

Appendix E

SUPPORTING DATA

FOR WILDLIFE RESOURCES

E.1 SPECIAL STATUS SPECIES

Special status species include the following: (1) species listed under the Endangered Species Act (ESA) as endangered, threatened, proposed, or candidate; (2) Bureau of Land Management (BLM) and U.S. Forest Service (USFS) sensitive species; (3) State of Oregon-listed threatened, endangered, vulnerable, or critical species; and (4) State of Idaho species of greatest conservation need (SGCN). Both the USFS and the BLM have established lists of species they consider “at risk” on lands they manage: the USFS Regional Forester’s sensitive species list and the BLM State Director’s special status species list. The Regional Forester’s sensitive species list includes animal species for which population viability is a concern within lands managed by the USFS. BLM special status species, per BLM Manual 6840, are managed under the Special Status Species Policy, whose purpose is to conserve listed species and their ecosystems and to ensure that actions taken by the BLM are consistent with the conservation of special status species and do not contribute to the listing of any species under the ESA.

A 10-mile wide study corridor centered on the Boardman to Hemingway Transmission Line (B2H) Project centerline was used to identify special status wildlife species potentially occurring in the B2H Project study corridor; refer to Section 3.2.4.4 for a more detailed discussion of the methods used to identify special status wildlife species. Special status wildlife species identified include amphibians, reptiles, mammals, birds, and invertebrates; information on special status fish species occurring in the study corridor is provided in Section 3.2.5.5. The 102 species identified in the 10-mile study corridor are listed below in Table E-1, along with regulatory status and likelihood the species to occur in the B2H Project area. Refer to Section 3.2.4 for a detailed analysis of potential B2H Project impacts on special status wildlife species.

Table E-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
Amphibians			
Columbia spotted frog (Great Basin distinct population segment)	<i>Rana luteiventris</i>	ID BLM, ID SGCN, OR BLM, CR	Known to occur
Columbia spotted frog (population outside Great Basin distinct population segment)	<i>Rana luteiventris</i>	USFS, CR	Known to occur
Northern leopard frog	<i>Litobates pipiens</i>	ID BLM, ID SGCN, OR BLM, CR	Known to occur
Rocky Mountain tailed frog	<i>Ascaphus montanus</i>	OR BLM, USFS, SV	Known to occur

Table E-1. Special Status Species Reviewed in the Project Area with Suitable Habitat Present in the Study Corridors			
Western toad	<i>Bufo boreas</i>	ID BLM, ID SGCN, SV	Known to occur
Woodhouse's toad	<i>Anaxyrus woodhousii</i>	ID BLM, ID SGCN, OR BLM	May occur
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, ID SGCN	Known to occur
Painted turtle	<i>Chrysemys picta</i>	OR BLM	Known to occur
Western ground snake	<i>Sonora semiannulata</i>	ID BLM	Known to occur
Birds			
American bittern	<i>Botaurus lentiginosus</i>	ID SGCN	May occur
American peregrine falcon	<i>Falco peregrinusanatum</i>	OR BLM, ID BLM, USFS, SV	Known to occur
American three-toed woodpecker	<i>Picoides dorsalis</i>	SV	Known to occur
American white pelican	<i>Pelecanus erythrorhynchos</i>	ID SGCN, OR BLM, SV	May occur
Bald eagle	<i>Haliaeetus leucocephalus</i>	BGEPA, 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
Black tern	<i>Chlidonias niger</i>	ID SGCN	May occur
Bobolink	<i>Dolichonyx oryzivorus</i>	OR BLM, SV	Known to occur
Brewer's sparrow	<i>Spizella breweri</i>	ID BLM	May occur
Burrowing owl	<i>Athene cunicularia</i>	CR, ID BLM, ID SGCN,	Known to occur
California gull (breeding population)	<i>Larus californicus</i>	ID SGCN	May occur
Caspian tern	<i>Hydroprogne caspia</i>	ID SGCN	May occur
Cassin's Finch	<i>Haemorhous cassinii</i>	ID BLM	May occur
Clark's grebe	<i>Aechmophorus clarkii</i>	ID SGCN	May occur
Common nighthawk	<i>Chordeiles minor</i>	ID SGCN, SC	Known to occur
Ferruginous hawk	<i>Buteo regalis</i>	CR, ID BLM, ID SGCN	Known to occur
Flammulated owl	<i>Otus flammeolus</i>	SV	Known to occur
Golden eagle	<i>Aquila chrysaetos</i>	BGEPA, ID BLM, ID SGCN	Known to occur
Grasshopper sparrow	<i>Ammodramus savannarum</i>	OR BLM, ID BLM, ID SGCN, SV	Known to occur
Great gray owl	<i>Strix nebulosa</i>	SV	Known to occur
Greater Sage-Grouse	<i>Centrocercus urophasianus</i>	OR BLM, ID BLM, ID SGCN, USFS, SV	Known to occur

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

Greater sandhill crane	<i>Grus canadensis tabida</i>	SV	May occur
Harlequin duck	<i>Histrionicus histrionicus</i>	USFS, ID BLM	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, SV	Known to occur
Long-billed curlew	<i>Numenius americanus</i>	ID BLM, ID SGCN, SV	Known to occur
Mountain quail	<i>Oreortyx pictus</i>	ID BLM, SV	May occur
Northern goshawk	<i>Accipiter gentilis</i>	ID BLM, SV	Known to occur
Olive-sided flycatcher	<i>Contopus cooperi</i>	ID BLM, SV	Known to occur
Pileated woodpecker	<i>Dryocopus pileatus</i>	SV	Known to occur
Prairie falcon	<i>Falco mexicanus</i>	ID BLM	Known to occur
Ring-billed gull (breeding population)	<i>Larus delawarensis</i>	ID SGCN	May occur
Sage sparrow	<i>Amphispiza belli</i>	ID BLM, ID SGCN, CR	Known to occur
Sage thrasher	<i>Oreoscoptes montanus</i>	ID BLM, ID SGCN	Known to occur
Sandhill crane	<i>Grus canadensis</i>	ID SGCN	May occur
Short-eared owl	<i>Asio flammeus</i>	ID BLM, ID SGCN	Known to occur
Snowy egret	<i>Egretta thula</i>	OR BLM, SV	Known to occur
Swainson's hawk	<i>Buteo swainsoni</i>	SV	Known to occur
Tricolored blackbird	<i>Agelaius tricolor</i>	OR BLM	Known to occur
Upland sandpiper	<i>Bartramia longicauda</i>	USFS, CR	May occur
Western grebe	<i>Aechmophorus occidentalis</i>	ID SGCN	May occur
White-faced ibis	<i>Plegadis chihi</i>	ID BLM, ID SGCN	May occur
White-headed woodpecker	<i>Picoides albolarvatus</i>	OR BLM, ID BLM, USFS, CR	Known to occur
Willow flycatcher	<i>Empidonax trailii</i>	ID BLM	May occur
Mammals			
American marten	<i>Martes americana</i>	SV	May occur
Bighorn sheep	<i>Ovis canadensis spp.</i>	ID BLM, ID SGCN	Known to occur
Big brown bat	<i>Eptesicus fuscus</i>	ID BLM S	Known to occur
California myotis	<i>Myotis californicus</i>	ID BLM, SV	Known to occur
Canyon bat	<i>Perimyotis hesperus</i>	ID BLM S	Known to occur
Columbia plateau ground squirrel	<i>Spermophilus canus</i>	ID SGCN	May occur
Fringed myotis	<i>Myotis thysanodes</i>	OR BLM, USFS, V	Known to occur
Gray wolf	<i>Canis lupus</i>	USFWS E, ID BLM, OR BLM, USFS	Known to occur
Hoary bat	<i>Lasiurus cinereus</i>	ID SGCN	May occur

Table E-1. Special Status Species Reviewed in the Project Area with Suitable Habitat Present in the Study Corridors			
Little brown bat	<i>Myotis lucifugus</i>	ID BLM S, ID SGCN	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>	USFWS P, OR BLM, ST	May occur
Pallid bat	<i>Antrozous pallidus</i>	OR BLM, V	Known to occur
Piute ground squirrel	<i>Urocitellus mollis</i>	ID BLM S	Known to occur
Pygmy rabbit	<i>Brachylagus idahoensis</i> (population outside Columbia Basin)	OR BLM, ID BLM, ID SGCN	Likely to occur
Silver-haired bat	<i>Lasionycetis noctivagans</i>	ID BLM, ID SGCN, SV	Known to occur
Spotted bat	<i>Euderma maculatum</i>	OR BLM, ID BLM, USFS, SV	May occur
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	OR BLM, ID BLM, ID SGCN, USFS	Known to occur
Washington ground squirrel	<i>Spermophilus washingtoni</i>	OR BLM, SE	Known to occur
Western small-footed myotis	<i>Myotis ciliolabrum</i>	ID BLM, ID SGCN	Known to occur
White-tailed jackrabbit	<i>Lepus townsendii</i>	SV	Known to occur
Invertebrates			
Alpine tiger beetle	<i>Cicindela plutonica</i>	ID SGCN	May occur
Blue mountainsnail	<i>Oreohelix strigosa delicata</i>	USFS	May occur
California floater	<i>Anodonta californiensis</i>	USFS	May occur
Columbia Oregonian	<i>Cryptomastix hendersoni</i>	USFS	May occur
Columbia pebblesnail	<i>Fluminicola fuscus</i>	USFS	May occur
Crooked Creek springsnail	<i>Pyrgulopsis intermedia</i>	OR BLM	May occur
Duckhead snowfly	<i>Capnura anas)</i>	ID SGCN	May occur
Fir pinwheel	<i>Radiodiscus abietum</i>	USFS	May occur
Hunt's bumble bee	<i>Bombus huntii</i>	ID SGCN	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
Johnsons' hairstreak	<i>Callophrys johnsoni</i>	USFS	Known to occur
Lined june beetle	<i>Polyphylla devestiva</i>	ID SGCN	May occur
Morrison bumble bee	<i>Bombus morrisoni</i>	ID SGCN	May occur
Owyhee springsnail	<i>Pyrgulopsis owyheensis</i>	OR BLM	Known to occur
Owyhee hot springsnail	<i>Pyrgulopsis fresti</i>	OR BLM	May occur
Poplar Oregonian	<i>Cryptoma stixpopuli</i>	OR BLM, USFS	May occur
Raptor fairy shrimp	<i>Branchinecta raptor)</i>	ID SGCN	May occur
Shortface lanx	<i>Fisherola nuttali</i>	USFS	May occur
Shiny tightcoil	<i>Pristiloma wascoense</i>	USFS	May occur

Table E-1. Special Status Species Reviewed in the Project Area with Suitable Habitat Present in the Study Corridors			
Silver-bordered fritillary	<i>Boloria selene</i>	OR BLM, USFS	May occur
Western bumblebee	<i>Bombus occidentalis</i>	USFS, OR BLM	Known to occur
Western ridged mussel	<i>Gonidea angulata</i>	ID SGCN, OR BLM, USFS	Known to occur
Table Abbreviations: BGEPA = Bald and Golden Eagle Protection Act BLM = Bureau of Land Management Sensitive C = Candidate for Federally Threatened or Endangered CR = State Critical E = Federally Endangered OR = Oregon ID = Idaho		SGCN = Species of Greatest Conservation Need SC = State Candidate SE = State Endangered ST = State Threatened SV = State Vulnerable USFS = U.S. Forest Service Sensitive USFWS = U.S. Fish and Wildlife Service	

E.2 WILDLIFE SPECIES

Wildlife species utilize a variety of habitats in the study corridor. These habitats provide important features such as foraging areas, breeding and wintering range, and cover for a range of bird, mammal, amphibian, reptile, and fish species common to eastern Oregon and southwestern Idaho. The existing wildlife habitats in the study corridor are generally categorized as grassland, shrubland, forest/woodland, Riparian Conservation Areas (RCAs) (includes wetlands, riparian, and surface water habitats, refer to Section 3.2.3), bare ground/cliff/talus, agriculture, and developed/disturbed areas. The habitat types occurring in the B2H Project area, as well as expected amounts of disturbance and commonly associated wildlife species, is summarized in Table E-2.

Table E-2. Typical Wildlife Species in the B2H Project Area by Habitat Type		
Habitat Type	Percent of Acres Affected by the Proposed Action and Alternatives	Common Wildlife Species
Grasslands (both native and semi-natural)	14.8	Pronghorn (<i>Antilocapra Americana</i>), coyote (<i>Canis latrans</i>), badger (<i>Taxidea taxus</i>), white-tailed jackrabbit, Washington ground squirrel (<i>Urocyon washingtoni</i>), northern pocket gopher (<i>Thomomys talpoides</i>), western harvest mouse (<i>Teithrodontomys megalotis</i>), mourning dove (<i>Zenaid 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>).

Table E-2. Typical Wildlife Species in the B2H Project Area by Habitat Type

Shrublands (disturbed shrubland, sagebrush, saltbrush, greasewood, and other shrubland types)	47.1	Mule deer (<i>Odocoileus hemionus</i>), elk (<i>Cervus canadensis</i>), pronghorn, coyote, Nuttall's cottontail (<i>Sylvilagus nuttallii</i>), deer mouse (<i>Peromyscus maniculatus</i>), Washington ground squirrel, sagebrush vole (<i>Lemmyscus 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)	10.8	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 hammondi</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.
Riparian Conservation Areas	10.5	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	13.0	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	1.5	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.

Table E-2. Typical Wildlife Species in the B2H Project Area by Habitat Type		
Bare ground (including cliff and talus areas)	2.2	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>).

E.3 AMPHIBIANS AND REPTILES

E.3.1 COLUMBIA SPOTTED FROG (IDAHO AND OREGON BLM SENSITIVE, IDAHO SGCN, USFS SENSITIVE, STATE CRITICAL)

Detailed information about the regulatory status, taxonomy and life history, threats to survival, and occurrence in the B2H Project area is provided in Section 3.2.4.

E.3.2 NORTHERN LEOPARD FROG (IDAHO AND OREGON BLM SENSITIVE, IDAHO SGCN, USFS SENSITIVE, STATE CRITICAL)

Northern leopard frog is widely distributed across northern North America, with the populations in eastern Oregon and western Idaho occurring at the margins of the distribution. Northern leopard frogs occur in or near various waterbodies and are typically found in areas with abundant vegetation. Adult frogs typically eat small invertebrates, while larvae graze and feed on algae, plant tissue, and detritus (NatureServe 2016).

E.3.3 ROCKY MOUNTAIN TAILED FROG (IDAHO AND OREGON BLM SENSITIVE, USFS SENSITIVE, STATE VULNERABLE)

Rocky Mountain tailed frog is distributed across the northern Rocky Mountains, occurring mostly in northern Idaho and western Montana; however, populations can be found in eastern Oregon in the Willowa Mountains. Adults are small, typically less than two inches in length, and are typically found in and along small, swift, perennial streams (NatureServe 2016).

E.3.4 WESTERN TOAD (IDAHO BLM SENSITIVE, IDAHO SGCN, STATE VULNERABLE)

Western toad is widely distributed across western North America from New Mexico north to Alaska, and is found in a variety of habitats from isolated springs to slow-moving rivers and streams, but can range a few kilometers from waterbodies into various upland habitats. Although widely distributed, population declines have been noted throughout the southern portions of the range as a result of several factors, including: disease and chytrid fungus infection, predation, and habitat destruction (NatureServe 2016).

E.3.5 WOODHOUSE'S TOAD (IDAHO SGCN, OREGON/IDAHO BLM SENSITIVE)

Woodhouse's toad can be found throughout the U.S. but are concentrated east of the Cascades in the Pacific Northwest. Woodhouse's toad (in Oregon) inhabits emergent marshes with bull rush; rangewide they require constant water sources, such as stream, ponds, and rivers, contrary to the western toad. The adults feed on a variety of small invertebrates and insects (NatureServe 2016).

E.3.6 COMMON GARTER SNAKE (IDAHO BLM SENSITIVE)

The common garter snake is widespread throughout North America except for extremely arid regions of the southwest U.S. It prefers to inhabit wet meadows and forests, but also open valleys and coniferous forests. It feeds on a variety of wildlife, including earthworms, frogs, toads, birds, fish, smaller reptiles and salamanders, and small mammals (NatureServe 2016).

E.3.7 LONGNOSE SNAKE (IDAHO BLM SENSITIVE)

The longnose snake is endemic to North America and inhabits a dry and arid environment. Its range is located primarily in the western U.S. and northern Mexico. It primarily feeds on smaller reptiles and amphibians and occasionally rodents (NatureServe 2016).

E.3.8 MOJAVE BLACK-COLLARED LIZARD (IDAHO BLM SENSITIVE, IDAHO SGCN)

The Mojave black-collared lizard, also known as the Great Basin black-collared lizard, is found in the western half of the U.S., extending from eastern Oregon and Idaho south to Baja California. In Oregon, it is found in desert habitat with sagebrush-steppe vegetation, among rimrock, ridges, rocky outcrops, road banks, sandy to rocky slopes, rocky washes, boulders and talus slopes. It feeds on other reptiles, insects, and occasionally plants (NatureServe 2016).

E.3.9 PAINTED TURTLE (OREGON BLM SENSITIVE)

Although widely distributed across North America from British Columbia southeast to Georgia, painted turtle has limited distribution in Oregon being restricted to the Columbia River, Willamette Valley, and the Blue Mountains. Painted turtles are typically found in slow-moving streams or shallow ponds and marshes with abundant aquatic vegetation (NatureServe 2016).

E.3.10 WESTERN GROUND SNAKE (IDAHO BLM SENSITIVE)

The western ground snake is primarily found in the southwestern U.S. from Oklahoma to northern Mexico, but can occasionally be found in arid regions in the northwest. It is found in dry and arid areas with grass or scrub vegetation with loose soil. It feeds on small insects such as scorpions, spiders, crickets and grasshoppers and occasionally small mammals (NatureServe 2016).

E.4 BIRDS

E.4.1 AMERICAN BITTERN (IDAHO SGCN)

American bitterns breed in freshwater marshes throughout the northern half of the U.S. Winters along southern coastal plain where temperatures remain above freezing. Breeding populations are patchily distributed throughout southern Idaho and a couple isolated locations north of Lake Pend Oreille. Population size range-wide is uncertain. American bitterns require large marshes with tall emergent vegetation (primarily hardstem bulrush and common cattail) for breeding. Marshes that become decadent are not typically suitable for this species, and birds using a decadent marsh can quickly dwindle. American bitterns are strictly carnivorous, feeding primarily on insects, amphibians, crayfish, and small fish and mammals. They mainly forage along shorelines and edges of emergent vegetation, but may also hunt for prey in open, flooded fields (IDFG 2015).

E.4.2 AMERICAN PEREGRINE FALCON (IDAHO AND OREGON BLM, USFS SENSITIVE, STATE VULNERABLE)

The American Peregrine falcon is located worldwide and found on every continent except Antarctica. In North America, it mainly breeds in Alaska and the western region and is uncommon in central and east North America. Nesting sites for the peregrine falcon are cliffs overlooking open areas with an abundance of food. They also nest along seacoasts, near marshes and even cities. The peregrine falcon mainly feeds on birds and attacks while they are in flight by performing high speed dives that can exceed 200 miles per hour (Csuti et al. 2001).

E.4.3 AMERICAN THREE-TOED WOODPECKER (STATE VULNERABLE)

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

E.4.4 AMERICAN WHITE PELICAN (OREGON BLM SENSITIVE, IDAHO SGCN, STATE VULNERABLE)

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

E.4.5 BALD EAGLE (BALD AND GOLDEN EAGLE PROTECTION ACT, OREGON AND IDAHO BLM SENSITIVE, USFS SENSITIVE, STATE THREATENED)

The bald eagle was de-listed on August 8, 2007 (72 *Federal Register* 37346), but the species continues to receive federal protection through the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. During breeding season, the eagle can be found in wetland habitats such as sea coasts,

rivers, large lakes, or marshes with an abundance of fish. It feeds mainly on fish but is also known to feed on carrion, smaller birds, and small mammals (Csuti et al. 2001).

E.4.6 BLACK-BACKED WOODPECKER (STATE VULNERABLE)

The black-backed woodpecker is found mainly in the western half of North America, but can also be found in north eastern U.S. It occurs at lower elevations. It can be found in a variety of forests but prefers ponderosa pine and lodgepole dominated forests. It feeds mainly on wood boring beetles and its larvae but may also feed on fruit, acorns, spiders and ants (Csuti et al. 2001). The black-backed woodpecker is under review by the U.S. Fish and Wildlife Service (USFWS) for a petition for listing.

E.4.7 BLACK-THROATED SPARROW (IDAHO BLM SENSITIVE)

The black-throated sparrow occurs in the southeastern corner of Oregon. It prefers to nest at the interface of valleys and hills with scattered desert shrub and a grass understory or under pile of rocks. Idaho populations are found in sagebrush, juniper, or salt-desert brush with plants near half a meter in height. During breeding season insects are primarily consumed with seeds being the primary food source after breeding season (Csuti et al. 2001).

E.4.8 BLACK TERN (IDAHO SGCN)

Black terns are localized breeders in the northern U.S. through central Canada. Most of the population is located in the northern and southeastern portions of the state. In northern Idaho, Kootenai National Wildlife Refuge and Westmond Lake appear to be consistent nesting locations for 30 and 15 pairs, respectively. Of the known breeding locations, most (more than 90 percent) are within National Wildlife Refuge or Idaho Department of Fish and Game (IDFG) Wildlife Management Area boundaries. Black terns generally breed semi-colonially (clusters of 11 to 50 nests) in shallow freshwater marshes with emergent vegetation (e.g., margins of lakes, ponds, rivers, islands, or sloughs). Unlike other North American terns, Black terns feed predominantly on insects during the breeding season, as well as freshwater fish when available (IDFG 2015).

E.4.9 BOBOLINK (OREGON BLM SENSITIVE, STATE VULNERABLE)

The bobolink breeds throughout the northern U.S. and southern Canada stretching from coast to coast. It prefers open prairies, grasslands, meadows, and grain crops. In Oregon it occurs in select irrigated hay meadows with willows and other wet open grasslands that facilitate nesting. The bobolink feeds primarily on grasses, seeds and during breeding season insects such as caterpillars, which are abundant during these times (Csuti et al. 2001).

E.4.10 BREWER'S SPARROW (IDAHO BLM SENSITIVE)

The Brewer's sparrow primarily breeds in western North America from southern Yukon and British Columbia to southern California. Its habitat includes sagebrush with clearings and open coniferous forests and breed in shadscale, greasewood, and grasslands with shrubs. Their diet varies between

seeds and insects, such as leafhoppers, beetles, aphids, and caterpillars, depending on the season (Csuti et al. 2001).

E.4.11 BURROWING OWL (IDAHO BLM SENSITIVE, IDAHO SGCN, STATE CRITICAL)

The western burrowing owl occurs mainly in western North America from southern Canada to central Mexico. It lives in open deserts such as fields, grasslands and desert scrub that may provide long-range visibility. It is also commonly found near airports and along roadsides as these areas provide large open areas. It primarily feeds on mice and voles, as well as insects such as grasshoppers (Csuti et al. 2001).

E.4.12 CALIFORNIA GULL (IDAHO SGCN)

California gulls breed in scattered locations throughout the Great Basin, northwest Great Plains, and south-central taiga of North America. California gulls breed almost exclusively on barren or sparsely vegetated islands in natural lakes, reservoirs, and rivers. California gulls will use a wide variety of fairly open habitats for foraging, including reservoirs, lakes, irrigation canals, weirs, garbage dumps, feed lots, irrigated agricultural fields, and pastures. This species is highly opportunistic and will feed on just about any food items that are possible to consume (although it prefers live animal prey), will occasionally steal food items from other species, and commonly eat eggs from other nests in the colony (IDFG 2015).

E.4.13 CASPIAN TERN (IDAHO SGCN)

Caspian terns breed in widely scattered locations along the Pacific coast, central Canada, the Intermountain West, the Great Lakes, the Gulf Coast, and along the Atlantic Coast. In the interior western U.S., there are approximately 280 breeding pairs. Of these, approximately 75 pairs currently breed at Island Park Reservoir in Idaho—this is now the only nesting location in the state. As recently as 2007, this species also nested at Blackfoot, Magic, and Mormon Reservoirs, and Bear Lake and Minidoka NWRs—in 2015, however, none of these locations were known to support nesting populations of Caspian terns. In the western interior, Caspian terns generally nest on open, fairly flat islands or islets of lakes, reservoirs, and rivers. In Idaho, this species appears to always nest in mixed-species colonies, particularly colonies with California gulls. This species forages over lakes, reservoirs, rivers, and sloughs and preys almost exclusively on fish (IDFG 2015).

E.4.14 CASSIN'S FINCH (IDAHO BLM SENSITIVE)

The breeding range of Cassin's finch extends from central British Columbia south northern New Mexico, and winter range extends from central Mexico north to southern British Columbia. Typical breeding habitat is open coniferous forest, but occasionally found nesting in shrublands and chaparral at lower elevations. Diet includes seeds and berries, as well as small invertebrates (NatureServe 2016).

E.4.15 CLARK'S GREBE (IDAHO SGCN)

Clark's grebes occur seasonally throughout most of the western half of North America where suitable wetlands occur. Most birds winter along the Pacific coast from British Columbia to Baja California. There are approximately 15,000 individuals in North America, and an estimated 472 of these breed in Idaho. In Idaho, the breeding distribution is primarily associated with the extensive Snake River drainage in the southern and southeastern parts of the state. Clark's grebes are colonial waterbirds that nest on freshwater lakes or marshes with extensive open water, where they feed primarily on fish (IDFG 2015).

E.4.16 COMMON NIGHTHAWK (IDAHO SGCN, STATE CANDIDATE)

The common nighthawk is a species that is found throughout western North America. It breeds in Canada to Baja California and into central Mexico and winters in South America. It commonly nests in open areas and open forest. It feeds in all habitats present in Oregon such as forest, chaparral, agriculture land, grasslands, dense forests and arid deserts. They mainly feed on a variety of insects such as mosquitoes, grasshoppers, flies and moths (Csuti et al. 2001).

E.4.17 FERRUGINOUS HAWK (IDAHO BLM SENSITIVE, IDAHO SGCN, STATE CRITICAL)

The ferruginous hawk is distributed throughout western North America. It occurs in eastern Oregon and prefers open country such as grassland, shrub-steppe, and juniper woodland. It requires cliffs ledges, secluded trees, or riparian woodland to nest in. In Malheur County, there have also been reports of ground nesting. The ferruginous hawk preys on mammals such as jackrabbits, ground squirrels, pocket gophers and kangaroo rats and occasionally birds and small reptiles (Csuti et al. 2001).

E.4.18 FLAMMULATED OWL (STATE VULNERABLE)

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

E.4.19 GOLDEN EAGLE (BALD AND GOLDEN EAGLE PROTECTION ACT, IDAHO BLM SENSITIVE, IDAHO SGCN)

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

E.4.20 GRASSHOPPER SPARROW (IDAHO AND OREGON BLM SENSITIVE, IDAHO SGCN, STATE VULNERABLE)

The grasshopper sparrow is commonly found in central and eastern U.S. but occurs sporadically in states that border the northern Pacific coast. It can be found in northeastern Oregon. It is found in grasslands with occasional shrub vegetation but avoids areas if the shrub cover exceeds 35 percent. They can occur in woodland areas if the understory is primarily grass. It feeds primarily on insects and occasionally on grasses, seeds and forbs (Csuti et al. 2001).

E.4.21 GREAT GRAY OWL (STATE VULNERABLE)

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

E.4.22 GREATER SAGE-GROUSE (IDAHO AND OREGON BLM SENSITIVE, IDAHO SGCN, USFS SENSITIVE, OREGON STATE VULNERABLE)

Detailed information about the regulatory status, taxonomy and life history, threats to survival, and occurrence in the B2H Project area is provided in Section 3.2.4.

E.4.23 GREATER SANDHILL CRANE (STATE VULNERABLE)

The greater sandhill crane, (a subspecies of the sandhill crane, described below) can be found from northern Canada, south to Oregon, and east to the Great Lakes. In Oregon it is commonly found in the southeastern portion of the state. It prefers marshes, pastures and wet meadows to nest. The sandhill crane eats a variety of items, including seeds, berries, tubers, roots, green leaves, and shoots. They also feed on small mammals, frogs, birds, and insects that are trapped in the marshes (Csuti et al. 2001).

E.4.24 HARLEQUIN DUCK (IDAHO BLM SENSITIVE, USFS SENSITIVE)

Harlequin duck typically winters along the northern Atlantic and Pacific coasts, but breeding habitat occurs in inland mountain ranges west to the Tetons, along streams and other flowing waterbodies far removed from human disturbance. Harlequin duck feed on aquatic invertebrates, primarily crustaceans and mollusks, as well as small fish (Atkinson 1991).

E.4.25 HORNED GREBE (OREGON BLM SENSITIVE)

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

E.4.26 LEWIS'S WOODPECKER (IDAHO AND OREGON BLM SENSITIVE, USFS SENSITIVE, STATE CRITICAL)

The Lewis's woodpecker is a bird that occurs in western North America. It breeds from central British Columbia to central California and winters in northern Mexico. The preferred habitat is low elevation open forests. In Oregon it nests in white oak, ponderosa pine, mixed oak-pine and riparian woodlands. Its diet consists of insects, acorns and berries. Oregon Biodiversity Information Center data indicates the Lewis's woodpecker is present within 1 mile of the study corridor (Csuti et al. 2001).

E.4.27 LOGGERHEADED SHRIKE (IDAHO BLM SENSITIVE, STATE VULNERABLE)

The loggerheaded shrike occurs throughout North America, breeding in Canada and central U.S. It can be found in moderately open vegetation type where there are occasional shrubs or trees. They can be found in desert communities, juniper woodlands, open pine and oak woodlands, and mountain shrubs. Nesting begins in April and continues for approximately two months until the young can be independent. It is primarily a carnivore eating any small animal it can catch, including small birds, mammals, reptiles, amphibians, and fish (Csuti et al. 2001).

E.4.28 LONG-BILLED CURLEW (IDAHO BLM SENSITIVE, IDAHO SGCN, STATE VULNERABLE)

The long-billed curlew is located in western North America spanning from southern Canada south to Texas. It breeds in open valleys and flatlands and winters along the Pacific coast as far south as Mexico. It feeds in grasslands and agricultural areas and eats insects, worms, berries, small bird eggs, small fish and seeds (Csuti et al. 2001).

E.4.29 MOUNTAIN QUAIL (IDAHO BLM SENSITIVE, STATE VULNERABLE)

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

E.4.30 NORTHERN GOSHAWK (IDAHO BLM SENSITIVE, STATE VULNERABLE)

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

E.4.31 OLIVE-SIDED FLYCATCHER (IDAHO BLM SENSITIVE, STATE VULNERABLE)

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

E.4.32 PILEATED WOODPECKER (STATE VULNERABLE)

The pileated woodpecker is found typically in the eastern U.S. and the forests of the Northwest, extending down to northern California. Pileated woodpeckers do not migrate (Bull and Jackson 2011). It prefers both forest types found in Oregon, Douglas-fir of western Oregon and ponderosa pine of eastern Oregon. It favors old-growth for nesting. It feeds mainly on carpenter ants, beetles, termites, fruit, berries, and vegetable matter during the winter months (Csuti et al. 2001).

E.4.33 PRAIRIE FALCON (IDAHO BLM SENSITIVE)

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

E.4.34 RING-BILLED GULL (IDAHO SGCN)

Ring-billed gulls are known to breed across northern North America from coastal Newfoundland to western British Columbia. Nesting ring-billed gulls are currently known from three locations in Idaho: Blackfoot and Island Park reservoirs and Market Lake Wildlife Management Area. Ring-billed gulls breed almost exclusively on barren or sparsely vegetated islands in natural lakes, reservoirs, and rivers (IDFG 2015).

E.4.35 SAGE SPARROW (IDAHO BLM SENSITIVE, IDAHO SGCN, STATE CRITICAL)

The sage sparrow is commonly found in the northwest portion of the U.S. It prefers shrub communities such as sage brush covered valleys as well as shadscale and greasewood. It feeds on small insects, green foliage and seeds (Csuti et al. 2001).

E.4.36 SAGE THRASHER (IDAHO BLM SENSITIVE, IDAHO SGCN)

Sage thrasher is a widely distributed species breeding throughout the Great Basin and east to northern Montana and eastern Colorado; typical wintering range extending from southern California to central Mexico. Typical breeding habitat is extensive patches of dense sagebrush, with occasional bunchgrasses. Nests are often built in large, mature sagebrush. Diet primarily includes insects such as ants and beetles, but can include seeds and berries as well (Reynolds 1999).

E.4.37 SANDHILL CRANE (IDAHO SGCN)

Three crane populations occur in Idaho. The Lower Colorado River Valley Population breeds in southwest Idaho from the border with Nevada north to New Meadows. The Rocky Mountain Population breeds in south-central and eastern Idaho. Lesser sandhill cranes in the Pacific coast population use staging areas in the Treasure and Payette River valleys during spring migration on their way to nesting areas in southern Alaska. Sandhill cranes are found in well-watered river valleys, marshes, and meadows typically above 5,000 feet elevation (IDFG 2015).

E.4.38 SHORT-EARED OWL (IDAHO BLM SENSITIVE, IDAHO SGCN)

This common owl species is widely distributed across North America, with breeding range extending from Alaska east to Nova Scotia and winter range extending from southern California east to southern Maine. It occurs as a year-round resident where the ranges overlap in the Pacific Northwest east to central Wisconsin. Typical breeding habitat includes open grasslands, as well as shrub-steppe, agricultural lands, and other open areas with low vegetation cover. Diet consists of small mammals and birds (Wiggins 2006).

E.4.39 SNOWY EGRET (OREGON BLM SENSITIVE, STATE VULNERABLE)

Snowy egrets typically breed in coastal wetlands across the southern U.S.; they may occasionally breed in inland wetlands to northern Utah, and can occur as a vagrant further north into southern Idaho and Oregon. Year-round and winter range extends from southern California and the Gulf Coast to northern Argentina and Chile. Diet consists of aquatic animals, including fish, crustaceans, frogs, and insects (Parsons and Master 2000).

E.4.40 SWAINSON'S HAWK (STATE VULNERABLE)

The Swainson's hawk is found in the western U.S. from Alaska south to Mexico and winters in South America. It occurs in eastern Oregon and prefers open country just as grasslands and large meadows. Trees are necessary for nesting. It primarily preys on small mammals, including ground squirrels, pocket gophers, mice, and occasionally small birds (Csuti et al. 2001).

E.4.41 TRICOLORED BLACKBIRD (OREGON BLM SENSITIVE)

Tricolored blackbird is narrowly distributed along the west coast of North America, with breeding range extending from northern Oregon south to southern California and the majority of the known population occurring in central California. Typical breeding habitat includes freshwater marshes dominated by dense cover of graminoid species, including cattail, bulrush, and sedges. Diet consists primarily of insects, but can also include seeds and grains, particularly in the fall and winter (NatureServe 2016).

E.4.42 UPLAND SANDPIPER (USFS SENSITIVE, STATE CRITICAL)

The upland sandpiper has a range that extends throughout North America and wintering in South America. In Oregon, it occurs in grasslands and meadows with the occasional perimeter tree along the

edge. It mainly feeds on insects such as grasshoppers and crickets (Csuti et al. 2001). The upland sandpiper is likely to occur in the study corridor.

E.4.43 WESTERN GREBE (IDAHO SGCN)

Western grebes occur seasonally throughout most of the western half of North America where suitable wetlands occur. Most birds winter along the Pacific coast from British Columbia to Baja California, although some winter records at inland locations of open water have been documented. In Idaho, this species breeds along the Snake River drainage in the southern and southeastern parts of the state, at Lake Cascade, and at several locations in the Panhandle. More than half of the state's population breeds at Lake Cascade. Western grebes are colonial waterbirds that nest on freshwater lakes or marshes with extensive open water, where they feed primarily on fish (IDFG 2015).

E.4.44 WHITE-FACED IBIS (IDAHO BLM SENSITIVE, IDAHO SGCN)

White-faced ibis breeds throughout western North America, with breeding habitat extending from central Oregon to northern Nebraska. Typical winter range for this species ranges extends from southern California to southern Mexico, with some birds occurring as permanent residents along the Gulf Coast. Typical breeding habitat includes freshwater marshes and other slow-moving waterbodies with abundant herbaceous and graminoid vegetation. Diet is varied, but consists of aquatic animals, including fish, frogs, crustaceans, and other aquatic wildlife (NatureServe 2016).

E.4.45 WHITE-HEADED WOODPECKER (IDAHO AND OREGON BLM SENSITIVE, USFS SENSITIVE, STATE CRITICAL)

The white-headed woodpecker can be found scattered throughout the Pacific Northwest and along the Pacific coast extending down to northern Mexico. It is closely associated with ponderosa pine with mixed conifer forests. It requires large trees and snags for nesting. It mainly feeds on insects and the seeds of the ponderosa pine (Csuti et al. 2001).

E.4.46 WILLOW FLYCATCHER (IDAHO BLM SENSITIVE)

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

E.5 MAMMALS

E.5.1 AMERICAN MARTEN (OREGON STATE VULNERABLE)

The American Marten occurs in northern North America stretching from southern Canada to New England and continues along the Pacific coast until northern California. It can be found at any elevation and can even be found wandering into alpine areas. The American marten is associated with mature or late-successional mesic to dry conifer forests that contain coarse woody debris, have multi-storied canopy with a closure of at least 60 percent, and are adjacent to riparian areas (Vasquez and Spicer 2005). They are carnivores that feed on smaller mammals such as shrews, woodrats, voles, squirrels

and small beavers. In Oregon, the species has been declining due to deforestation and fragmentation (Csuti et al. 2001).

E.5.2 BIGHORN SHEEP (IDAHO BLM SENSITIVE, IDAHO SGCN)

Bighorn sheep habitats range from alpine to Great Basin sagebrush scrub. They prefer open ground and areas with access to steep, rocky terrain (escape habitat) and generally avoid forests, thick brush, and large expanses lacking precipitous escape terrain. Suitable escape terrain (cliffs, talus slopes, etc.) is an important feature of the habitat. Winter range seems to be limiting population growth of reintroduced Wallowa herds. This species does not spread into new habitat quickly (NatureServe 2016).

E.5.3 BIG BROWN BAT (IDAHO BLM SENSITIVE)

Big brown bat is widely distributed across North America from southern British Columbia to central Quebec and south to Central America, and can occur in a variety of habitats, including forested woodlands, shrublands and chaparral, and man-made structures. Caves, buildings, and abandoned mines are often used as roosting sites and hibernacula. Diet consists of flying insects, usually small beetles (NatureServe 2016).

E.5.4 CALIFORNIA MYOTIS (IDAHO BLM SENSITIVE, STATE VULNERABLE)

The range of the California myotis is restricted to western North America and extends from southern Alaska to central Mexico. This species can occur in a wide variety of habitats, including juniper woodlands, open coniferous forests, grasslands, and riparian woodlands. Caves, shrubs, trees, and buildings or abandoned mines are common roosting sites. Diet consists of flying insects (NatureServe 2016).

E.5.5 CANYON BAT (IDAHO BLM SENSITIVE)

Canyon bat distribution extends from northeastern Oregon south to central Mexico, with the greatest populations in the desert southwest near New Mexico, Arizona, and Texas. The species is not known to migrate and uses a variety of habitats for foraging and roosting. Roosting sites are often crevices of rocks, cliffs or mines, but can also include buildings or large sagebrush. Diet consists of small flying insects (NatureServe 2016).

E.5.6 COLUMBIA PLATEAU GROUND SQUIRREL (IDAHO SGCN)

This species occurs in Owyhee County south of the Snake River and historically occurred at sites between Reynold's Creek and the Oregon border. Only 1 of 9 historical colonies was extant during 2000. The Columbia Plateau ground squirrel occurs in xeric shrub-steppe habitat. This species occurs primarily in big sagebrush-western juniper habitats and grasslands, but also pastures, fence lines, and other agricultural lands (IDFG 2015).

E.5.7 FRINGED MYOTIS (OREGON BLM SENSITIVE, USFS SENSITIVE, STATE VULNERABLE)

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

E.5.8 GRAY WOLF (FEDERALLY ENDANGERED, OREGON BLM SENSITIVE, USFS)

The gray wolf is a generalist that can survive in desert, forests, and grasslands. Its distribution is primarily determined by the presence of ungulate prey (elk and deer), although they will also take other species opportunistically, including beaver and small mammals. Wolves are wide ranging animals, and have dispersed back into Oregon recently from reintroductions in Idaho. There are currently four or five packs resident in Oregon (Oregon Department of Fish and Wildlife [ODFW] 2016).

E.5.9 HOARY BAT (IDAHO SGCN)

Hoary bat is widely distributed across North America from northern Canada to southern Mexico and Guatemala. It is one of the most common bats observed in Idaho, and has been detected across most of the state. Habitat use is broad, but hoary bat is primarily associated with coniferous or mixed conifer/hardwood forests at a wide range of elevations. Diet consists of primarily large moths, but includes other insects (IDFG 2015).

E.5.10 LITTLE BROWN BAT (IDAHO BLM SENSITIVE, IDAHO SGCN)

Little brown bat is widely distributed across northern North America extending from Alaska east to Newfoundland and south to New Mexico. The greatest populations are in the northeastern U.S. and Canada, but are common in the western U.S. Habitat use is broad and can include a variety of foraging habitats, including agricultural, forest and woodlands, and riparian forests or other wetland habitats. Roosting sites are often human-made structures such as building or mines with relatively stable temperatures. Diet consists of flying small flying insects, but can include small beetles as well (NatureServe 2016).

E.5.11 LONG-LEGGED MYOTIS (IDAHO BLM SENSITIVE, STATE VULNERABLE)

The long-legged myotis occurs in montane coniferous forests, and riparian and desert (Baja California) habitats. It feeds primarily on moths, but may also consume a wide variety of invertebrates, including fleas, termites, lacewings, wasps, and small beetles (NatureServe 2013).

E.5.12 MERRIAM'S GROUND SQUIRREL (IDAHO BLM SENSITIVE)

Merriam's ground squirrel occurs in high desert (sagebrush, shadscale, greasewood, and western juniper), grasslands, pastures, (NatureServe 2013), and in river valley bottomland. Main diet of the

Merriam's ground squirrel consists of herbaceous vegetation (grasses, forbs, and exotic annuals), and seeds; however, it may also eat some shrub parts and animal matter (NatureServe 2016).

E.5.13 NORTH AMERICAN WOLVERINE (OREGON BLM SENSITIVE, USFS SENSITIVE, STATE THREATENED, USFWS PROPOSED)

On April 4, 2016, wolverines in the contiguous U.S. were once again proposed as a threatened species under the ESA. The North American wolverine utilizes a variety of high-elevation wilderness habitat, including older open forests, but the key feature seems to be absence of human activity. Home ranges are very large, averaging more than 100,000 acres for males and more than 95,000 acres for females. It is not clear whether Oregon has a self-sustaining population. The wolverine eats small to medium-sized rodents, but also berries, roots, birds, rabbits, squirrels and porcupines. It has been known to eat carrion and may cache carrion and surplus prey beneath snow and ice (Oregon Forest Resources Institute [OFRI] 2006).

E.5.14 PALLID BAT (IDAHO AND OREGON BLM SENSITIVE, STATE VULNERABLE)

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

E.5.15 PIUTE GROUND SQUIRREL (IDAHO BLM SENSITIVE)

Piute ground squirrel occurs throughout the Great Basin, as well as the Snake River Valley in southern Idaho. Typical habitat is shrub-steppe or grassland communities, but it may occur along edges and hedgerows of agricultural lands. Diet consists of seeds and herbaceous vegetation, and often includes crops (NatureServe 2016).

E.5.16 PYGMY RABBIT (IDAHO AND OREGON BLM SENSITIVE, IDAHO SGCN)

The pygmy rabbit is limited to the northern half of the Great Basin, and an isolated population concentrated in the southeast portion of Oregon. It prefers big sagebrush and areas dominated by greasewood. They require soft, fine soil to dig their deep burrows. It feeds almost exclusively on leaves from the local sagebrush, but during the summer, it may feed on grasses (NatureServe 2016).

E.5.17 SILVER-HAIRED BAT (IDAHO BLM SENSITIVE, IDAHO SGCN, STATE VULNERABLE)

Silver-haired bat is widely distributed across North America, extending from Alaska southeast to Georgia. This species is a seasonal migrant wintering in the Pacific Northwest, some areas of the southwestern U.S., and portions of Indiana, Ohio, and Kentucky. Typical habitat is forested areas near

waterbodies, but may include drier habitats during migration. Typical roosting sites are in cavities of standing snags, but may also include buildings, caves, or rock crevices. Diet consists of small to medium-sized flying insects (NatureServe 2016).

E.5.18 SPOTTED BAT (IDAHO AND OREGON BLM SENSITIVE, USFS SENSITIVE, STATE VULNERABLE)

The spotted bat has a poorly documented global range. It has been found in British Columbia, east to Montana and south to central Mexico. It has been spotted in a variety of habitats ranging from ponderosa pine to arid desert regions on southeastern Oregon. It feeds primarily on moths and forages between midnight and 3:00 a.m. (Csuti et al. 2001).

E.5.19 TOWNSEND'S BIG-EARED BAT (IDAHO AND OREGON BLM SENSITIVE, IDAHO SGCN, USFS SENSITIVE, STATE CRITICAL)

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

E.5.20 WASHINGTON GROUND SQUIRREL (OREGON BLM SENSITIVE, STATE ENDANGERED)

Detailed information about the regulatory status, taxonomy and life history, threats to survival, and occurrence in the B2H Project area is provided in Section 3.2.4.

E.5.21 WESTERN SMALL-FOOTED MYOTIS (IDAHO BLM SENSITIVE, IDAHO SGCN)

Western small-footed myotis only occurs west of the Mississippi River, with a distribution from British Columbia extending south to central Mexico. Typical habitats are generally semi-arid to arid and include drier forests, shrub-steppe, grasslands, and juniper woodlands. Roosting sites vary and include rock crevices, standing snags, buildings or other man-made structures. Diet consists of small flying insects (NatureServe 2016).

E.5.22 WHITE-TAILED JACKRABBIT (STATE VULNERABLE)

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

E.6 INVERTEBRATES

E.6.1 ALPINE TIGER BEETLE (IDAHO SGCN)

This species occurs in limited portions of California, Nevada, Oregon, and Idaho. The Idaho distribution includes scattered localities in southern parts of the state, including sites in Ada, Canyon, Cassia, Elmore, Jefferson, Lemhi, and Owyhee counties. This species is found mainly in high-elevation mountainous areas, generally in alpine habitat over 2700 meters. However, the species has also been documented in rangeland. Habitat associations in Idaho have not been reported, but considering the Idaho distribution, populations may not be restricted to true alpine habitat (IDFG 2005).

E.6.2 BLUE MOUNTAIN SNAIL (USFS SENSITIVE)

Blue Mountain snail is a terrestrial species ranging from the Blue Mountains of northeastern Oregon and southeastern Washington, with four known occurrences along the north and south forks of the Walla Walla River in northeastern Oregon. The species is found in openly forested areas, rocky areas with small seeps, and occasionally in riparian areas (Interagency Special Status/Sensitive Species Program [ISSSSP] 2015).

E.6.3 CALIFORNIA FLOATER (USFS SENSITIVE)

The California floater is a freshwater bivalve mussel that lives in shallow areas of clean, clear lakes, ponds and large rivers (Taylor 1981) and some reservoirs (Nedeau et al. 2009). Preferred habitat for this species is soft, mud or sand substrate (Clarke 1981) where the mussel can burrow. This species is primarily sedentary and it filter-feeds on plankton and other particulate matter suspended in the water column (reviewed by Vaughn et al. 2008). There have been major declines in this species from their historic range. Reasons are thought to include a decline in numbers of native host fish, on which the larval life stage of the California floater depends; pollution; sedimentation from land-use activities like logging and grazing; predation by non-native fish; and dam building.

E.6.4 COLUMBIA OREGONIAN (USFS SENSITIVE)

Columbia Oregonian is known from scattered seeps and streams in Washington and Oregon along the Columbia River Gorge and upland locations in the Mount Hood National Forest. The habitat requirements for this species are poorly understood, but in the B2H Project area the species is found along the margins of seeps and seep fed streams where conditions create an adequately cool and damp microclimate (Duncan 2009).

E.6.5 COLUMBIA PEBBLESNAIL (USFS SENSITIVE)

The Columbia pebblesnail is found in larger tributaries and rivers, on upper surfaces of stable rocks, boulders and bedrock outcrops in fast current, in relatively shallow water. This species requires cold water with high oxygen content, so is not found behind impoundments, or where water is warm, slow, nutrient-enriched or turbid. These snails feed by scraping bacteria, diatoms and other perolithic organisms from rock surfaces. These snails occasionally feed on aquatic plant surfaces. Columbia pebblesnail habitat is generally areas with few aquatic macrophytes or epiphytic algae (ISSSSP 2013).

E.6.6 CROOKED CREEK SPRINGSNAIL (OREGON BLM SENSITIVE)

Crooked Creek springsnail is endemic to nine occurrences in the Owyhee River basin and Barren Valley in Malheur County. Found in springs and creeks; reported at 2,861 to 4,100 feet elevation (NatureServe 2013).

E.6.7 DUCKHEAD SNOWFLY (IDAHO SGCN)

Duckhead snowfly is a regional endemic known only from a few locations in Oregon and Idaho. Habitat requirements are poorly understood, but the species is generally founds in small intermittent streams, some with low quality (IDFG 2015).

E.6.8 FIR PINWHEEL (USFS SENSITIVE)

Fir pinwheel is a terrestrial snail which occurs in four states, with distribution in the B2H Project area limited to the Blue Mountains. It feeds on organic detritus and microorganisms on leaf surfaces, such as molds and bacteria; rangewide most often found in moist and rocky Douglas'-fir dominated forest at mid-elevations in valleys and ravines, often in or near talus of a variety of rock types or under fallen logs, preferring moist sites low on slopes or near persistent water sources, but outside of floodplains (Duncan 2009; NatureServe 2013).

E.6.9 HUNT'S BUMBLE BEE (IDAHO SGCN)

Hunt's bumble bee is widespread across western North America and although Idaho-specific information is lacking, it has been found at several locations and assumed to be present across much of the state. Hunt's bumble bee is found in grasslands and shrublands that provide an abundance of native flowers, pollen, and nectar (IDFG 2015).

E.6.10 INTERMOUNTAIN SULPHUR (OREGON BLM SENSITIVE, USFS SENSITIVE)

Intermountain sulphur, also known as western sulphur, is a butterfly which occurs in four states and restricted to the Blue and Ochoco Mountains in Oregon and along the Snake River in Idaho. It is found on hillsides; reported from 3,800 to 7,300 feet elevation; apparently in sagebrush dominated plant communities (NatureServe 2013).

E.6.11 JACKSON LAKE SPRINGSNAIL (OREGON BLM SENSITIVE)

Jackson Lake springsnail occurs in four states. Found (in Oregon) in cold springs and reported from 3,890 to 6,000 feet elevation (NatureServe 2013).

E.6.12 JOHNSON'S HAIRSTREAK (USFS SENSITIVE)

Johnson's hairstreak is a butterfly which occurs in three states and Canada. It is reported from 1200 to 3,400 feet elevation; in prairies and generally unspecified plant communities (NatureServe 2013).

E.6.13 LINED JUNE BEETLE (IDAHO SGCN)

Lined June beetle is an endemic beetle currently known from two locations in southwestern Idaho: Celebration Park and Bruneau Dunes. However, formal surveys have not been conducted for this species, and presence at historical sites or population trends are unknown. The species requires healthy early-seral dune habitats and the presence of native grasses (IDFG 2015).

E.6.14 MORRISON BUMBLE BEE (IDAHO SGCN)

Morrison bumble bee is widespread across western North America, but is currently considered uncommon in Idaho with several surveys failing to detect the species. Morrison bumble bee is commonly associated with arid environments, and typically forages in open dry shrub and scrub (IDFG 2015).

E.6.15 OWYHEE SPRINGSNAIL (OREGON BLM SENSITIVE)

Owyhee springsnail is a freshwater snail endemic to nine occurrences in Malheur County. It lives in spring sources and stream outflows, some of which are thermal, and is found on a variety of hard substrates; reported from 1,400 to 4,000 feet elevation (NatureServe 2013).

E.6.16 OWYHEE HOT SPRINGSNAIL (OREGON BLM SENSITIVE)

Owyhee hot springsnail, also known as Owyhee springsnail, is a freshwater snail endemic to three occurrences in a short reach of the Owyhee River above Three Forks, Malheur County. It lives on loose cobble and basalt rock faces in very shallow thermal (24 to 33 degree Centigrade) spring runs; reported at 3,500 to 3,600 feet elevation (NatureServe 2013).

E.6.17 POPLAR OREGONIAN (OREGON BLM SENSITIVE, USFS SENSITIVE)

Poplar Oregonian, also known as Hells Canyon land snail or cottonwood Oregonian, occurs in less than 20 sites over three states. Rangelwide it is found mostly in moderately xeric, rather open and dry, large-scale basalt taluses, usually found at lower elevations on steep, cool (generally north or east-facing) lower slopes in major river basins; in talus disturbed vegetation associated with hackberry, cherry, sagebrush, grasses, and some bryophytes, generally surrounded by sagebrush scrub (NatureServe 2013; Stone 2011).

E.6.18 RAPTOR FAIRY SHRIMP (IDAHO SGCN)

Raptor fairy shrimp is an Idaho endemic known only from two playas in southwestern Idaho: Tadpole and Armadillo Lakes. Habitat and population trends for this species are poorly understood, but the two playas with known occurrences are less than 5 hectares in size and 10 to 30 centimeters deep, and with turbid water, highly alkaline, and with variable rainfall (IDFG 2015).

E.6.19 SHORTFACE LANX (USFS SENSITIVE)

The shortface lanx is a large non-migrant freshwater snail. The shortface lanx moves with a slow snail-like crawl, or is subject to transport by stream current. It feeds by scraping algae and diatoms from rock surfaces in the streams but may occasionally feed on other plant surfaces (NatureServe 2009). The species is sporadically distributed at present in the Columbia River and has been verified in a few major tributaries, including the Grande Ronde River. The shortface lanx are found in large bodies of water (at least 30 meters and up to 100 meters wide) that are cold, unpolluted, well-oxygenated, perennial, and dominated by cobble-boulder substrate (Neitzel and Frest 1990).

E.6.20 SHINY TIGHTCOIL (USFS SENSITIVE)

Shiny tightcoil is a small, terrestrial snail historically known from the Cascade and Blue Mountains and several locations in Idaho. Currently, the range is much reduced with occurrences in Oregon rare and recent surveys for the species failing to locate individuals. However, the species is suspected to occur on the Umatilla and Wallowa-Whitman National Forest. Typical habitat for this species is open conifer forests, but occurrences in eastern Oregon and Washington are from aspen woodlands or talus accumulations near seeps and springs (ISSSSP 2011).

E.6.21 SILVER-BORDERED FRITILLARY (OREGON BLM SENSITIVE, USFS SENSITIVE)

Silver-bordered fritillary is a butterfly which occurs in 32 states and Canada. It is known in Oregon only from Big Summit Prairie in Crook County, where a single relict population exists at 4,600 feet elevation in a marshy ravine within a typical rangewide habitat of wet, boggy meadow adjoining a prairie (NatureServe 2013).

E.6.22 WESTERN BUMBLE BEE (OREGON BLM SENSITIVE, USFS SENSITIVE)

Western bumble bee occurs in 15 states and Canada. Reported (in Oregon) from 280 to 7,200 feet elevation, in clover meadows but most commonly in undocumented habitats (NatureServe 2013).

E.6.23 WESTERN RIDGED MUSSEL (IDAHO SGCN, OREGON BLM SENSITIVE, USFS SENSITIVE)

Western ridged mussel occurs in six states and Canada. Found (in Oregon) most commonly in water courses; in a variety of substrates; reported from sea level to 4,300 feet elevation; associated primarily with cattails, algae and sedge mats (NatureServe 2013).

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