 known leks within this core area, 10 of which
6 have not had any observed male attendance in the last 10 years. Tetra Tech conducted Greater Sage-
7 Grouse lek surveys for Idaho Power Company during the breeding season in 2010, 2011, 2012, and
8 2013. Tables in Section 3.2.4 Wildlife Resources list the number of leks (based on survey results and
9 existing agency data) that are located within varying distances of the project's centerline (the centerline
10 being the line located directly under the transmission line).

11 *GREATER SANDHILL CRANE (STATE VULNERABLE)*

12 The greater sandhill crane can be found from northern Canada, south to Oregon, and east to the great
13 lakes. In Oregon it is commonly found in the southeastern portion of the state. It prefers marshes,
14 pastures and wet meadows to nest. The sandhill crane eats a variety of items including seeds, berries,
15 tubers, roots, green leaves and shoots. They also feed on small mammals, frogs, birds, and insects that
16 are trapped in the marshes. The ORBIC data indicates that the greater sandhill crane is located within 2
17 miles of the analysis area (Csuti et al 2001)

18 *HORNED GREBE (OREGON BLM SENSITIVE)*

19 The horned grebe is found in North America in Alaska, Canada and the northwest US. Its preferred
20 habitat includes areas with open water surrounded by emergent vegetation. It nests in vegetated areas
21 around freshwater lakes during the summer months primarily in Canada and Asia. Breeding begins in
22 April. The grebe eats mainly fish, amphibians, and aquatic insects and occasionally vegetation (Csuti et
23 al 2001).The horned grebe may occur in the analysis area.

24 *LEWIS'S WOODPECKER (OREGON AND IDAHO BLM SENSITIVE, USFS SENSITIVE,
25 STATE CRITICAL)*

26 The lewis's woodpecker is a bird that occurs in western North America. It breeds from central British
27 Columbia to central California and winters in northern Mexico. The preferred habitat is low elevation
28 open forests. In Oregon it nests in white oak, ponderosa pine, mixed oak-pine and riparian woodlands.
29 It diet consists of insects, acorns and berries. ORBIC data indicates the Lewis's woodpecker is present
30 within one mile of the study corridor (Csuti et al 2001). The Lewis's woodpecker is known to occur in
31 the analysis area.

32 *LOGGERHEADED SHRIKE (IDAHO BLM SENSITIVE)*

33 The loggerheaded shrike occurs throughout North America, breeding in Canada and central United
34 States. It can be found in moderately open vegetation type where there are occasional shrubs or trees.
35 They can be found in desert communities, juniper woodlands, open pine and oak woodlands, and
36 mountain shrubs. Nesting begins in April and continues for approximately two months until the young

1 can be independent. It is primarily a carnivore eating any small animal it can catch, including small
2 birds, mammals, reptiles, amphibians, and fish. ORBIC data indicates that the loggerheaded shrike is
3 located within two miles of the analysis area (Csuti et al 2001).

4 *LONG-BILLED CURLEW (STATE VULNERABLE)*

5 The long-billed curlew is located in western North America spanning from southern Canada south to
6 Texas. It breeds in open valleys and flatlands and winters along the pacific coast as far south as
7 Mexico. It feeds in grasslands and agricultural areas and eats insects, worms, berries, small bird eggs,
8 small fish and seeds. ORBIC data indicates that long-billed curlew is present within one mile of the
9 analysis area (Csuti et al 2001).

10 *MOUNTAIN QUAIL (IDAHO BLM SENSITIVE)*

11 The mountain quail can be found along the pacific coast and in the northwest of North America. Habitat
12 occurs mostly in sage brush in eastern Oregon and around fields and agriculture in other parts of the
13 state. Breeding begins in April and young may stay with parents until the fall. It has a seasonally
14 influenced diet, in the summer it primarily feeds on seeds and insects, during the winter it feeds on
15 seeds and grasses (Csuti et al 2001). The mountain quail may occur in the analysis area.

16 *NORTHERN GOSHAWK (IDAHO BLM SENSITIVE, MIS)*

17 The northern goshawk is a habitat generalist and can be found in both coniferous and deciduous
18 forests, woodlands, or along tree lines adjacent to open habitats. Their habitat is coniferous forest but
19 may also occupy aspen groves and desert mountains ranges. They can be found in ponderosa pine
20 forest located in the Blue Mountains of Oregon. They prefer to feed on birds and small mammals,
21 including quail, smaller hawks, duck, squirrels and mice. ORBIC data indicates that the northern
22 goshawk is present within one mile of the analysis area (Csuti et al 2001).

23 *OLIVE-SIDED FLYCATCHER (OREGON STATE VULNERABLE)*

24 The olive-sided flycatcher limited to the western half of North America extending from Alaska to
25 northern Baja California. In Oregon, it is found in coniferous forests and prefers a patchycanopy to open
26 canopy, though it can be found in a variety of forests from sea level to subalpine. Its diet consists of
27 small insects such as flies, beetles, mosquitoes and other small flying insects (Csuti et al 2001). The
28 olive-sided flycatcher is known to occur in the analysis area.

29 *PILEATED WOODPECKER (OREGON STATE VULNERABLE, MIS)*

30 The pileated woodpecker is found typically in the eastern United States and the forests of the
31 Northwest, extending down to northern California. Pileated woodpeckers do not migrate (Bull and
32 Jackson 2011). It prefers both forest types found in Oregon, Douglas-fir of western Oregon and
33 ponderosa pine of eastern Oregon. It favors old-growth for nesting. It feeds mainly on carpenter ants,
34 beetles, termites, fruit, berries, and vegetable matter during the winter month's (Csuti et al 2001). The
35 pileated woodpecker is known to occur in the analysis area.

1 *PRAIRIE FALCON (IDAHO BLM SENSITIVE)*

2 The prairie falcon is a bird that is commonly found in the southwest portion of the United States. Its
3 range occurs from southern Canada to northern Mexico. It prefers open arid desert and grasslands or
4 alpine meadows. It occurs throughout eastern Oregon in mountainous areas with cliffs that may provide
5 nesting areas. They feed primarily on small mammals and birds such as jackrabbits, mice, squirrels,
6 ducks, quail, doves and sparrows (Csuti et al 2001). The prairie falcon is likely to occur in the analysis
7 area.

8 *SAGE SPARROW (IDAHO BLM SENSITIVE)*

9 The sage sparrow is commonly found in the northwest portion of the United States. It prefers shrub
10 communities such as sage brush covered valleys as well as shadscale and greasewood. It feeds on
11 small insects, green foliage and seeds (Csuti et al 2001). The sage sparrow is known to occur in the
12 analysis area.

13 *SWAINSON'S HAWK (STATE VULNERABLE)*

14 The Swainson's hawk is found in the western United States from Alaska south to Mexico and winters in
15 South America. It occurs in eastern Oregon and prefers open country just as grasslands and large
16 meadows. Trees are necessary for nesting. It primarily preys on small mammals including ground
17 squirrels, pocket gophers, mice and occasionally small birds. The ORBIC data has indicated that the
18 Swainson's hawk occurs within one mile of the analysis area (Csuti et al 2001).

19 *UPLAND SANDPIPER (USFS SENSITIVE, STATE CRITICAL)*

20 The upland sandpiper has a range that extends throughout North America and wintering in South
21 America. In Oregon, it occurs in grasslands and meadows with the occasional perimeter tree along the
22 edge. It mainly feeds on insects such as grasshoppers and crickets (Csuti et al 2001). The upland
23 sandpiper is likely to occur in the analysis area.

24 *WESTERN BURROWING OWL (STATE VULNERABLE)*

25 The western burrowing owl occurs mainly in western North America from southern Canada to central
26 Mexico. It lives in open deserts such as fields, grasslands and desert scrub that may provide long-
27 range visibility. It's also commonly found near airports and along roadsides as these areas provide
28 large open areas. It primarily feeds on mice and voles, as well as insects such as grasshoppers. The
29 ORBIC data has indicated that the Western Burrowing Owl is present within one mile of the analysis
30 area (Csuti et al 2001).

31 *WHITE-HEADED WOODPECKER (OREGON BLM SENSITIVE, USFS SENSITIVE,*
32 *STATE CRITICAL)*

33 The white-headed woodpecker can be found scattered throughout the Pacific Northwest and along the
34 pacific coast extending down to northern Mexico. It is closely associated with ponderosa pine with
35 mixed conifer forests. It requires large trees and snags for nesting. It mainly feeds on insects and the

1 seeds of the ponderosa pine (Csuti et al 2001). The white-headed woodpecker may occur in the
2 analysis area.

3 *WILLOW FLYCATCHER (IDAHO BLM SENSITIVE)*

4 The willow flycatcher breeds coast-to-coast in North America and winters in Central America. It prefers
5 willows adjacent to riparian habitat, wet meadows and streams and rivers to nest in. It primarily feeds
6 on flying insects such as flies, wasps, beetles, bees and grasshoppers (Csuti et al 2001). The willow
7 flycatcher may occur in the analysis area.

8 **MAMMALS**

9 *AMERICAN MARTEN (MIS, OREGON STATE VULNERABLE)*

10 The America Marten occurs in northern North America stretching from southern Canada to New
11 England and continues along the Pacific coast until northern California. It can be found at any elevation
12 and can even be found wandering into alpine areas. The American marten is associated with mature or
13 late-successional mesic to dry conifer forests that contain coarse woody debris, have multi-storied
14 canopy with a closure of at least 60 percent, and are adjacent to riparian areas (Vasquez and Spicer
15 2005). They are carnivores that feed on smaller mammals such as shrews, woodrats, voles, squirrels
16 and small beavers. In Oregon, the species has been declining due to deforestation and fragmetation
17 (Csuti et al 2001). The American marten is unlikely to occur in the analysis area.

18 *CALIFORNIA BIGHORN SHEEP (IDAHO BLM SENSITIVE)*

19 Bighorn sheep habitats range from alpine to Great Basin sagebrush scrub. They prefer open ground
20 and areas with access to steep, rocky terrain (escape habitat) and generally avoid forests, thick brush,
21 and large expanses lacking precipitous escape terrain. Suitable escape terrain (cliffs, talus slopes, etc.)
22 is an important feature of the habitat. Winter range seems to be limiting population growth of
23 reintroduced Wallowa herds. This species does not spread into new habitat quickly. The California big
24 horned sheep may occur in the analysis area.

25 *FRINGED MYOTIS (OREGON BLM SENSITIVE, USFS SENSITIVE,
26 STATE VULNERABLE)*

27 The fringed myotis occupies a variety of habitats but prefers forests or riparian areas, it can be found in
28 willow-bordered riparian areas in sagebrush, oak and pinyon habitats. It uses caves and buildings as
29 roost sites. Unlike most bats, the fringed myotis gleans its prey from the ground or from vegetation, and
30 occasionally while in flight. It eats moths, spiders, beetles and flies (Csuti et al 2001). The fringed
31 myotis is known to occur in the analysis area.

32 *GRAY WOLF (OREGON BLM SENSITIVE, USFS SENSITIVE, STATE ENDANGERED)*

33 The gray wolf is a generalist that can survive in desert, forests, and grasslands. It's distribution is
34 primarily determined by the presence of ungulate prey (elk and deer), although they will also take other
35 species opportunistically, including beaver and small mammals. Wolves are wide ranging animals, and

1 have dispersed back into Oregon recently from reintroductions in Idaho. There are currently four or five
2 packs resident in Oregon. The gray wolf is known to occur in the analysis area.

3 *LONG-LEGGED MYOTIS (STATE VULNERABLE)*

4 The long-legged myotis occurs in montane coniferous forests, and riparian and desert (Baja California)
5 habitats. It feeds primarily on moths, but may also consume a wide variety of invertebrates including
6 fleas, termites, lacewings, wasps, and small beetles (NatureServe 2013). The long-legged myotis is
7 known to occur in the analysis area.

8 *MERRIAM'S GROUND SQUIRREL (IDAHO BLM SENSITIVE)*

9 Merriam's ground squirrel occurs in high desert (sagebrush, shadscale, greasewood, western juniper),
10 grasslands, pastures (NatureServe 2013) and in river valley bottomland. Main diet of the Merriam's
11 ground squirrel consists of herbaceous vegetation (grasses, forbs, and exotic annuals), and seeds;
12 however, it may also eat some shrub parts and animal matter. The Merriam's ground squirrel may
13 occur in the analysis area.

14 *NORTH AMERICAN WOLVERINE (OREGON BLM SENSITIVE, USFS SENSITIVE,*
15 *STATE THREATENED)*

16 On August 12, 2014 the USFWS determined that the North American wolverine did not warrant
17 protection under the Endangered Species Act. The North American wolverine utilizes a variety of high-
18 elevation wilderness habitat, including older open forests, but the key feature seems to be absence of
19 human activity. Home ranges are very large, averaging more than 100,000 acres for males and more
20 than 95,000 acres for females. It is not clear if Oregon has a self-sustaining population. The wolverine
21 eats small to medium-sized rodents, but also berries, roots, birds, rabbits, squirrels and porcupines. It
22 has been known to eat carrion and may cache carrion and surplus prey beneath snow and ice. The
23 North America wolverine may occur in the analysis area.

24 *PALLID BAT (OREGON BLM SENSITIVE, STATE VULNERABLE)*

25 The pallid bat occurs in arid deserts and grasslands, often near rocky outcrops and water. It usually
26 roosts in rock crevices or buildings, less often in caves, tree hollows, or mines. In Oregon, night roosts
27 were identified in buildings, rock overhangs, and under bridges. The pallid bat is a gregarious species
28 and usually forms clusters in diurnal roosts. It may also gather in night roosts that are frequently near,
29 but separate from, day roosts (NatureServe 2013, Csuti et al 2001). The pallid bat is known to occur in
30 the analysis area.

31 *PYGMY RABBIT (OREGON AND IDAHO BLM SENSITIVE)*

32 The pygmy rabbit is limited to the northern half of the Great Basin, and an isolated population
33 concentrated in the southeast portion of Oregon. It prefers big sagebrush and areas dominated by
34 greasewood. They require soft, fine soil to dig their deep burrows. It feeds almost exclusively on leaves
35 from the local sage brush, but during the summer, it may feed on grasses. The pygmy rabbit may occur
36 in the analysis area.

1 *ROCKY MOUNTAIN ELK (MIS)*

2 The Rocky Mountain Elk is a subspecies of elk that occurs in the western portion of the United States
3 and Oregon specifically. It is primarily found in forests, meadows, and valleys. The elk are grazers and
4 the diet consists almost entirely of grasses and forbs. During the winter, they commonly turn to twigs or
5 local trees, and other woody vegetation (Csuti et al 2001). The Rocky Mountain elk is known to occur in
6 the analysis area.

7 *SPOTTED BAT (OREGON AND IDAHO BLM SENSITIVE, USFS SENSITIVE, STATE*
8 *VULNERABLE)*

9 The spotted bat has a poorly documented global range. It has been found in British Columbia, east to
10 Montana and south to Central Mexico. It has been spotted in a variety of habitats ranging from
11 ponderosa pine to arid desert regions on southeastern Oregon. It feeds primarily on Moths and forages
12 between midnight and 3:00 a.m (Csuti et al 2001). The spotted bat may occur in the analysis area.

13 *TOWNSEND'S BIG-EARED BAT (OREGON AND IDAHO BLM SENSITIVE,*
14 *USFS SENSITIVE)*

15 The Townsend's big-eared bat can be found through North America. Two subspecies occur in Oregon,
16 one west of the Cascades and one in the arid southeast. Suitable roosts are important to distribution and
17 commonly roost in caves, bridges, mines, and buildings. Its diet consists of moths, beetles, bugs, and
18 flies (Csuti et al 2001). The Townsend's big-eared bat is known to occur in the analysis area.

19 *WASHINGTON GROUND SQUIRREL (USFWS CANDIDATE, OREGON BLM SENSITIVE,*
20 *STATE ENDANGERED)*

21 **Regulatory Status**

22 The Washington ground squirrel was designated as a candidate for ESA listing by the USFWS in 1994
23 (59 FR 58982); its listing under the ESA has been determined that it may be warranted, but is
24 precluded by higher priority actions. The USFWS has assigned a listing priority number of 5 to the
25 Washington ground squirrel (on a scale of 1 to 12, with 1 indicating the highest listing priority; 75 FR
26 69239). As a result of a settlement agreement, the USFWS has agreed to publish a final listing decision
27 by the end of fiscal year 2015.

28 The Washington ground squirrel was state-listed as endangered in Oregon in 2000. In Oregon, some
29 threats are being addressed as a result of the state listing, and by implementation of the Threemile
30 Canyon Farms Multi-Species Candidate Conservation Agreement with Assurances which protects 36
31 percent of known Oregon colonies, about one-third of known occupied habitat, from agricultural
32 development. NatureServe lists the global status of the Washington ground squirrel as imperiled, and
33 the IUCN category is Vulnerable. The biggest factor causing the decline of this species is habitat loss
34 (NatureServe 2010).

1 **Taxonomy and Life History**

2 The Washington ground squirrel is a member of the family Sciuridae, described in 1938 as
3 Spermophiluswahingtoni by A.H. Howell (Rickart and Yensen 1991). However, this genus was revised
4 in 2009, and now eight new ground squirrel genera are recognized that were formerly included in the
5 genus Spermophilus (Helgen et al. 2009). The Washington ground squirrel is one of 12 species of
6 Holarctic ground squirrels in the genus Urocitellus (Helgen et al. 2009). The species is monotypic
7 (Rickart and Yensen 1991).

8 Washington ground squirrels eat a broad range of succulent forb and grass stems, buds, leaves,
9 flowers, roots, bulbs, seeds; they also eat insects and various agricultural crops (Rickart and Yensen
10 1991). Washington ground squirrels usually live less than five years and have high annual mortality
11 rates. Mortality rates at four Washington study sites between 2005 and 2006 were 66 percent for males
12 and 76 percent for females. Causes of mortality included starvation or freezing during
13 estivation/hibernation, predation often by badgers and various birds of prey, disease, and human
14 interference (Delavan 2008; USFWS 2010b).

15 **Threats to Survival**

16 Threats to the survival of the Washington ground squirrel are summarized in the USFWS's 2010
17 candidate review (75 FR 69239):

18 Agricultural, residential, and wind power development, along with other forms of
19 development, continue to eliminate Washington ground squirrel habitat in portions of its
20 range. Throughout much of its range, Washington ground squirrels are threatened by the
21 establishment and spread of invasive plant species, particularly cheatgrass, which alter
22 available cover and food quantity and quality, and increase fire intervals. Additional threats
23 include habitat fragmentation, recreational shooting, genetic isolation and drift, and
24 predation. Potential threats include disease, drought, and possible competition with related
25 species in disturbed habitat at the periphery of their range.

26 **Occurrence in the Project Area**

27 Within the analysis area, the Washington ground squirrel can be found at the western end of the
28 proposed transmission line, in Morrow and Umatilla counties. Surveys were conducted in 2011, 2012,
29 and 2013 to determine the distribution of Washington ground squirrel colonies in proximity to the
30 transmission line corridor. The ODFW typically applies a 785-foot buffer around the outside boundary of
31 Washington ground squirrel colonies as an avoidance area for energy development projects. The
32 survey corridor included this and an additional 250-foot distance along both sides of the Proposed
33 Action for a combined total survey corridor of 1,035 feet to allow for minor shifts in the alignment of the
34 transmission line.

35 In 2011, a total of 15,577 acres of suitable habitat were identified within 1,035 feet of the Proposed
36 Action (including one alternative route), access roads, and associated facilities including areas that
37 would only be temporarily disturbed during construction. Based on this determination of habitat
38 suitability, surveys were conducted from Portland General Electric's Grassland Substation east to

1 approximately MP 83 within the Proposed Action running west and south of the Naval Weapons
2 System Training Facility Boardman and the Longhorn Alternative running north of the training facility.
3 Portions of the survey area are on private lands (approximately 26 percent of the area identified as
4 potentially suitable habitat) were not able to be surveyed because landowner permission could not be
5 obtained.

6 The 2011 surveys documented 30 active Washington ground squirrel colonies within 1,035 feet of
7 project disturbance areas. The size of these colonies ranged from 0.05 acres to 41 acres. All but two of
8 the colonies were less than 10 acres in size, and all but three of the colonies intersect the 785-foot
9 buffer from features of the Proposed Action. The colonies were clustered in two general areas: (1) the
10 immediate vicinity of the Naval Weapons System Training Facility the Boardman Conservation Area,
11 and (2) east of the training facility along the Longhorn Alternative. The colonies that were found in
12 Umatilla County in 2011 are part of a previously undocumented population of Washington ground
13 squirrels.

14 In 2012, the survey area was shifted to accommodate changes in the alignment of the Proposed Action,
15 and a total of 7,943 acres of suitable habitat was identified within 1,035 feet of the Proposed Action.
16 The 2012 survey area did not include areas that had been surveyed in 2011, with the exception of five
17 colonies that were identified in 2011 and were still within 1,035 feet of the Proposed Action.
18 Approximately 66 percent of suitable habitat identified in 2012 was surveyed. One of the five colonies
19 identified in 2011 was determined to be active in 2012, and three new colonies were identified during
20 the 2012 survey, bringing the total number of active and inactive colonies occurring within 1,035 feet of
21 the 2012 Proposed Action to eight.

22 In 2013, additional surveys were conducted along the Longhorn Variation Alternative south of the
23 proposed Longhorn Substation (i.e., along the eastern edge of the Naval Weapons System Training
24 Facility). A total of 4,918 acres of suitable habitat was identified within 1,035 feet of the Longhorn
25 Variation; approximately 59 percent of the suitable habitat along the Longhorn Variation was able to be
26 surveyed in 2013. One active colony was documented within the survey area in 2013; a potential
27 colony was also identified on the training facility grounds to the west of the survey area, which was not
28 able to be surveyed because of restricted access.

29 *WHITE-TAILED JACKRABBIT (STATE VULNERABLE)*

30 The white-tailed jackrabbit occupies open grasslands and sagebrush plains. At higher elevations the
31 rabbit can be found in open areas adjacent to pine forests and in alpine tundra. This jackrabbit rests by
32 day, usually in shallow depressions at the base of shrubs or in a snow cavity. Young are born in a well
33 concealed depression in the ground or in burrows abandoned by other animals. This species of
34 jackrabbit eats grasses, forbs, and grains in summer, browses on twigs, buds, and bark in winter (Csuti
35 et al 2001). The white-tailed jackrabbit is known to occur in the analysis area.

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