

Table 1.2-1 Land Cover within Five Miles of the GRP

| Land Use Type | Area (square meters) | Area (acres) | Percent of Total Area |
|--|-----------------------------|---------------------|------------------------------|
| Madrean Encinal | 295,200 | 73 | 0.12 |
| Madrean Pinyon-Juniper Woodland | 900 | 0 | 0.00 |
| Southern Rocky Mountain Ponderosa Pine Woodland | 508,500 | 126 | 0.21 |
| Great Basin Pinyon-Juniper Woodland | 3,600 | 1 | 0.00 |
| Inter-Mountain Basins Juniper Savanna | 61,200 | 15 | 0.03 |
| Colorado Plateau Pinyon-Juniper Woodland | 971,015 | 240 | 0.41 |
| Colorado Plateau Pinyon-Juniper Shrubland | 56,169,000 | 13880 | 23.49 |
| Rocky Mountain Lower Montane Riparian Woodland and Shrubland | 194,400 | 48 | 0.08 |
| Mogollon Chaparral | 86,400 | 21 | 0.04 |
| Rocky Mountain Subalpine-Montane Riparian Shrubland | 146,572 | 36 | 0.06 |
| Inter-Mountain Basins Greasewood Flat | 6,667,886 | 1648 | 2.79 |
| Inter-Mountain Basins Playa | 25,200 | 6 | 0.01 |
| Madrean Juniper Savanna | 900 | 0.2 | 0.00 |
| Inter-Mountain Basins Mat Saltbush Shrubland | 24,912,975 | 6156 | 10.42 |
| Inter-Mountain Basins Mixed Salt Desert Scrub | 10,394,043 | 2568 | 4.35 |
| Inter-Mountain Basins Big Sagebrush Steppe | 616,991 | 152 | 0.26 |
| Inter-Mountain Basins Semi-Desert Grassland | 111,013,155 | 27432 | 46.43 |
| Inter-Mountain Basins Semi-Desert Shrub Steppe | 7,666,513 | 1894 | 3.21 |
| Rocky Mountain Cliff, Canyon and Massive Bedrock | 900 | 0.2 | 0.00 |
| North American Warm Desert Bedrock Cliff and Bedrock | 367,200 | 91 | 0.15 |
| Colorado Plateau Mixed Bedrock Canyon and Tableland | 15,300 | 4 | 0.01 |
| Inter-Mountain Basins Volcanic Rock and Cinder Land | 392,400 | 97 | 0.16 |
| Cultivated Cropland | 2,788,200 | 689 | 1.17 |
| Disturbed/Successional - Grass/Forb Regeneration | 76,500 | 19 | 0.03 |
| Disturbed/Successional - Shrub Regeneration | 1,940,400 | 479 | 0.81 |
| Open Water (Fresh) | 1,130,358 | 279 | 0.47 |
| Developed, Open Space | 5,861,863 | 1448 | 2.45 |
| Developed, Low Intensity | 5,930,474 | 1465 | 2.48 |
| Developed, Medium Intensity | 826,399 | 204 | 0.35 |
| Developed, High Intensity | 31,500 | 8 | 0.01 |

Table 1.2-2 Land Use within Five Miles of the GRP

| Land Use | Percentage |
|--------------------------|-------------------|
| Shrubland | 87 |
| Grassland/Pasture | 3 |
| Evergreen Forest | 3 |
| Developed/Open Space | 3 |
| Developed/Low Density | 2 |
| Developed/Medium Density | 1 |
| Open Water | 1 |

NRCS, 2022

Table 1.2-3 Land Occupancy in Subdivisions near GRP

| Subdivision | Number of Lots | Vacant | Percent Occupied |
|-----------------------|-----------------------|---------------|-------------------------|
| Broadview Acres | 56 | 15 | 73% |
| Felice Acres | 22 | 7 | 68% |
| Murray Acres | 30 | 10 | 67% |
| Pleasant Valley Acres | 36 | 14 | 61% |
| Valle Verde | 109 | 83 | 24% |

Table 1.2-4 2010 Cibola County Demographics

| Population Groups | New Mexico | | Cibola County | | McKinley County | |
|----------------------------|--------------|------------|---------------|------------|-----------------|------------|
| | Population | Percentage | Population | Percentage | Population | Percentage |
| Population | 2,059,179.00 | | 26,746 | | 71,492 | |
| Under 5 years | | 5.8 | | 6.3 | | 6.5 |
| Under 18 years | | 22.7 | | 23.6 | | 28.1 |
| 65 years and over | | 18 | | 16.1 | | 12.9 |
| Population per square mile | 17 | | 6 | | 13 | |

| | New Mexico | | Cibola County | | McKinley County | | Grants | | Milan | | San Rafael | |
|--|--------------|------------|---------------|------------|-----------------|------------|------------|------------|------------|------------|------------|------------|
| | Population | Percentage | Population | Percentage | Population | Percentage | Population | Percentage | Population | Percentage | Population | Percentage |
| Total population (5-Year Estimate) | 2,059,179.00 | | 26,746 | | 71,492 | | 9094 | | 3644 | | 892 | |
| Hispanic or Latino | | | | 38 | | 14.2 | 4533 | 50 | 2584 | 71 | 671 | 75 |
| White alone | | 81.9 | | 52 | | 16.3 | 5785 | 64 | 2371 | 65 | 575 | 64 |
| Black or African American alone | | 2.6 | | 1 | | 0.7 | 163 | 2 | 69 | 2 | | |
| American Indian and Alaska Native alone | | 11 | | 44 | | 79.6 | 1749 | 19 | 511 | 14 | | |
| Asian alone | | 1.8 | | 1 | | 1.1 | 46 | 1 | 21 | 1 | | |
| Native Hawaiian and Other Pacific Islander alone | | 0.2 | | 0 | | 0.1 | 0 | | 0 | | | |
| White alone not Hispanic or Latino. | | 36.8 | | 19 | | 8.3 | 2562 | 28 | 636 | 17 | 221 | 25 |
| Two or More Races | | 2.6 | | 2 | | 2.3 | 291 | 3 | 46 | 1 | | |

| Labor | New Mexico | | Cibola County | | McKinley County | |
|---|------------|------|---------------|------|-----------------|------|
| In civilian labor force, total percent of population over 16years (2014-2018) | | 57.3 | | 52.6 | | 51.3 |
| In civilian labor force, female percent of population over 16years (2014 -2018) | | 53.6 | | 52.1 | | 50.5 |

| Income and Poverty | New Mexico | | Cibola County | | McKinley County | Grants | Milan | San Rafael |
|---|------------|------|---------------|------|-----------------|----------|----------|------------|
| Median household income (in 2018 dollars) | \$49,754 | | \$37,368 | | \$33,834 | \$35,671 | \$35,648 | \$64,470 |
| Individuals below the poverty line | | 16.8 | | 27.6 | 33.4 | 26.7% | 37.3% | 2.4% |

2010 Census Data, Census, 2019

Table 1.2-5 Grants-Milan Municipal Airport Temperature and Precipitation

| Month | Maximum Average Temperature | Minimum Average Temperature | Mean Total Precipitation Inches |
|--------------------------|-----------------------------------|-----------------------------------|---------------------------------------|
| | Degrees Fahrenheit | | |
| January | 56.1 | 2.15 | 0.6 |
| February | 58.3 | 5.93 | 0.7 |
| March | 66.2 | 10.4 | 0.76 |
| April | 71.7 | 17.03 | 0.85 |
| May | 80.5 | 25.1 | 0.75 |
| June | 89.6 | 36.47 | 0.66 |
| July | 89.5 | 45.2 | 2.62 |
| August | 85.5 | 43.57 | 2.63 |
| September | 81.2 | 33.47 | 1.47 |
| October | 73.5 | 19.97 | 1.11 |
| November | 63.9 | 7.8 | 0.69 |
| December | 56.9 | 0.1 | 0.7 |
| Annual Average 1986-2018 | 73.1 | 20.97 | 13.6 |

Source: WRCC, 2019

Table 1.2-6 2020 GRP Meteorological Data

| Month | | Wind Speed | Air Temperature | Relative Humidity | Monthly Precipitation | Average Daily Temperature |
|-----------|---------|------------|-------------------|-------------------|-----------------------|---------------------------|
| | | (m/s) | (Degrees Celsius) | (%) | (in) | (Degrees Celsius) |
| January | maximum | 11.1 | 12.8 | 93.9 | 0.5 | 0 |
| | minimum | 0.2 | -15.1 | 9.5 | | |
| | average | 3.0 | -0.3 | 58.2 | | |
| February | maximum | 15.9 | 17.0 | 94.6 | 0.81 | 1.45 |
| | minimum | 0.3 | -15.9 | 10.2 | | |
| | average | 3.4 | 1.5 | 52.1 | | |
| March | maximum | 15.8 | 18.2 | 93.0 | 0.86 | 6.49 |
| | minimum | 0.2 | -7.8 | 7.8 | | |
| | average | 3.5 | 6.5 | 45.2 | | |
| April | maximum | 12.5 | 26.5 | 88.2 | 0.29 | 10.69 |
| | minimum | 0.4 | -7.8 | 6.8 | | |
| | average | 3.8 | 10.7 | 30.4 | | |
| May | maximum | 12.3 | 29.0 | 70.2 | 0.02 | 16.76 |
| | minimum | 0.3 | -0.4 | 4.1 | | |
| | average | 3.7 | 16.8 | 21.5 | | |
| June | maximum | 14.8 | 31.7 | 80.6 | 0.16 | 21.16 |
| | minimum | 0.5 | 3.0 | 4.9 | | |
| | average | 3.9 | 21.2 | 20.7 | | |
| July | maximum | 8.1 | 34.6 | 94.7 | 1.36 | 22.3 |
| | minimum | 0.2 | 10.1 | 7.7 | | |
| | average | 2.8 | 22.3 | 38.9 | | |
| August | maximum | 10.7 | 33.3 | 90.4 | 1.19 | 23.12 |
| | minimum | 0.0 | 10.2 | 8.1 | | |
| | average | 2.7 | 23.1 | 30.8 | | |
| September | maximum | 13.2 | 31.8 | 92.0 | 0.66 | 16.98 |
| | minimum | 0.1 | 0.0 | 5.2 | | |
| | average | 2.9 | 17.0 | 32.3 | | |
| October | maximum | 13.0 | 27.0 | 95.2 | 0.92 | 11.08 |
| | minimum | 0.1 | -7.9 | 5.2 | | |
| | average | 2.3 | 11.1 | 30.1 | | |
| November | maximum | 1.8 | 22.0 | 93.8 | 0.34 | 5.19 |
| | minimum | 0.1 | -9.6 | 10.4 | | |
| | average | 2.9 | 5.2 | 50 | | |
| December | maximum | 12.5 | 15.8 | 90.2 | 0.44 | 0 |
| | minimum | 0.1 | -13.9 | 9.3 | | |
| | average | 2.8 | -2.1 | 51.5 | | |

Source: HMC and Hydro-Engineering, 2021

Table 1.2-7 Wildlife Species Known to Occur in the GRP Area

| Mammals | |
|--------------------------|---------------------------------|
| Desert Cottontail | <i>Sylvilagus audubonii</i> |
| Black-tailed jackrabbit | <i>Lepus californicus</i> |
| Silky pocket mouse | <i>Perognathus flavus</i> |
| Botta's pocket gopher | <i>Thomomys bottae</i> |
| Deer mouse | <i>Peromyscus maniculatus</i> |
| Ord's kangaroo rat | <i>Dipodomys ordii</i> |
| White-throated woodrat | <i>Neotoma abigula</i> |
| Mexican woodrat | <i>Neotoma mexicana</i> |
| Spotted ground squirrel | <i>Spermophilus spilosoma</i> |
| Rock squirrel | <i>Spermophilus verigatus</i> |
| Black-tailed prairie dog | <i>Cynomys ludovicianus</i> |
| Coyote | <i>Canis latrans</i> |
| Mule deer | <i>Ordocoileus hemionus</i> |
| Birds | |
| American robin | <i>Turdus migratorius</i> |
| American kestrel | <i>Falco sparverius</i> |
| Barn swallow | <i>Hirundo rustica</i> |
| Bewick's wren | <i>Thryomanes bewickii</i> |
| Brewer's sparrow | <i>Spizella breweri</i> |
| Brown-headed cowbird | <i>Molothrus ater</i> |
| Bullock's oriole | <i>Icterus bullockii</i> |
| Burrowing owl | <i>Athene cunicularia</i> |
| Common raven | <i>Corvus corax</i> |
| Eastern meadowlark | <i>Sturnella magna</i> |
| Eurasian collared-dove | <i>Streptopelia decaocto</i> |
| European starling | <i>Sturnus vulgaris</i> |
| Ferruginous hawk | <i>Buteo regalis</i> |
| Golden eagle | <i>Aquila chrysaetos</i> |
| Great blue heron | <i>Ardea herodias</i> |
| Hermit thrush | <i>Catharus guttatus</i> |
| Horned lark | <i>Eremophila alpestris</i> |
| House finch | <i>Haemorhous mexicanus</i> |
| House sparrow | <i>Passer domesticus</i> |
| Loggerhead shrike | <i>Lanius ludovicianus</i> |
| Mourning dove | <i>Zenaidura macroura</i> |
| Northern mockingbird | <i>Mimus polyglottos</i> |
| Olive-sided flycatcher | <i>Contopus cooperi</i> |
| Red-tailed hawk | <i>Buteo jamaicensis</i> |
| Red-winged blackbird | <i>Agelaius phoeniceus</i> |
| Sage thrasher | <i>Oreoscoptes montanus</i> |
| Sagebrush sparrow | <i>Artemisospiza nevadensis</i> |
| Say's phoebe | <i>Sayornis saya</i> |
| Scaled quail | <i>Callipepla squamata</i> |
| Turkey vulture | <i>Cathartes aura</i> |
| Vesper sparrow | <i>Pooecetes gramineus</i> |
| Violet-green swallow | <i>Tachycineta thalassina</i> |
| Western kingbird | <i>Tyrannus verticalis</i> |
| Western meadowlark | <i>Sturnella neglecta</i> |
| White-crowned sparrow | <i>Zonotrichia leucophrys</i> |
| Yellow-rumped warbler | <i>Setophaga coronata</i> |
| Reptiles | |
| Western rattlesnake | <i>Crotalus oreganus</i> |
| Lesser earless lizard | <i>Holbrookia maculata</i> |
| Horned lizard | <i>Phrynosoma spp.</i> |

Source: HDR, 2016

Table 1.2-8 Plant Species of Interest

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Flowering Period | Likelihood of Occurrence |
|------------------------------------|---------------------------------|----------------|--------------|---|---|--|
| Cinder Phacelia | <i>Phacelia serrata</i> | | NM rare | Primarily in deep volcanic cinders associated with volcanic cones, but also roadcuts and abandoned quarries in open, exposed, sunny locations; near ponderosa pine and piñon-juniper woodlands; 1,800-2,200 m (5,900-7,200 ft). | Flowers July to October, primarily late August and early September. | Low - More typical of coarse, rocky, highly well drained substrates; though limited potential may occur in areas of roadcuts, presence is unlikely in survey parcels. |
| Laguna Fame Flower | <i>Talinum brachypodium</i> | | NM rare | Very shallow pockets of calcareous silt to clay soils overlying limestone or travertine, or fine silty sand overlying calcareous sandstones; open piñon-juniper woodland with little understory and scattered cacti and shrubs or Chihuahuan desert scrub. Preference for substrates of fine-grained non-calcareous iron rich red sandstone of the "Rimrock Country" of the Colorado Plateau. | Flowers June to August. | Low - Iron rich red sandstone typical of habitat areas not present, and vegetation associations are lacking (Chihuahuan desert scrub and cacti areas lacking). |
| New Mexico Sunflower | <i>Helianthus praetermissus</i> | | NM rare | This species is known only from the type specimen collected in 1851. The locality was the head of the Rio Laguna (now Rio San Jose) at Ojo de la Gallina, on the north side of the Zuni Mountains. This species may have been named from a depauperate specimen of <i>Helianthus paradoxus</i> . Based on limited information, habitats may include perhaps wet ground. | Flowers in September. | Low - Species has not been observed since 1851. |
| Parish's Alkali Grass | <i>Puccinellia parishii</i> | | E | Alkaline springs, seeps, and seasonally wet areas that occur at the heads of drainages or on gentle slopes at 800-2,200 m (2,600-7,200 ft) range-wide. The species requires continuously damp soils during its late winter to spring growing period. It frequently grows with <i>Distichlis stricta</i> (salt grass), <i>Sporobolus airoides</i> (alkali sacaton), <i>Carex</i> spp. (sedges), <i>Scirpus</i> spp. (bulrushes), <i>Juncus</i> spp. (rushes), <i>Eleocharis</i> spp. (spike rushes), and <i>Anemopsis californica</i> (yerba mansa). | Flowers May to June. | Low to Medium - Localized areas of wetted soils occur where piping and pumping persists and contain similar plant associations. |
| Pecos Sunflower (Puzzle Sunflower) | <i>Helianthus paradoxus</i> | T | E | Saturated saline soils of desert wetlands. Usually associated with desert springs (ciénegas) or the wetlands created from modifying desert springs; 1,000-2,000 m (3,300-6,600 ft). <i>Helianthus paradoxus</i> is a true wetland species that requires saturated soils; adult plants still grow well when inundated | Flowers August to October. | Low to Medium - Localized areas of wetted soils occur where piping and pumping persists; however, likelihood of occurrence even in these areas is extremely low due to dominance of thick cattails. |

Table 1.2-8 Plant Species of Interest

| Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Flowering Period | Likelihood of Occurrence |
|--------------------------------|---|----------------|--------------|--|---|---|
| Todilto Stickleaf | <i>Mentzelia todiltoensis</i> | | NM rare | Outcrops of gypsum in the Todilto Formation; 1,700-1,910 m (5,600-5,840 ft). | Flowers open in the evening hours, late June through September. | Low - No gypsum outcrops occur in the study area. |
| Yeso Twinpod | <i>Physaria newberryi</i> var. <i>yescicola</i> | | NM rare | The habitat is nearly barren badlands and canyon sides of various slopes and exposures between the elevations of 1700 and 2100 m. It occurs on sandy gypsum and other silty strata in short grass steppe and juniper savanna; in the Permian age Yeso Formation. The Yeso formation is comprised of a soft, silty sandstone interbedded with gypsum, limestone, shale and siltstone strata of various thickness. | Flowers April and May. | Low - May occur in shortgrass steppe, however Yeso formation not known to occur underlying area. Other ecological information indicates this species occurs in barren badlands and canyon sides. |
| Zuni Fleabane (Acoma Fleabane) | <i>Erigeron acomanus</i> | T | E | Steep, sandy slopes and benches beneath sandstone cliffs of the Entrada Sandstone Formation in piñon-juniper woodland; 2,100-2,170 m (6,900-7,100 ft). Vegetation cover is usually high; prefers north facing slopes. Typical of high selenium soils. | Flowers in July. | Low - No suitable habitat in survey areas. |
| Zuni Milkvetch | <i>Astragalus missouriensis</i> var. <i>accumbens</i> | | NM rare | Habitats include gravelly clay banks and knolls, in dry, alkaline soils derived from sandstone, in piñon-juniper woodlands; 1,890-2,410 m (6,200-7,900 ft). | Flowers (March) May through June (August). | Medium - May be locally abundant within its limited range. Alkaline soils derived from sandstone occur in study area parcels. |

Notes: Queried from NMNHP, <http://nmrareplants.unm.edu/rarelist.php>, January 2018, and USFWS IPAC for Cibola County, <https://ecos.fws.gov/ipac/>, January 2018.

T = threatened; E = endangered; NM = New Mexico

Source: Lone Mountain, 2018

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|---------------------|-----------------------------|----------------|--------------|---|--|
| Bat | Big Free-tailed Bat | <i>Nyctinomops macrotis</i> | | NM sensitive | Seasonal migrant through much of its range. Found in urban areas, dry forests, and pine forests. | Low - May forage or pass through on a seasonal basis, but no suitable habitat is present. |
| Bat | Fringed Myotis | <i>Myotis thysanodes</i> | | NM sensitive | Found at middle elevations of 1,200-2,150 m in desert, grassland, and woodland habitats. Roosts in caves, mines, rock crevices, buildings, and other protected sites. | Low - Study area is outside species elevation range. |
| Bat | Long-eared Myotis | <i>Myotis evotis</i> | | NM sensitive | Widespread throughout the western U.S. in a wide range of habitats but most commonly found in coniferous forests. Prefer snags that reach high into or above the forest canopy and roost in crevices of sandstone boulders, stumps of clear-cut stands, abandoned buildings, cracks in the ground, caves, mines, and loose bark on living and dead trees. | Low - May forage or pass through on a seasonal basis. |
| Bat | Long-legged Myotis | <i>Myotis volans</i> | | NM sensitive | Found in forested regions and roost in trees, rock crevices, fissures in stream banks, and buildings. | Low - May forage or pass through, but no suitable habitat in the study area. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|----------------------------------|--------------------------------|----------------|--------------|---|--|
| Bat | Pale Townsend's Big-eared Bat | <i>Corynorhinus townsendii</i> | | NM sensitive | Occurs in semi-desert shrublands, desert scrub, sagebrush, chaparral, piñon-juniper woodlands, and open montane forests. Roosts mostly in caves or mines; at night may roost in abandoned buildings. Will also use rock crevices and hollow trees as roost sites. In summer, this species occurs widely across the state. | Medium - Suitable habitat within study area. Species occurs widely in New Mexico during summer months over desert scrub and other habitats. |
| Bat | Southwestern Little Brown Myotis | <i>Myotis occultus</i> | | NM sensitive | Found in a variety of habitats including urban and agricultural areas, riparian habitats, grasslands, and forests. Hibernates in caves and mines, and roosts in buildings in New Mexico. Typically found near lakes or streams as they prefer to forage over water, but will also forage among trees in open areas. | Low - May forage over ponds or roost in abandoned structures near study area. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|-----------------------------|---------------------------|----------------|--------------|---|---|
| Bat | Spotted Bat | <i>Euderma maculatum</i> | | T | Forages in forest openings, piñon-juniper woodlands, riparian habitats, meadows, and agricultural fields. It is a broad-ranging species; however, its distribution is highly associated with prominent rock features. Rocky cliffs with suitable roosting substrate (e.g., crevices, cracks) are critical to this species. Perennial water sources also are important for this species. | Low - No suitable habitat in study area. May be found in forests or rocky cliffs outside study area. |
| Bat | Western Small-footed Myotis | <i>Myotis ciliolabrum</i> | | NM sensitive | Common in arid desert, badland, and semiarid habitats. Occurs at low to moderate elevations as high as 9,500 ft in New Mexico. Wide ecological range from rock outcrops in open grasslands to canyons and woodlands. Roosts include cracks and crevices in cliffs, behind tree bark, mines, caves, tunnels, and other man-made structures. | Medium - Potential habitat for foraging within study area. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|-----------------------|-----------------------------|----------------|--------------|---|--|
| Bat | Yuma Myotis | <i>Myotis yumanensis</i> | | NM sensitive | Found in a variety of habitats from juniper and riparian woodlands to desert regions near open water. Almost guaranteed to find near rivers, streams, ponds, and lakes. Roost in caves, attics, buildings, mines, underneath bridges, and other similar structures. | Low - No suitable aquatic habitat present. May roost in abandoned structures near study area. |
| Bird - MBTA | Bendire's Thrasher | <i>Toxostoma bendirei</i> | BCC | | Desert species found in various dry, semi-open habitats, particularly areas of tall vegetation, cholla cactus, creosote bush and yucca, and in juniper woodlands. | Medium - Potential for breeding and foraging habitat to be present. |
| Bird - MBTA | Black-chinned Sparrow | <i>Spizella atrogularis</i> | BCC | | Occupies brushy mountain slopes, open chaparral, and sagebrush habitats. Found mostly in arid scrub on hillsides from low foothills to 7,000 ft elevation. | Medium - Potential for breeding and foraging habitat to be present. |
| Bird - MBTA | Brewer's Sparrow | <i>Spizella breweri</i> | BCC | | Occurs in the arid intermountain western U.S. Breeds on sagebrush flats and open scrubby areas. Sometimes found in stands of saltbush, on open prairie, or in pinyon-juniper woodland. | High - Suitable habitat present and within the common breeding range of the species. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|----------------------------|--------------------------|----------------|--------------|--|--|
| Bird - MBTA | Chestnut-collared Longspur | <i>Calcarius ornatus</i> | BCC | | Found along the plains and prairies, breeding in shortgrass prairies containing slightly longer grass and scattered taller weeds. Overwinters in shortgrass prairies and fields. | Medium - Habitat present for overwintering and migration route. |
| Bird - MBTA | Grace's Warbler | <i>Dendroica graciae</i> | BCC | | Occupies pine-oak forests of mountain regions. Breeds in the tops of pine trees, spruce, fir, and oak thickets. Overwinters in pine-oak woodlands in the mountains. | Low - Potential to occur in nearby forests, not likely within project area due to lack of suitable habitat in the study area. |
| Bird - MBTA | Gray Vireo | <i>Vireo vicinior</i> | BCC | T | Open woodlands/shrublands, mountain slopes, mesas, open chaparral, scrub oak, and junipers; occurs in New Mexico only in warmer months (April-September). Found in elevations between 3,000 to 6,500 ft. | Medium - Habitat present for breeding during spring and summer. |
| Bird - MBTA | Lesser Yellowlegs | <i>Tringa flavipes</i> | BCC | | Migrates through New Mexico and found in marshes, mudflats, shores, ponds, and open boreal woods. | Medium - Potential to pass through during migration. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|--------------------|----------------------------|----------------|--------------|--|--|
| Bird - MBTA | Lewis's Woodpecker | <i>Melanerpes lewis</i> | BCC | | Prefers scattered or logged forests, river groves, burns, and foothills. During the summer requires open country for foraging so is often found in Cottonwood groves, open pine-oak woods, burned or cut-over woods. Overwinters in oak groves and orchards. | Low - No suitable habitat present within the study area. Likely present in forests outside the study area so may pass through incidentally. |
| Bird - MBTA | Loggerhead Shrike | <i>Lanius ludovicianus</i> | BCC | NM sensitive | Found in semi-open country with lookout posts, wires, trees, and scrub. Breeds in semi-open terrain from large clearings in wooded regions to open grasslands or desert with a few scattered trees or large shrubs. | High/Confirmed - Species observed and identified within the study area. |
| Bird - MBTA | Long-billed Curlew | <i>Numenius americanus</i> | BCC | | Migrates through New Mexico and breeds only in the northeastern corner of New Mexico. Found on the high plains, and breeds in native dry grassland and sagebrush prairie. | Medium - Potential to pass through during migration. |
| Bird - MBTA | Marbled Godwit | <i>Limosa fedoa</i> | BCC | | Migrates through New Mexico. Found in prairies, pools, shores, and tideflats. Breeds in the northern Great Plains in native prairies containing marshes or ponds. | Low - Potential for species to occur within the study area during migration. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|------------------------|----------------------------------|----------------|--------------|--|--|
| Bird - MBTA | Mountain Plover | <i>Charadrius montanus</i> | | NM sensitive | This species is a native of the short-grass prairie. Breeds on open plains at moderate elevations and overwinters in short-grass plains and fields, plowed fields, and sandy deserts. | Medium - Suitable habitat present for breeding and overwintering. |
| Bird - MBTA | Olive-sided Flycatcher | <i>Contopus cooperi</i> | BCC | | Occupies coniferous forests, burns, and clearings. Breeds in coniferous forests in the mountains, particularly around the edges of open areas including bogs, ponds, and clearings. | None - No suitable habitat within the study area. Only suitable habitat is in the nearby forests. |
| Bird - MBTA | Pinyon Jay | <i>Gymnorhinus cyanocephalus</i> | BCC | | Found in New Mexico year-round in pinyon pines and junipers. Seldom found outside of pinyon pines in pinyon-juniper woods, but may be seen in streamside groves, oak woods, or other habitats if the pinyon cone crop fails. | None - No suitable habitat within the study area. Only suitable habitat is in the forests outside the study area. |
| Bird - MBTA | Rufous Hummingbird | <i>Selasphorus rufus</i> | BCC | | Migrates through New Mexico. Found along forest edges, streamsides, and mountain meadows. Occur at all elevations but more common in lowlands during spring, and mountain meadows during late summer and fall. | Medium - Potential to pass through during migration. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|------------------------------------|---|----------------|--------------|--|--|
| Bird - MBTA | Southwestern Willow Flycatcher | <i>Empidonax traillii extimus</i> | E | E | Riparian habitat consisting primarily of native trees such as willow; nest in shrubs and small trees in willow thickets, shrubby mountain meadows and deciduous woodlands along streams. Habitat patches must be at least 0.25 acres in size and at least 30 ft wide (USFWS 2014). | Low - No suitable riparian habitat is present for nesting or foraging. However, species known to use habitat patches so area containing willows should be assessed. |
| Bird - MBTA | Virginia's Warbler | <i>Vermivora virginiae</i> | BCC | | Occupies oak canyons, brushy slopes, and pinyons. Breeds in New Mexico in dry mountainsides in scrub oak, chaparral, pinyon-juniper woods, or other low brushy habitats. | Medium - Suitable habitat present and project area within common breeding range for species. |
| Bird - MBTA | Yellow-billed Cuckoo (western pop) | <i>Coccyzus americanus occidentalis</i> | T | T | Mature riparian habitats most commonly associated with cottonwood or other native forests; associated with lowland deciduous woodlands, willow and alder thickets, second-growth woods, deserted farmlands and orchards. | None - No suitable riparian habitat is present within the study area. |
| Bird - Raptor | Arctic Peregrine Falcon | <i>Falco peregrinus tundrius</i> | | T | Hunting habitats include croplands, meadows, riverbottoms, marshes and lakes; breeds in the Arctic tundra. | Low - Hunting habitat may be present during migration. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|---------------|---------------------------------|----------------|--------------|--|--|
| Bird - Raptor | Bald Eagle | <i>Haliaeetus leucocephalus</i> | | T | Forested areas along coasts, large lakes, and rivers. Year-round occurrence | Low - May hunt or pass through incidentally, but study area does not contain suitable aquatic habitat preferred by species. |
| Bird - Raptor | Burrowing Owl | <i>Athene cunicularia</i> | BCC | | Found in open grasslands, prairies, farmland, deserts, steppe environments, and airfields. Favors areas of flat, open ground with very short grass or bare soil. Most often associated with high densities of burrowing mammals, such as prairie dogs, but also airports, golf courses, vacant lots, industrial parks, and other open areas when prairie dog colonies are not present. | High - Suitable habitat present in prairie dog colonies within the study area. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|----------------|--------------------------|----------------|--------------|--|---|
| Bird - Raptor | Golden Eagle | <i>Aquila chrysaetos</i> | BCC | | Found in open mountains, foothills, plains, and open country. Require open terrain for hunting. Avoid developed areas and primarily found in the mountains up to 12,000 ft, canyonlands, rimrock terrain, and riverside cliffs and bluffs. Nest on cliffs and steep escarpments near open grasslands, chaparral, shrubland, and forests. | High/Confirmed - Suitable hunting habitat present within the study area, and nesting habitat present along cliffs outside of the study area. Incidental observations of this species have were noted previously. |
| Bird - Raptor | Long-eared Owl | <i>Asio otus</i> | BCC | | Inhabit woodlands and conifer groves, favoring dense trees for nesting and roosting, and open country for hunting. Found in forests with extensive meadows, groves of conifers or deciduous trees in prairie country, or streamside groves in the desert. Typically avoids unbroken forests. | Low - May hunt or pass through, but will predominately nest and hunt outside study area in forested areas. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|---------------------|----------------------------------|----------------|--------------|--|---|
| Bird - Raptor | Mexican Spotted Owl | <i>Strix occidentalis lucida</i> | T | | Inhabits canyon and montane forests and rocky canyons from southern Utah, Colorado, Arizona, New Mexico, and western Texas. The highest densities of this species occur in mixed-conifer forests with minimal human disturbance. | Low - May hunt or pass through, but will predominately nest and hunt outside study area in forested, undisturbed areas. |
| Bird - Raptor | Northern Goshawk | <i>Accipiter gentilis</i> | | | Occupy coniferous and mixed forests, and are generally restricted to wooded areas but may also be found in open woods or edges. In the western U.S. they are found in the forest along riparian corridors and in more open habitat such as sagebrush steppes. Nest in mature, old-growth forests with more than 60% closed canopy throughout their entire range. | Low - May hunt or pass through incidentally, but will predominately nest and hunt outside study area in dense, forested areas. |
| Bird - Raptor | Peregrine Falcon | <i>Falco peregrinus</i> | | T | Breeding territories located on cliffs in wooded/forested habitats; hunting habitats include croplands, meadows, riverbottoms, marshes and lakes. | High - Suitable hunting habitat present within the study area, and nesting habitat present along cliffs outside of the study area. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|-------------------------|--------------------------------------|----------------|--------------|--|--|
| Fish | Rio Grande Chub | <i>Gila pandora</i> | | NM sensitive | Most commonly found in flowing pools of headwaters, creeks, and small rivers near inflow of riffles, undercut banks, aquatic vegetation, and plant debris. Can also occur in impoundments. | None - No suitable habitat present within the study area. |
| Fish | Zuni Bluehead Sucker | <i>Catostomus discobolus yarrowi</i> | E | E | Most frequently occurs in stream reaches with cobble and bedrock substrates with slow- to moderate-velocity water. In New Mexico, the sucker currently is limited to the headwaters of the Zuni River drainage. | None - No suitable habitat present within the study area. |
| Invertebrate | Socorro Mountainsnail | <i>Oreohelix neomexicana</i> | | NM sensitive | Occupies a variety of habitats from lush forested canyons to extreme conditions. Found in New Mexico in scant cover under loose stones, limestone rocks, and other single stones in areas of rich leaf litter. | None - No suitable habitat present within the study area. |
| Mammal | Cebolleta Pocket Gopher | <i>Thomomys bottae paguatae</i> | | NM sensitive | Currently known only from a small area in Cibola County. Prefers perennial riparian vegetation including willow, cottonwood, alder, and maple. Surrounding uplands in known locality include large sandstone cliffs with juniper, piñon, and sage. | Low - Evidence of gophers identified in the project area, but unlikely this species due to its preference for riparian habitat. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|---|------------------------------------|----------------|--------------|---|--|
| Mammal | Common Hog-nosed Skunk | <i>Conepatus leuconotus</i> | | NM sensitive | Inhabits a variety of habitats including sycamore, cottonwood, and rabbitbrush riparian habitats, piñon-juniper woodlands, and montane shrublands. Prefers rocky areas. Uses rock crevices, hollow logs, underground burrows, caves, mines, woodrat houses, or buildings as dens. | Medium - Potential for habitat to be present. |
| Mammal | Gunnison's prairie dog (prairie subspecies) | <i>Cynomys gunnisoni zuniensis</i> | | NM sensitive | Found in plains and desert grassland, and to a lesser extent the Great Basin desert scrub. Occurs in low valleys, but also is common in parks and meadows in the montane forests up to at least 10,000 feet. | Medium - Potential for habitat to be present as there are numerous prairie dog colonies. Species needs to be confirmed. |
| Mammal | Northern Pocket Gopher | <i>Thomomys talpoides taylori</i> | | NM sensitive | Found in a wide variety of habitats ranging from sagebrush steppe, mountain meadows, tundra, agricultural fields, grasslands, and gardens or lawns. Prefer deep soils along streams, meadows, and cultivated fields. Also found in rocky soils and clay. | High - Evidence of gophers identified in the project area. |

Table 1.2-9 Wildlife Species of Interest

| Type of Wildlife | Common Name | Scientific Name | Federal Status | State Status | Habitat/Seasonal Occurrence | Likelihood of Occurrence |
|------------------|---------------------------|----------------------------|----------------|--------------|---|--|
| Mammal | Red Fox | <i>Vulpes vulpes</i> | | NM sensitive | Occupies a wide range of habitats including grasslands, deserts, mountains, forests, and suburban areas. Prefer wooded areas but can adapt to different environments. | Medium - Potential for habitat to be present. |
| Mammal | Ringtail | <i>Bassariscus astutus</i> | | NM sensitive | Found in a variety of habitats such as semi-arid oak forests, pinyon pine or juniper woodlands, montane conifer forests, chaparral, desert, dry tropical habitats, and rocky or cliff areas. This species adapts well to disturbed areas and frequently found in human populated areas. | Medium - Potential for habitat to be present. |
| Reptile | Southwestern Fence Lizard | <i>Sceloporus cowlesi</i> | | NM sensitive | Found in a variety of habitats including semidesert grasslands, woodlands, rocky canyons, and forested slopes. Usually encountered in open, sunlit areas with plenty of basking sites such as rock piles, wood piles, and fallen logs. | Medium - Potential for habitat to be present. |

Notes: Queried from Bison-M, <http://bison-m.org/index.aspx>, January 2018, and USFWS IPAC for Cibola County, <https://ecos.fws.gov/ipac/>, January 2018.

T = threatened; E = endangered; BCC= bird of conservation concern; NM = New Mexico

Source: Lone Mountain, 2018

Table 1.5-1 Proposed Alternate Concentration Limits

| Constituents (mg/L unless noted) | Lowest Promulgated Standard | ^aProposed ACL |
|--|--|-------------------------------------|
| Arsenic (As) | 0.01 | 0.483 |
| Boron (B) | 0.75 | 0.970 |
| Cadmium (Cd) | 0.005 | 0.020 |
| Molybdenum (Mo) | 0.1 | 80.8 |
| Selenium (Se) | 0.01 | 4.40 |
| Uranium (U) | 0.03 | 57.7 |
| Vanadium (V) | 0.01 | 0.404 |
| Chloride (Cl) | 250 | 1,489 |
| Fluoride (F) | 1.6 | 9.7 |
| Nitrate (NO ₃ -N) | 1 | 210 |
| Sulfate (SO ₄) | 600 | 12,300 |
| Combined Radium-226+228 (Ra-226+228) (pCi/L) | 5 | 15.2 |
| Thorium-230 (Th-230) (pCi/L) | 0.3 | 114 |

^aMaximum of current measured (2018-2020) and predicted concentration from bounding-case model for POC wells C2, D1, M3, SB, SZ, X.