

Appendix A

Reclamation Seed Mixes

Table A-1 Proposed Reclamation Seed Mix

Common Name	Scientific Name
Grasses	
Ephraim Crested Wheatgrass	<i>Agropyron Cristatum var. Ephraim</i>
Thickspike Wheatgrass	<i>Agropyron dasystrachyum</i>
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>
Great Basin Wildrye	<i>Elymus cinereus</i>
Big Bluegrass	<i>Poa ampla</i>
Indian Ricegrass	<i>Oryzopsis hymenoides</i>
Sandberg Bluegrass	<i>Poa secunda</i>
Forbs	
Blue Flax	<i>Linum lewisii</i>
Small Burnet	<i>Sanguisorba minor</i>
Forage Kochia	<i>Kochia prostrata var. Immigrant</i>
Palmer Penstemon	<i>Penstemon palmeri</i>
Western Yarrow	<i>Achillea millefolium</i>
Fourwing Saltbush	<i>Atriplex canescens</i>
Antelope Bitterbrush	<i>Purshia tridentate</i>
Winterfat	<i>Eurotia lanata</i>
Wyoming Big Sagebrush	<i>Artemesia tridentata wyomingensis</i>

Source: SRK 2009.

Table A-2 BLM Alternative Plant Species for Reclamation Seed Mix¹

Common Name	Scientific Name
Thickspike wheatgrass	<i>Agropyron dasystachyum</i>
Pubescent wheatgrass	<i>Agropyron trichophorum</i>
Streambank wheatgrass	<i>Agropyron riparium</i>
Bluebunch wheatgrass	<i>Agropyron spicatum</i>
Sandberg bluegrass	<i>Poa secunda</i>
Indian ricegrass	<i>Oryzopsis hymenoides</i>
Webber ricegrass	<i>Oryzopsis webberi</i>
Idaho fescue	<i>Festuca idahoensis</i>
Green needlegrass	<i>Stipa viridula</i>
Bottlebrush squirreltail	<i>Sitanion hystrix</i>
Great Basin wildrye	<i>Elymus cinereus</i>
Crested wheatgrass	<i>Agropyron cristatum</i>
Sheep fescue	<i>Festuca ovina</i>
Western wheatgrass	<i>Agropyron smithii</i>
Slender wheatgrass	<i>Agropyron trachycaulum</i>
Canby bluegrass	<i>Poa canbyi</i>
Sand dropseed	<i>Sporobolus cryptandrus</i>
Alkali sacaton	<i>Sporobolus albidus</i>
Northern sweetvetch	<i>Hodysarum boreale</i>
Buckwheat	<i>Eriogonum</i>
Annual ryegrass	<i>Lolium perenne multiflorum</i>
Western yarrow	<i>Achillea millefolium lanulosa</i>
Small burnet	<i>Sanguisorba minor</i>
Lewis flax	<i>Linum lewisii</i>
Gooseberryleaf globemallow	<i>Sphaeralcea grossulariifolia</i>
Scarlet globemallow	<i>Sphaeralcea coccinea</i>
Desert globemallow	<i>Sphaeralcea ambigua</i>
Arrowleaf balsamorhiza	<i>Balsamorhiza sagittata</i>
Palmer penstemon	<i>Penstemon palmeri</i>
Wyoming big sagebrush	<i>Artemesia tridentate wyomingensis</i>
Chokecherry	<i>Prunus virginiana</i>
Black sagebrush	<i>Artemesia nova</i>
Shadscale	<i>Atriplex confertifolia</i>

¹ Experimental species to be considered near TD1 to promote wildlife habitat could include aspen (*Populus tremuloides*), service berry (*Amelanchier* spp.), and bitterbrush.

Source: BLM 2011.

Table A-3 Interim Reclamation Seed Mix for Stockpiles

Common Name	Scientific Name
Crested Wheatgrass	<i>Agropyron Cristatum</i>
Yellow Sweetclover	<i>Melilotus officianlis</i>
Fourwing Saltbush	<i>Atriplex canescens</i>

Source: SRK 2009.

References

Bureau of Land Management (BLM). 2011. Alternative Plant Species for Reclamation Seed Mix. Email transmittal from J. Daniel, BLM to C. Johnson, AECOM. February 14, 2011.

SRK Consulting (U.S.) Inc. (SRK). 2009. Plan of Operations and Reclamation Permit Application, Dee Arturo Expansion Project. Prepared by SRK Consulting (U.S.) Inc. for Barrick Dee Mining Venture. Submitted to Bureau of Land Management. June 2009.

Appendix B

Special Status Species Identified for the Arturo Mine Project

Appendix B Special Status Species Identified for the Arturo Mine Project

Common Name/ Scientific Name	Status ¹	Range Habitat Requirements	Potential for Occurrence Within or Near the Study Area	Eliminated from Detailed Analysis	References
Mammals					
Pallid bat <i>Antrozous pallidus</i>	BLM; NV-SP	Range: Throughout Nevada. Habitat: Found in a variety of habitats from desert scrub to forests. Roosts in a variety of structures including mines, caves, buildings, and trees. Intolerant of roosts in excess of 40°C.	High. This species has been documented southwest of the study area along Rock Creek. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	BLM; NV-SPS	Range: Throughout Nevada. Habitat: Highly associated with caves and mines. Very susceptible to disturbance at roost sites. Periodically moves to alternate roosts and actively forages and drinks throughout the winter. Typically forages in open forest habitats.	High. This species has been documented southwest of the study area along Rock Creek. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Big brown bat <i>Eptesicus fuscus</i>	BLM	Range: Throughout Nevada. Habitat: Found in a variety of habitats including forests, shrublands, and agricultural and urban areas. Roosts in a variety of structures including mines, caves, buildings, and trees. More tolerant of human habitation than other bat species. Roosts in groups of up to several hundred individuals.	High. This species has been documented northwest of the study area in the Santa Renia Mountains. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Silver-haired bat <i>Lasionycteris noctivagans</i>	BLM	Range: Throughout Nevada but occurs primarily in forest and riparian habitats. Habitat: A forest associated species often found at higher elevations in piñon-juniper, subalpine fir, aspen, and willow habitats. Roosts almost exclusively in trees in the summer. Frequently alternates roost sites. Maternity roost sites are usually in woodpecker holes.	Low. Marginal roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.

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Common Name/ Scientific Name	Status¹	Range Habitat Requirements	Potential for Occurrence Within or Near the Study Area	Eliminated from Detailed Analysis	References
Western red bat <i>Lasiurus blossevilli</i>	BLM	Range: Known from only a few locations in Nevada in Lincoln and Clark counties. Habitat: Found primarily in wooded habitats. Species is a solitary rooster in trees and under leaf litter. Originally thought to only be a migrant in Nevada but small breeding populations may exist in the Fallon and Muddy River areas.	None.	Yes. This species' known distribution in Nevada is outside the study area.	Bradley et al. 2006.
Hoary bat <i>Lasiurus cinereus</i>	BLM	Range: Patchy distribution throughout Nevada. Habitat: Tree-associated species. Found primarily in forested upland habitats, as well as in forest riparian zones, and agriculture habitats. May occur in park and garden settings in urban areas. A solitary rooster that typically roosts in trees.	Low. Marginal roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
California myotis <i>Myotis californicus</i>	BLM	Range: Throughout Nevada but mainly found in the southern half of the state at lower elevations. Habitat: Found in a variety of habitats from desert scrub to forests. Roosts in a variety of structures including mines, caves, buildings, and trees. Actively forages throughout the winter.	Moderate. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Small-footed myotis <i>Myotis ciliolabrum</i>	BLM	Range: Throughout Nevada. Habitat: Found in a variety of habitats from desert scrub to pine-fir forests. Roosts in caves, mines, and trees. Forages in open areas.	High. This species has been documented northwest of the study area in the Santa Renia Mountains. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.

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Common Name/ Scientific Name	Status¹	Range Habitat Requirements	Potential for Occurrence Within or Near the Study Area	Eliminated from Detailed Analysis	References
Long-eared myotis <i>Myotis evotis</i>	BLM	Range: Throughout Nevada, primarily at higher elevations. Habitat: Primarily a forest-associated species. Roosts in caves, mines, and under bridges. May forage within mine and cave structures, gleaning moths from the rock walls.	High. This species has been documented northwest of the study area in the Santa Renia Mountains. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Little brown myotis <i>Myotis lucifugus</i>	BLM	Range: Found primarily in the northern part of Nevada. Habitat: Found at higher elevations in coniferous forest. Requires a nearby water source. Roosts in trees, buildings, caves, and mines. One of the species most commonly found in human structures.	Low. Marginal foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Long-legged myotis <i>Myotis volans</i>	BLM	Range: Throughout Nevada but absent from the low desert. Habitat: Piñon-juniper and other higher elevation forest habitats. Night roosts and hibernacula located in caves and mines. Forages in open areas at canopy height.	High. This species has been documented northwest of the study area in the Santa Renia Mountains. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Yuma myotis <i>Myotis yumanensis</i>	BLM	Range: Found in the western, southern, and north-central parts of Nevada. Habitat: Found in a wide variety of habitats from low to mid-elevations, including sagebrush, salt desert scrub, agriculture, playa, and riparian habitats. One of the species that is most tolerant of human habitation and one of the few that thrives in a relatively urbanized environment. Roosts in buildings, trees, mines, caves, bridges, and other man-made structures.	High. This species has been documented northeast of the study area in the Tuscarora Mountains. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.

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Common Name/ Scientific Name	Status¹	Range Habitat Requirements	Potential for Occurrence Within or Near the Study Area	Eliminated from Detailed Analysis	References
Western pipistrelle bat <i>Pipistrellus hesperus</i>	BLM	Range: Throughout most of Nevada. More common in the western and southern portions. Habitat: Lower and Upper Sonoran desert habitats of blackbrush, creosote, salt desert shrub, and sagebrush, with occasional occurrence in Ponderosa pine and piñon-juniper, usually in association with rock features such as granite boulders and canyons. Roosts in mainly in rock crevices.	High. This species has been documented southwest of the study area along Rock Creek. Suitable roosting and foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Brazilian free-tailed bat <i>Tadarida brasiliensis</i>	BLM; NV-SP	Range: Throughout Nevada. Habitat: Found in a wide variety of habitats from desert scrub to coniferous forests. Roosts in caves, mines, trees, bridges, and buildings. Colonies often number in the thousands.	Moderate. This species has not been documented in the project region. The nearest record is approximately 25 miles southeast of the study area along the Humboldt River near Elko, Nevada. However, suitable foraging habitat occurs within the study area.	No.	Bradley et al. 2006.
Preble's shrew <i>Sorex preblei</i>	BLM	Range: Northern Nevada. Habitat: Found in a variety of habitats including arid grassland and sagebrush shrubland, forest edges, and willow-fringed creeks and marshes.	High. This species has been recorded approximately 25 miles northeast of the study area near Sheep Creek. Suitable habitat occurs within the study area.	No.	Ports and George 1990; Wildlife Action Plan Team 2006.
Fletcher dark kangaroo mouse <i>Microdipodops megacephalus nasutus</i>	BLM; NV-SPS	Range: Throughout Nevada. Habitat: Intermountain desert scrub, sagebrush, grasslands and meadows, badlands and dunes, and areas around desert playas and ephemeral pools.	High. This species has been recorded in Elko County near Halleck, Nevada. Suitable habitat occurs within the study area.	No.	O'Farrell and Blaustein 1974; Wildlife Action Plan Team 2006.
Pygmy rabbit <i>Brachylagus idahoensis</i>	BLM	Range: Throughout Nevada but typically found in areas dominated by sagebrush. Habitat: Requires dense sagebrush for cover as well as appropriate deep soils for burrowing (i.e., high clay content). Often found in drainages with taller sagebrush present.	High. This species has been recorded at several locations in the project region. The study area contains areas of suitable sagebrush habitat.	No.	Great Basin Ecology 2009; Miller 2010.

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River otter <i>Lontra canadensis</i>	BLM	Range: Northeastern to central-western Nevada. Habitat: Riverine systems and associated marshes, lakes, and ponds. When inactive, occupies hollow logs, spaces under roots, logs, or overhangs, abandoned beaver lodges, dense thickets near water, or burrows of other animals; such sites also are used for rearing young.	None.	Yes. No suitable habitat occurs within the study area. The nearest documented records are south of the study area along the Humboldt River.	Boyle 2006; Wildlife Action Plan Team 2006.
Birds					
Bald eagle <i>Haliaeetus leucocephalus</i>	NV-SE	Range: Throughout Nevada. Habitat: Generally nests and roosts in close proximity to large water bodies including rivers, lakes, and reservoirs. Requires abundant food sources such as fish and waterfowl. Breeding period is February 15 to July 15.	Moderate: Occurrence within the study area would be limited to migrating and foraging individuals.	No.	Floyd et al. 2007; Great Basin Ecology 2009; Herron et al. 1985; Johnsgard 1990.
Northern goshawk <i>Accipiter gentilis</i>	BLM; NV-SPS	Range: Primarily found in the northern two-thirds of Nevada. Habitat: Deep conifer-dominated mixed forests. May exhibit seasonal migrations depending on prey availability. Preferred nesting habitat is aspen stands within coniferous forests along perennial streams. Breeding period is April 15 to August 1.	None.	Yes. No suitable habitat occurs within the study area.	Floyd et al. 2007; Herron et al. 1985; Johnsgard 1990.
Swainson's hawk <i>Buteo swainsoni</i>	BLM	Range: Found throughout Nevada, typically in agricultural areas. Habitat: Agricultural valleys and associated uplands. Nests in large shrubs and trees such as cottonwood, willows, and aspen. Breeding period is April 1 to July 15.	High. Known nesting areas occur south of the study area along the Humboldt River. No known nests occur within the study area. Suitable foraging habitat occurs within the study area.	No.	Floyd et al. 2007; Herron et al. 1985; Johnsgard 1990.

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Ferruginous hawk <i>Buteo regalis</i>	BLM	Range: Throughout Nevada, mainly in the east-central portion of the state. Habitat: Dry, open country. Nests usually occur in trees at the interface between piñon-juniper and desert scrub/grasslands. Forages over open areas with an adequate prey base. Breeding period is March 15 to July 15.	High. No nest sites have been documented within the study area; however, suitable nesting and foraging habitat occurs throughout the study area.	No.	Floyd et al. 2007; Herron et al. 1985; Johnsgard 1990.
Golden eagle <i>Aquila chrysaetos</i>	BLM	Range: Throughout Nevada. Habitat: Mountain or hilly terrain. Nests usually occur on cliffs or in trees. Forages over open areas with an adequate prey base. Breeding period is March 15 to July 15.	High. No known nests occur within the study area. However, this species has been documented in the vicinity of the study area. Suitable foraging habitat occurs within the study area.	No.	BLM 2008; Floyd et al. 2007; Herron et al. 1985; Johnsgard 1990.
Peregrine falcon <i>Falco peregrinus</i>	BLM; NV-SE	Range: Southwest and extreme southeast Nevada. Habitat: Open country near cliffs. Typically migrates south of the U.S. during winter months. Nests on cliffs and rock ledges. Forages in open areas typically near water. Breeding period is March 15 to July 15.	None.	Yes. This species' known distribution in Nevada is outside the study area.	Floyd et al. 2007; Herron et al. 1985; Johnsgard 1990.
Prairie falcon <i>Falco mexicanus</i>	BLM	Range: Throughout Nevada. Habitat: Dry, open country including desert scrub and sagebrush grasslands. Usually nests on cliffs in proximity to suitable foraging habitat. Breeding period is March 15 to July 15.	High. No known nests occur within the study area. However, this species has been documented nesting in the vicinity of the study area approximately 7 miles north of the study area. Suitable foraging habitat occurs within the study area.	No.	Floyd et al. 2007; Herron et al. 1985; Johnsgard 1990.

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Greater sage-grouse <i>Centrocercus urophasianus</i>	FC; BLM	Range: Throughout Nevada in areas with sagebrush. Habitat: Sagebrush grasslands. Leks are located in open areas in close proximity to escape cover. Nests are located in sagebrush habitat, typically within 2 miles of the lek. Broods are raised in wet, grassy areas near sagebrush. Winter habitat consists of south and east facing slopes with minimal snow cover. Breeding period (including displaying, nesting, and brooding) is March 1 to July 31.	Moderate. No leks occur within the study area; however, suitable nesting, brooding, and wintering habitat occurs throughout the study area.	No.	Connelly et al. 2000; Floyd et al. 2007; NDOW 2010, 2009; Neel 1999; Wildlife Action Plan Team 2006.
Least bittern <i>Ixobrychus exilis</i>	BLM	Range: Nests on shallow lakes and wetlands from Sheldon NWR to Ruby Lakes NWR south to Mason Valley WMA in western Nevada. Habitat: Prefers marshes in very fresh water, typically characterized by cattail and/or spikerush. Breeding period is April 15 to July 15.	None.	Yes. Only extremely marginal foraging habitat occurs within the study area.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Sandhill crane <i>Grus canadensis</i>	BLM	Range: Breeds in the lower river valleys and interior basins of the northeastern and east-entrnal regions of Nevada. Habitat: Large irrigated hay meadows, flooded pastures, and grasslands. Also found in agricultural grain fields certain times of the year. Approximately 90 percent of nesting pairs are found in Elko County with additional nesting pairs in White Pine, Eureka, Lander, northern Lincoln and Nye, and eastern Humboldt counties. Breeding period is April 15 to July 15.	None.	Yes. Only extremely marginal foraging habitat occurs within the study area.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.

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Long-billed curlew <i>Numenius americanus</i>	BLM	Range: A confirmed breeder at Sheldon NWR in northern Washoe County, Ruby Lake NWR in Elko County, Lahontan Valley in Churchill County, and Fish Creek Ranch in Eureka County. Habitat: Prefers closely cropped grasslands, pastures, wet or dry meadows, either on the fringe of a marsh or in a meadow or broad riverine floodplain such as the Humboldt River. Non-breeding feeding areas include irrigated pastures and croplands, shallow wetlands, and newly plowed fields. Breeding period is April 15 to July 15.	High: Marginal habitat occurs within the study area; however, this species was observed within the study area in the spring of 2011.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Black tern <i>Chlidonias niger</i>	BLM	Range: Nests on shallow lakes and wetlands from Sheldon NWR to Ruby Lakes NWR south to Mason Valley WMA in western Nevada. Habitat: Prefers marshes in very fresh water, typically characterized by cattail and/or spikerush. Breeding period is April 15 to July 15.	None.	Yes. Only extremely marginal foraging habitat occurs within the study area.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Western yellow-billed cuckoo <i>Coccyzus americanus</i>	FC; NV-SPS	Range: Found mainly in the western and southern portions of Nevada. Habitat: Found in cottonwood, willow, riparian, and other woodland habitats. Prefers dense understories. Breeding period is April 15 to July 15.	Low. Marginal habitat occurs within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Western burrowing owl <i>Athene cunicularia hypugea</i>	BLM	Range: Throughout Nevada. Habitat: Open country from desert scrub to grasslands. Often found in or around prairie dog colonies. Nests in burrows. Breeding period is April 15 to August 15.	High. An active burrow was observed immediately west of the study area. Suitable nesting and foraging habitat occurs within the study area.	No.	Floyd et al. 2007; Great Basin Ecology 2009; Herron et al. 1985.

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Long-eared owl <i>Asio otus</i>	BLM	Range: Throughout Nevada. Found primarily at higher elevations. Habitat: Juniper woodlands, riparian forests, and coniferous forests. Will often take over old hawk, crow, or magpie nests. Breeding period is February 15 to July 15.	Low. Suitable foraging habitat occurs within the study area. However, roosting, and nesting habitat is lacking within the study area.	No.	Floyd et al. 2007; Herron et al. 1985.
Short-eared owl <i>Asio flammeus</i>	BLM	Range: Throughout Nevada. Habitat: Open country from desert-scrub to sagebrush-grasslands. Nests and roosts on the ground. Forages primarily at dawn and dusk. Breeding period is February 15 to July 15.	High. Suitable nesting and foraging habitat occurs within the study area.	No.	Floyd et al. 2007; Herron et al. 1985.
Lewis's woodpecker <i>Melanerpes lewis</i>	BLM	Range: A resident breeder in isolated pockets mainly in the northern half of the state. Habitat: During the breeding season, this species prefers open habitats that facilitate its foraging behavior of hawking for insects. Scattered trees and/or snags are necessary for nesting. Open or park-like ponderosa pine, burned-over stands of Douglas fir, mixed conifer, piñon-juniper, riparian and oak woodlands are preferred nesting areas. Furthermore, this species prefers areas with a grassy and bushy understory. Breeding period is April 15 to July 15.	Low. Suitable nesting and foraging habitat is lacking within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Pinyon jay <i>Gymnorhinus cyanocephalus</i>	BLM	Range: Throughout Nevada, although more common in the central and southern portions of the state. Habitat: Piñon-juniper woodlands. Less frequently found in pine forests and sagebrush grasslands. Distribution is determined by availability of food resources. Nests in loose colonies. Breeding period is April 15 to July 15.	Low. Suitable nesting and foraging habitat is lacking within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.

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Juniper titmouse <i>Baeolophus griseus</i>	BLM	Range: Found mainly in piñon -juniper woodlands from I-80 south to the Colorado River. Habitat: Strongly associated with piñon-juniper woodlands. Snags and heart rot are assumed to be important in providing nesting cavities. Dense foliage and closed canopies are preferred, while thin understory and ground cover are preferred for feeding activities. Breeding period is April 15 to July 15.	Low. Suitable nesting and foraging habitat is lacking within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Loggerhead shrike <i>Lanius ludovicianus</i>	BLM; NV-SPS	Range: Throughout Nevada. Habitat: Open country including desert scrub and sagebrush grasslands. Nests and forages in brushy areas. Breeding period is April 15 to July 15.	High. Suitable nesting and foraging habitat occurs within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Yellow-breasted chat <i>Icteria virens</i>	BLM	Range: Throughout Nevada, although more common in the eastern portion of the state. Habitat: Found in cottonwood, willow, riparian and other woodland habitats. Prefers dense understories. Breeding period is April 15 to July 15.	Low. Marginal habitat occurs within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Vesper sparrow <i>Pooecetes gramineus</i>	BLM	Range: Nesting has been recorded only in the northern half of Nevada. However, the higher mountain ranges in southern Nevada may provide nesting habitat for the species as well. Habitat: Nests in various open shrub habitats from high elevation valleys to higher mountain slopes and basins. Breeding period is April 15 to July 15.	High. Suitable nesting and foraging habitat occurs within the study area.	No.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.

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Black rosy-finch <i>Leucosticte atrata</i>	BLM	Range: In Nevada, this species breeds on the highest mountains of Elko and White Pine counties. Habitat: Breeds and nests in alpine tundra habitat. Nests on high ridges and peaks (9,000 to 13,000 feet in elevation) near rock cover, usually in crevices and holes in cliff sides. Breeding period is May 1 to July 15.	None.	Yes. No suitable habitat occurs within the study area.	Floyd et al. 2007; Neel 1999; Wildlife Action Plan Team 2006.
Amphibians					
Columbia spotted frog <i>Rana luteiventris</i>	FC; NV-SP	Range: Central (Nye County) and northeast (Elko and Eureka counties), usually at elevations between 5,600 and 8,700 feet. Habitat: Quiet aquatic habitats including perennial streams, ponds, springs, lakes, and marshes. May travel to uplands during wet weather. Females typically lay eggs in late April and May. Tadpoles develop into frogs from mid-summer to late fall.	Low. Known populations exist in the Independence Range approximately 15 miles east of the study area. No known records of this species exist for the study area, although marginal habitat occurs within the 6 small wetlands within the study area and along Boulder Creek.	No.	BLM 2008; Cedar Creek Associates 2009; USFWS 2010b.
Northern leopard frog <i>Rana pipiens</i>	BLM; NV-SP	Range: Isolated habitats throughout Nevada. Absent from the southwestern portion of the state. Habitat: Springs, slow streams, marshes, bogs, ponds, canals, flood plains, reservoirs, and lakes. Usually found in permanent water with rooted aquatic vegetation. During the summer, commonly inhabits wet meadows and fields. Females typically lay eggs in late April and May. Tadpoles develop into frogs from mid-summer to late fall.	Low. No known records of this species exist for the study area, although marginal habitat occurs within the 6 small wetlands within the study area and along Boulder Creek.	No.	Cedar Creek Associates 2009; NatureServe 2010.

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Fish					
Lahontan cutthroat trout <i>Oncorhynchus clarkii henshawi</i>	FT	Range: Found in the Lahontan Basin of northern Nevada and eastern Oregon. Habitat: Occurs in a wide variety of habitats including lakes, rivers, and creeks. Riverine habitat includes cool flowing water with available cover of well-vegetated and stable stream banks.	None.	Yes. No suitable habitat occurs within the study area.	USFWS 2010a,c.
Interior redband trout <i>Oncorhynchus mykiss gairdneri</i>	BLM	Range: Washington, Idaho, Oregon, Montana, and Nevada. In Nevada, this species occurs in Elko county in the Long-Ruby Valleys watershed. Habitat: Low-gradient, medium-elevation stream reaches with an abundance of complex pools. Winter habitat includes deep pools with extensive amounts of cover in third-order mountain streams.	None.	Yes. No suitable habitat occurs within the study area.	Behnke 1992
Invertebrates					
Mattoni's blue butterfly <i>Euphilotes pallescens mattoni</i>	BLM	Range: Throughout Nevada. Habitat: Arid areas such as desert flats and edges of sand dunes. This species is typically most abundant from early July to September.	None.	Yes. No suitable habitat occurs within the study area.	Butterflies and Moths of North America Online 2010.

¹ Status:
 FT – Federally Threatened Species
 FC – Federal Candidate Species
 BLM – BLM Sensitive Species
 NV-SE – Nevada State Endangered
 NV-SP – Nevada State Protected
 NV-SPS – Nevada State Protected Sensitive

References

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