

**APPENDIX A
BIOLOGICAL RESOURCES**

VERTEBRATE SPECIES LISTS

This section of the appendix provides a listing of vertebrate species that may occur in the vicinity of the proposed project. Information regarding these species was gathered from existing literature, Internet sources, field reconnaissance, and information provided from the USFS/MRRD resource staff.

TABLE A-1 MAMMAL SPECIES THAT MAY OCCUR IN THE VICINITY OF THE PROPOSED PROJECT		
Common Name	Scientific Name	Habitat
Merriam Shrew	<i>Sorex merriami</i>	Cool, grassy places near coniferous forest, and often near but not directly associated with a water source.
Desert shrew	<i>Notiosorex crawfordi</i>	Any area with ample ground cover, including plant debris, trash and lumber.
Southwestern myotis	<i>Myotis auriculus</i>	High elevation coniferous forest, mesquite, chaparral, pinyon-juniper, or riparian habitats, often associated with rocky cliffs where water is available.
California myotis	<i>Myotis californicus</i>	Desertscrub with rock faces containing crevices, and occasionally utilizes caves or mines.
Lone-eared myotis	<i>Myotis evotis</i>	Found in most habitats, but prefers coniferous woodlands, from sea level to 8,850 feet.
Western small-footed myotis	<i>Myotis leibii (ciliolabrum)</i>	Crevices and cavities in cliffs, caves and mines in desert, oak woodlands, chaparral, and riparian areas.
Occult little brown bat	<i>Myotis lucifugus occultus</i>	Oak-pine to ponderosa elevations, usually near a water source.
Fringed myotis	<i>Myotis thysanodes</i>	Cave, mines, rock crevices and buildings in oak woodland, but also desertscrub, chaparral and ponderosa pine.
Long-legged myotis	<i>Myotis volans</i>	Small pockets in crevices in rock ledges, and in houses and other structures, generally in coniferous forests.
Western pipistrelle	<i>Pipistrellus hesperus</i>	Areas with canyon walls or cliff faces for roosting, and streambeds or tanks for foraging.
Big brown bat	<i>Eptesicus fuscus</i>	Wooded areas, desertscrub.
Silver-haired bat	<i>Lasionycteris noctivagans</i>	During all seasons, except summer, found in montane coniferous forests, pinyon-juniper, foothill woodlands, or riparian habitats. Seldom found in xeric habitats. Below 9,000 feet in summer.
Hoary bat	<i>Lasiurus cinereus</i>	Forests with medium to large-size trees and dense foliage during the breeding season; during migration males are found in foothills, deserts and mountains; females in lowlands. Hoary bats have been recorded from sea level to 13,200 feet.
Allen's big-eared bat	<i>Idionycteris phyllotis</i>	Roosts in large tree snags, caves, mines and rock shelters in pine-oak or coniferous forest, but may occur in non-forested arid areas in winter.
Townsend's big-eared bat	<i>Plecotus townsendii</i>	Areas with caves, mines, or structures for night roosts from desertscrub up into coniferous forest.
Pallid bat	<i>Antrozous pallidus</i>	Desertscrub with caves, mines, cliffs, bridges or other structures for roosts.

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Common Name	Scientific Name	Habitat
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>	Desertscrub and foothills with mines, caves, bridges or old buildings.
Desert cottontail	<i>Sylvilagus audubonii</i>	Desertscrub or semi-desert grassland.
Black-tailed jack rabbit	<i>Lepus californicus</i>	Desertscrub or other areas with open ground cover.
Cliff chipmunk	<i>Tamias dorsalis</i>	Areas with large rocks or cliffs from juniper and chaparral up into pine and fir elevations.
Gray-collared chipmunk	<i>Eutamias cinereicollis</i>	Coniferous forests from ponderosa pine elevations and higher.
White-tailed antelope squirrel	<i>Ammospermophilus leucurus</i>	Desert scrub, sagebrush, mixed chaparral, grassland, Joshua tree, pinyon-juniper or desert riparian habitats.
Rock squirrel	<i>Spermophilus variegatus</i>	Rocky canyons and boulder-strewn slopes.
Mantled ground squirrel	<i>Spermophilus lateralis</i>	Higher elevation coniferous forests, occasionally as low as pinyon-juniper-oak habitat.
Gunnison's prairie dog	<i>Cynomys gunnisoni</i>	Plains and desert grassland habitats.
Abert's squirrel	<i>Sciurus aberti</i>	Ponderosa pine forest.
Botta's pocket gopher	<i>Thomomys bottae</i>	Wide variety of habitats, any area with soil suitable for digging burrows.
Silky pocket mouse	<i>Perognathus flavus</i>	Areas with grassy cover in plains or desert grassland, up into juniper habitat.
Ord's kangaroo rat	<i>Dipodomys ordii</i>	A variety of habitats at or below juniper-pinyon elevation.
Western harvest mouse	<i>Reithrodontomys megalotis</i>	Wide variety of habitats, including desertscrub and semidesert grassland. Require adequate cover, preferably grasses.
Deer mouse	<i>Peromyscus maniculatus</i>	Coniferous or riparian woodland, desertscrub, often adjacent to canals or along intermittent creeks.
White-footed mouse	<i>Peromyscus leucopus</i>	A variety of habitats, typically in thick grasses or other dense vegetation.
Brush mouse	<i>Peromyscus boylii</i>	In a wide variety of situations, usually associated with dense brush.
Pinyon mouse	<i>Peromyscus truei</i>	Pinyon-juniper habitat associated with rocky substrate.
Northern grasshopper mouse	<i>Onychomys leucogaster</i>	Sparsely vegetated plains and desert grassland habitats in areas of friable soils.
White-throated wood rat	<i>Neotoma albigula</i>	Most habitats below, and including the pinyon-juniper. Areas with rocky outcrops that provide incipient midden structure have higher densities of woodrats. Common in areas with abundant cholla or prickly pear cacti.

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Common Name	Scientific Name	Habitat
Stephen's wood rat	<i>Neotoma stephensi</i>	Rocky areas primarily in pinyon-juniper habitat.
Mexican wood rat	<i>Neotoma mexicana</i>	Montane coniferous forest in areas with extensive rock outcrops. Generally above pinyon-juniper elevation.
Bushy-tailed wood rat	<i>Neotoma cinerea</i>	Generally in cliffs or rocky crevices below pine-fir forest. It is recorded from west of Winslow along I-40 at the southern edge of its range
Mexican vole	<i>Microtus mexicanus</i>	Dry grassy areas, usually from open ponderosa woodlands down into pinyon-juniper, but is known in fir and sagebrush communities.
Porcupine	<i>Erethizon dorsatum</i>	Forested habitats, particularly coniferous, but at lower elevations in riparian habitat. Utilizes mines, caves, and buildings for shelter.
Coyote	<i>Canis latrans</i>	Cosmopolitan, low desert to spruce forest.
Kit fox	<i>Vulpes macrotis</i>	Desertscrub or desert grassland with sandy or softer clay soils.
Gray fox	<i>Urocyon cinereoargenteus</i>	Open desertscrub, chaparral, or lower elevation woodland, occasionally in ponderosa pine or Douglas fir.
Black bear	<i>Ursus americanus</i>	Generally higher elevations in mountains, but also frequent riparian habitats.
Raccoon	<i>Procyon lotor</i>	Generally associated with a permanent water source. Probably present in Clear Creek drainage.
Ringtail	<i>Bassariscus astutus</i>	Steep rocky areas near water.
Badger	<i>Taxidea taxus</i>	Flats and drainages adjacent to mountains, or in grasslands.
Western spotted skunk	<i>Spilogale putorius</i>	Low and middle elevations, often in rocky areas or around human habitation.
Mountain lion	<i>Puma concolor</i>	Usually in mountainous, forested areas, but also in desertscrub and semidesert grassland.
Bobcat	<i>Lynx rufus</i>	Rocky upland areas interspersed with open desert, grassland or woodland.
American elk	<i>Cervus elaphus</i>	Montane coniferous forest, and as low as pinyon-juniper habitat in winter.
Mule deer	<i>Odocoileus hemionus</i>	Upland desert, chaparral, oak woodland or pine forest.
Pronghorn	<i>Antilocapra americana</i>	Meadows and plains of short grass with good visibility, sometimes with thinly scattered shrubs. Prominently present in the Anderson Mesa area west of the proposed project.
Sources: Hoffmeister 1986; Burt and Grossenheider 1980; Harvey et al 1999; ITIS 2003; Schmidly 1991.		

**TABLE A-2
BIRD SPECIES THAT MAY OCCUR IN THE VICINITY
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Common Name	Scientific Name	Habitat
Turkey vulture	<i>Cathartes aura</i>	Open country, agricultural areas.
Northern harrier	<i>Circus cyaneus</i>	Wetlands, open fields. Winter.
Golden eagle	<i>Aquila chrysaetos</i>	Mountainous areas, also grasslands.
Bald eagle	<i>Haliaeetus leucocephalus</i>	Areas with permanent water and high trees from lowland deserts to montane forest. Bald eagles have exhibited heavy use of Long, Soldier Annex, and Tremaine lakes west of the project.
Sharp-shinned hawk	<i>Accipiter striatus</i>	Mixed woodlands. Winter.
Cooper's hawk	<i>Accipiter cooperii</i>	Broken woodlands or streamside groves.
Northern goshawk	<i>Accipiter gentilis</i>	Mature dense forest, usually with large old growth trees.
Zone-tailed hawk	<i>Buteo albonotatus</i>	Canyons, dry washes, rivers and creeks that support cottonwood, sycamore and/or ponderosa pine.
Red-tailed hawk	<i>Buteo jamaicensis</i>	Plains, prairie groves, desert.
Swainson's hawk	<i>Buteo swainsoni</i>	Open to semi-open areas with vegetation of moderate height. Summer.
Ferruginous hawk	<i>Buteo regalis</i>	Dry, open country. Winter.
American kestrel	<i>Falco sparverius</i>	Open country, cities.
Merlin	<i>Falco columbarius</i>	Found in a variety of habitats. Winter.
Peregrine falcon	<i>Falco peregrinus</i>	Open areas with perches providing good visibility. Found in almost any habitat.
Prairie falcon	<i>Falco mexicanus</i>	Dry open country, grasslands.
Wild turkey	<i>Meleagris gallopavo</i>	Open forest.
Montezuma quail	<i>Cyrtonyx montezumae</i>	Semi-arid slopes of mountains in juniper-oak or pine-oak woodland.
Band-tailed pigeon	<i>Columba fasciata</i>	Low elevation coniferous or oak-conifer woodlands. Summer.
Mourning dove	<i>Zenaida macroura</i>	Wide variety of habitats.
Barn owl	<i>Tyto alba</i>	Open desert, grasslands, and farmlands. Nests in dark cavities in cliffs, trees, mines, or embankments.
Western screech owl	<i>Otus kennicottii</i>	Open woodlands, streamside groves, deserts, and suburban areas.
Great horned owl	<i>Bubo virginianus</i>	Common in wide variety of habitats.
Mexican spotted owl	<i>Strix occidentalis lucida</i>	Dense forest, coniferous and hardwood, steep-walled canyons, Jacks Canyon.
Flammulated owl	<i>Otus flammeolus</i>	Oak or pine woodlands, particularly ponderosa.
Northern pygmy owl	<i>Glaucidium gnoma</i>	Open forest and woodlands in coniferous, hardwood, mixed and pine-oak woodlands.
Western burrowing owl	<i>Athene cunicularia hypugia</i>	Open country, agricultural areas, golf courses, and airports, could be present in Great Basin desertscrub habitat near the Winslow Substation.
Lesser nighthawk	<i>Chordeiles acutipennis</i>	Dry, open country, scrubland, desert.
Common nighthawk	<i>Chordeiles minor</i>	Open to semi-open habitats in grasslands, fields, and around human habitation.
Whip-poor-will	<i>Caprimulgus vociferus</i>	Wooded canyons.
Black-chinned hummingbird	<i>Archilochus alexandri</i>	Lowlands and low mountains.
Broad-tailed hummingbird	<i>Selasphorus platycercus</i>	Open woodland from pinyon-juniper to pine elevations, brushy hillsides, montane scrub, and thickets.

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Common Name	Scientific Name	Habitat
Rufous hummingbird	<i>Selasphorus rufus</i>	Suburban and riparian areas. Migrant.
Acorn woodpecker	<i>Melanerpes formicivorus</i>	Oak and pine-oak woodlands.
Lewis's woodpecker	<i>Melanerpes lewis</i>	Open forest and woodland, oak or coniferous (particularly ponderosa) forest.
Williamson's sapsucker	<i>Sphyrapicus thyroideus</i>	Montane coniferous forest.
Red-naped sapsucker	<i>Sphyrapicus nuchalis</i>	Primarily coniferous forest or montane riparian woodland.
Northern flicker	<i>Colaptes auratus</i>	Open woodlands, lowlands in winter.
Downy woodpecker	<i>Picoides pubescens</i>	Deciduous and mixed deciduous-coniferous woodlands.
Hairy woodpecker	<i>Picoides villosus</i>	Deciduous or coniferous forest, and open woodlands.
Greater pewee	<i>Contopus pertinax</i>	Montane pine-oak woodlands.
Olive-sided flycatcher	<i>Contopus cooperi</i>	Coniferous forests, other forest types in migration.
Western wood-pewee	<i>Contopus sordidulus</i>	Coniferous or mixed coniferous-deciduous forest, or riparian woodland.
Hammond's flycatcher	<i>Empidonax hammondii</i>	Pine or pine-oak forest, and arid montane scrub. Migrant.
Gray flycatcher	<i>Empidonax wrightii</i>	Arid habitats in pinyon-juniper, lowland scrub, or riparian thickets.
Dusky flycatcher	<i>Empidonax oberholseri</i>	Open montane woodlands and brushy areas.
Cordilleran flycatcher	<i>Empidonax occidentalis</i>	Coniferous forests or pine-oak forests and canyons.
Say's phoebe	<i>Sayornis saya</i>	Dry, open areas, canyons, cliffs.
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	Wide variety of lowland to mid-elevation habitats.
Cassin's kingbird	<i>Tyrannus vociferans</i>	Scrub, riparian woodland, and pinyon-juniper-oak woodland.
Western kingbird	<i>Tyrannus verticalis</i>	Dry, open lowlands.
Loggerhead shrike	<i>Lanius ludovicianus</i>	Open or brushy areas.
Gray vireo	<i>Vireo vicinior</i>	Chaparral or dry scrub or shrubby areas.
Plumbeous vireo	<i>Vireo plumbeus</i>	Open forests from pinyon-juniper up to ponderosa elevations.
Cassin's vireo	<i>Vireo cassinii</i>	Variety of wooded habitats. Migrant.
Warbling vireo	<i>Vireo gilvus</i>	Open deciduous and mixed deciduous-coniferous woodlands and riparian habitats with cottonwood and/or willows.
Steller's jay	<i>Cyanocitta stelleri</i>	Pine oak woodlands and coniferous forests.
Western scrub-jay	<i>Aphelocoma californica</i>	Pinyon-juniper and oak scrub, brushy areas, and riparian woodland.
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>	Primarily pinyon-juniper woodland, but also in ponderosa woodland.
American crow	<i>Corvus brachyrhynchos</i>	Wide variety of habitats. Winter.
Common raven	<i>Corvus corax</i>	Mountains, deserts.
Horned lark	<i>Eremophila alpestris</i>	Dirt fields, gravel ridges, grasslands.
Violet-green swallow	<i>Tachycineta thalassina</i>	Primarily a highland species of coniferous or deciduous forests.
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>	Open areas, especially near banks of streams and canals, ponds, and lakes.
Cliff swallow	<i>Petrochelidon pyrrhonota</i>	Near lakesides, streams, ponds, cliffs, and canals. Nest on buildings, under nearby bridges, and other overhangs.
Bridled titmouse	<i>Baeolophus wollweberi</i>	Pine-oak forest.
Juniper titmouse	<i>Baeolophus ridgwayi</i>	Juniper or pinyon-juniper woodland.
Mountain chickadee	<i>Poecile gambeli</i>	Montane coniferous forest, primarily pine, but also locally pinyon-juniper or desert riparian woodland.

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Common Name	Scientific Name	Habitat
Bushtit	<i>Psaltriparus minimus</i>	Pinyon-juniper and pine-oak woodland and scrub.
Brown creeper	<i>Certhia americana</i>	Coniferous or deciduous forest.
White-breasted nuthatch	<i>Sitta carolinensis</i>	Mature oak or mixed forest and woodland up to ponderosa woodland, and riparian woodland.
Pygmy nuthatch	<i>Sitta pygmaea</i>	Ponderosa pine forest, and rarely in pinyon-juniper habitat.
House wren	<i>Troglodytes aedon</i>	Thickets and scrub of open woodland, rural areas and urban parks.
Bewick's wren	<i>Thryomanes bewickii</i>	Brushy slopes, pinyon-juniper, live-oak, and mesquite associations
Rock wren	<i>Salpinctes obsoletus</i>	Arid and semiarid habitats.
Canyon wren	<i>Catherpes mexicanus</i>	Canyons and cliffs, often near water.
Golden-crowned kinglet	<i>Regulus satrapa</i>	Coniferous woodlands.
Ruby-crowned kinglet	<i>Regulus calendula</i>	Woodlands, thickets. Winter.
Blue-gray gnatcatcher	<i>Poliophtila caerulea</i>	Thickets, woodlands, and chaparral.
Western bluebird	<i>Sialia mexicana</i>	Open pine, deciduous and mixed woodland, and riparian woodland.
Mountain bluebird	<i>Sialia currucoides</i>	Montane grassland with scattered trees, and pinyon-juniper and coniferous woodland habitats.
Townsend's solitaire	<i>Myadestes townsendi</i>	High elevation coniferous woodland, down to pinyon-juniper woodland, chaparral, or desert in winter.
Hermit thrush	<i>Catharus guttatus</i>	Mixed woodlands and thickets.
American robin	<i>Turdus migratorius</i>	Coniferous or deciduous woodland.
Northern mockingbird	<i>Mimus polyglottos</i>	Variety of habitats up to oak-juniper zone.
Sage thrasher	<i>Oreoscoptes montanus</i>	Arid or semi-arid scrub, grassland with scattered bushes, or pinyon-juniper woodland. Winter/migrant.
American pipit	<i>Anthus rubescens</i>	Pastures and cultivated fields in winter/migration.
Sprague's pipit	<i>Anthus spragueii</i>	Pastures and fields with medium-height grasses in winter/migration.
Orange-crowned warbler	<i>Vermivora celata</i>	Open, brushy woodlands, deserts in winter. Migrant.
Virginia's warbler	<i>Vermivora virginiae</i>	Brushy, arid montane woodland or coniferous scrub, and mountain mahogany stands.
Yellow-rumped warbler	<i>Dendroica coronata</i>	Conifer forests. Widespread in lowlands in winter.
Black-throated gray warbler	<i>Dendroica nigrescens</i>	Woodlands, brushlands and chaparral.
Townsend's warbler	<i>Dendroica townsendi</i>	Pine-oak habitat or oak woodland. Migrant.
Grace's warbler	<i>Dendroica graciae</i>	Ponderosa pine or pine-oak forest.
MacGillivray's warbler	<i>Oporornis tolmiei</i>	Coniferous forest edge, brushy hillsides, and regenerating clear-cut and burn areas.
Wilson's warbler	<i>Wilsonia pusilla</i>	Thickets, brush and scrub in a variety of open-woodland types. Migrant.
Painted redstart	<i>Myioborus pictus</i>	Moist, shaded canyons in pine or pine-oak forest.
Olive warbler	<i>Peucedramus tainiatus</i>	Pine or pine-oak forest.
Hepatic tanager	<i>Piranga flava</i>	Pine-oak forest.
Western tanager	<i>Piranga ludoviciana</i>	Coniferous or mixed coniferous-deciduous woodlands.

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Green-tailed towhee	<i>Pipilo chlorurus</i>	Brushy hillsides and chaparral in mountains, or in riparian scrub.
Spotted towhee	<i>Pipilo maculatus</i>	Chaparral, oak woodland, lowlands in winter.
Rufous-crowned sparrow	<i>Aimophila ruficeps</i>	Arid and hilly terrain, usually on rocky and grassy or brushy slopes.
Chipping sparrow	<i>Spizella pallida</i>	Grasslands, brushy edges, and riparian areas. Migrant/winter.
Brewer's sparrow	<i>Spizella breweri</i>	Desertscrub, semidesert grassland. Migrant.
Black-chinned sparrow	<i>Spizella atrogularis</i>	Chaparral, arid scrub and brushy hillsides.
Lark sparrow	<i>Chondestes grammacus</i>	Open habitats with scattered bushes and trees.
Sage sparrow	<i>Amphispiza belli</i>	Grasslands and open areas with scattered brush.
Fox sparrow	<i>Passerella iliaca</i>	A variety of habitats that have thickets, scrub or brush. Migrant.
Savannah sparrow	<i>Passerculus sandwichensis</i>	Open areas, or grasslands, usually with scattered brush. Migrant.
Lincoln's sparrow	<i>Melospiza lincolni</i>	Brushy areas and thickets in understory of open woodlands.
Vesper sparrow	<i>Poocetes gramineus</i>	Open weedy fields, roadsides, and grassy areas. Migrant/winter.
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	Brushy desert areas in winter. Migrant/winter.
Dark-eyed junco	<i>Junco hyemalis</i>	Coniferous and deciduous forest and adjacent brushy areas.
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>	Pinyon-juniper, pine-oak, or cottonwood riparian woodland. Migrant.
Blue grosbeak	<i>Guiraca caerulea</i>	Brushy and weedy fields and scrub. Migrant.
Lazuli bunting	<i>Passerina amoena</i>	Arid habitats including open woodlands, brushy canyons, scrub oak, and riparian thickets. Migrant.
Eastern meadowlark	<i>Sturnella magna</i>	Grasslands and open fields. Migrant.
Western meadowlark	<i>Sturnella neglecta</i>	Grasslands and cultivated fields.
Brewer's blackbird	<i>Euphagus cyanocephalus</i>	Shrubby and brushy habitats.
Brown-headed cowbird	<i>Molothrus ater</i>	Woodland, scrub and fields.
Bullock's oriole	<i>Icterus bullockii</i>	Open woodlands near grasslands.
Scott's oriole	<i>Icterus parisorum</i>	Arid and semiarid habitats.
Cassin's finch	<i>Carpodacus cassinii</i>	Scrubby and brushy areas in winter. Migrant.
House finch	<i>Carpodacus mexicanus</i>	Arid scrub and brush, oak-juniper and pine-oak habitats, and in cultivated and urban areas.
Red crossbill	<i>Loxia curvirostra</i>	Coniferous and mixed deciduous-coniferous forest.
Pine siskin	<i>Carduelis pinus</i>	Coniferous and mixed deciduous-coniferous forest.
American goldfinch	<i>Carduelis tristis</i>	Open deciduous and riparian woodland, second growth and weedy fields.
Lesser goldfinch	<i>Carduelis psaltria</i>	Open areas with scattered trees, second growth, and around human habitations.

Sources: AOU 1998; NGS 2002; ITIS 2003; NatureServe 2001a; Nature Serve 2003; Spaeth 2003a; Wheeler 2003.

**TABLE A-3
AMPHIBIAN AND REPTILE SPECIES THAT MAY OCCUR IN THE VICINITY
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Common Name	Scientific Name	Habitat
Tiger salamander	<i>Ambystoma tigrinum</i>	Temporary rain pools, stock ponds, rocky crevices and associated karst features where standing water is available for breeding.
Red-spotted toad	<i>Bufo punctatus</i>	Desert streams and oases, open grassland and scrubland, oak woodland, rocky canyons and arroyos, in crevices among rocks for shelter, breeds in rain pools, reservoirs, and temporary pools of intermittent streams.
Great plains toad	<i>Bufo cognatus</i>	Inhabits prairies or deserts, often breeding after heavy rains in summer in shallow temporary pools or quiet water of streams, marshes, irrigation ditches, and flooded fields. Also frequents creosote bush desert, mesquite woodland, and sagebrush plains.
Plains spadefoot	<i>Spea bombifrons</i>	Hills, desert grassland, and xeric intermittent streams.
Mexican spadefoot	<i>Spea multiplicata</i>	Desert grasslands up into pinyon-juniper elevations, usually in sandy or gravelly soils.
Lesser earless lizard	<i>Holbrookia maculata</i>	Exposed patches of sand or gravel along washes, and in mesquite, short-grass prairie and pinyon-juniper woodland.
Long-nosed leopard lizard	<i>Gambelia wislizenii</i>	Arid plains with bunchgrass or scattered shrubby vegetation.
Collard lizard	<i>Crotaphytus collaris</i>	A rock-dwelling species of canyons, rocky arroyos, limestone ledges from desert scrub up into pinyon-juniper elevations.
Desert spiny lizard	<i>Sceloporus magister</i>	Arid or semi-arid habitats from creosote desert up into pinyon-juniper elevations, including riparian habitats.
Southern plateau lizard	<i>Sceloporus undulatus tristichus</i>	A wide variety of habitats where almost any shelter, preferably with trees present.
Sagebrush lizard	<i>Sceloporus graciosus</i>	Predominantly a resident of sagebrush, but occurs in a variety of brushy habitats up through pinyon-juniper, and into pine habitats.
Ornate tree lizard	<i>Urosaurus ornatus</i>	Generally found where trees are present, but may occur in treeless areas, from low desert up to spruce-fir elevations.
Common side-blotched lizard	<i>Uta stansburiana</i>	Primarily a ground dwelling lizard found in almost any habitat or soil type.
Greater short-honed lizard	<i>Phrynosoma hernandesi</i>	Occurs from semi-arid plains up to spruce-fir elevations on a variety of soil types, but usually with loose soils being present.
Great Plains skink	<i>Eumeces obsoletus</i>	Generally found on fine-grained loose soils in areas of grasses and low shrubby growth, particularly along arroyos. Occurs from grassland elevations up into mountain elevations.
Many-lined skink	<i>Eumeces multivirgatus</i>	Found in a variety of soil conditions and vegetation associations from creosote bush to fir forest elevations.
Painted desert whiptail	<i>Cnemidophorus tigris septentrionalis</i>	Prefers warm, dry areas in semi-arid habitats with sparse vegetation from desert to pine forest elevations.
Gila-spotted whiptail	<i>Cnemidophorus flagellicaudus</i>	Found in brushy areas in desert grassland and chaparral up to pinyon-juniper or oak woodland habitats.

**TABLE A-3
AMPHIBIAN AND REPTILE SPECIES THAT MAY OCCUR IN THE VICINITY
OF THE PROPOSED PROJECT**

Common Name	Scientific Name	Habitat
Plateau striped whiptail	<i>Cnemidophorus velox</i>	Primarily a montane species from chaparral and oak woodland up into pinyon-juniper and lower edge of pine forests. Also at lower elevation along intermittent streams.
Ring-necked snake	<i>Diadophis punctatus</i>	Generally associated with springs or watercourses, but may descend to more arid habitat among rocks.
Coachwhip	<i>Masticophis flagellum</i>	Sparsely vegetated areas from low desert to juniper woodland.
Striped whipsnake	<i>Masticophis taeniatus</i>	In both lowlands and mountains on flats and in canyons, in areas with grasses or shrubs
Glossy snake	<i>Arizona elegans</i>	Below 6,000 feet in sparsely vegetated woodland, chaparral, grassland or desert scrub with loose soil.
Gopher snake	<i>Pituophis catenifer</i>	Open areas in a variety of habitats, including desert scrub, grassland, chaparral, woodlands, and coniferous forest.
Common kingsnake	<i>Lampropeltis getula</i>	Wide variety of habitats, including desert, grassland, chaparral, woodlands, and coniferous forests.
Sonoran mountain kingsnake	<i>Lampropeltis pyromelana</i>	A montane species, generally found in pinyon or oak-juniper habitats, but may descend to lower elevations in moist canyons.
Western terrestrial garden snake	<i>Thamnophis elegans</i>	Occurs in a wide variety of habitats and over a wide elevation range from sea level up into the mountains. More commonly present where associated with a permanent water source.
Night snake	<i>Hypsiglena torquata</i>	Wide range of habitats, including deserts, grassland, chaparral, woodlands, and mountain meadows.
Black-tailed rattlesnake	<i>Crotalus molossus</i>	Primarily a montane species, preferring rocky cliffs in canyons or slopes with rocky cover.
Western rattlesnake	<i>Crotalus viridis</i>	Occurs in a wide variety of habitats from desert scrub up to timberline.

Source: Degenhardt et al.1996; Stebbins 2003; ITIS 2003.

TABLE A-4 NOXIOUS WEED SPECIES FOR WHICH SUITABLE HABITAT IS PRESENT, AND THAT COULD POTENTIALLY OCCUR WITHIN THE PROJECT AREA	
Scientific Name	Common Name
<i>Achnatherum brachychaetum</i>	Puna grass
<i>Acroptilon repens</i>	Russian knapweed
<i>Aegilops cylindrica</i>	Jointed goatgrass
<i>Cardaria chalapensis</i>	Lenspod whitetop
<i>Cardaria draba</i>	Globe-podded hoary cress
<i>Cardaria pubescens</i>	Hairy whitetop
<i>Carduus acanthoides</i>	Plumeless thistle
<i>Cenchrus spinifex (incertus)</i>	Coastal sandbur
<i>Centaurea biebersteinii</i>	Spotted knapweed
<i>Centaurea calcitrapa</i>	Purple starthistle
<i>Centaurea diffusa</i>	Diffuse knapweed
<i>Centaurea iberica</i>	Iberian starthistle
<i>Centaurea maculosa</i>	Spotted knapweed
<i>Centaurea melitensis</i>	Malta starthistle
<i>Centaurea solstitialis</i>	Yellow starthistle
<i>Centaurea triumphettii (squarrosa)</i>	Squarrose knapweed
<i>Chondrilla juncea</i>	Rush skeletonweed
<i>Cirsium arvense</i>	Canada thistle
<i>Convolvulus arvensis</i>	Field bindweed
<i>Cuscuta</i> spp.	Dodder
<i>Elymus (Elytrigia) repens</i>	Quackgrass
<i>Euphorbia esula</i>	Leafy spurge
<i>Euryops subcarnosus</i> ssp. <i>vulgaris</i>	Sweet resinbush
<i>Halogeton glomeratus</i>	Halogeton
<i>Helianthus ciliaris</i>	Blueweed
<i>Ipomoea</i> spp.	Morning glory*
<i>Isatis tinctoria</i>	Dyer's woad
<i>Linaria genistifolia</i> var. <i>dalmatica</i>	Dalmation toadflax
<i>Medicago polymorpha</i>	Burclover
<i>Nassella trichotoma</i>	Serrated tussock grass
<i>Onopordum acanthium</i>	Scotch thistle
<i>Peganum harmala</i>	African rue
<i>Portulaca oleracea</i>	Common purslane
<i>Senecio jacobaea</i>	Tansy ragwort
<i>Solanum carolinense</i>	Carolina horse-nettle
<i>Sonchus arvensis</i>	Perennial sowthistle
<i>Striga</i> spp.	Witchweed
<i>Tribulus terrestris</i>	Puncture vine

*All species except Mexican bush morning glory (*I. carnea*) and tree morning glory (*I. arborescens*).