

November 14, 2025

Biological Assessment / Biological Evaluation

Schmitt Decline Abandoned Uranium Mine Project McKinley County, New Mexico

Prepared for:

New Mexico Environmental Department
Harold Runnels Building
1190 St. Francis Drive Suite N4050
Santa Fe, New Mexico 87505

and

New Mexico Energy, Minerals, and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Pinyon Project No.:
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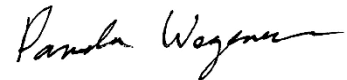
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1. Introduction and Background

The New Mexico Environment Department (NMED), in coordination with the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) Abandoned Mine Land (AML) Program, proposes to implement mitigation measures to address public health and safety hazards present at the Schmitt Decline, an Abandoned Uranium Mine (AUM) located near Milan, New Mexico (Figure 1). The Schmitt Decline AUM Area of Potential Effect (APE), provided by NMED, consists of approximately 100 acres around the mine adit and is situated on State Trust Land (STL) administered by the New Mexico State Land Office (SLO) with a small portion extending onto lands administered by the U.S. Department of Interior Bureau of Land Management (BLM), Rio Puerco Field Office (BLM-RPFO) (Figure 2). The Schmitt Decline AUM represents one of several uranium mine features identified by the AML Program as posing potential risks to human health and the environment.

This Biological Assessment/Biological Evaluation (BA/BE) has been prepared by Pinyon Environmental, Inc. (Pinyon) on behalf of NMED and EMNRD in support of the Endangered Species Act (ESA) and related federal and state environmental laws. Section 7 (a)(2) of the ESA [16 U.S.C. 1531 et seq.] states that “each federal agency shall, in consultation with the Secretary, insure that any action authorized, funded, or carried out by such agency, is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat.”

The BA/BE documents existing conditions within the APE, evaluates potential effects of the Proposed Action on federally listed and proposed species, state-listed species, BLM Sensitive Species, and unprotected species and their habitats, and provides determinations consistent with U.S. Fish and Wildlife Service (USFWS) and BLM guidance. The BA/BE also provides recommendations for limiting impacts to biological resources during AUM mitigation work.

1.1 Proposed Project Location

The APE is located approximately 13 miles northeast of Milan, McKinley County, New Mexico (Figure 2) as shown on the U.S. Geological Survey (USGS) 7.5-Minute Quadrangle, Dos Lomas, 2023 (USGS, 2023a). Table 1 describes the location, in detail, of the APE.

Table 1: Project Location

Latitude, Longitude ¹	Section (S), Township (T) Range (R)	Elevation ²
35.349918°, -107.802845°	S 16, 17, 20, 21, T 13 North, R 9 West	6,840-6,970

¹Approximate center of APE (World Geodetic System of 1984, Decimal Degrees)

²Approximate elevation above mean sea level in feet

1.2 Proposed Action

The NMED and EMNRD AML Program, in cooperation with the SLO and BLM, intends to undertake reclamation activities at the Schmitt Decline AUM to eliminate public-safety hazards associated with legacy uranium mining operations.

The APE encompasses approximately 100 acres, with proposed reclamation activities confined to an estimated 6 acres that represents the maximum extent of potential ground disturbance (Figure 3). Disturbance would be limited to areas immediately surrounding the waste rock piles associated with Schmitt Decline. The Proposed Action includes removal of the waste rock piles exhibiting elevated radiological readings. Radiological readings are considered elevated over 5 picocuries per gram (pCi/g) and are further explained in the Work Plan for the Schmitt Decline Mine Site Assessment dated September 2025 (EA, 2025). Material would be excavated using a medium-sized wheel loader (e.g., Caterpillar 950 or equivalent) and placed within the Schmitt Decline. A track loader or skid steer would then be used to push the material farther into the decline. Upon completion of this activity, a small bulldozer would spread material from the remaining rock piles across the surrounding area to achieve a stable final grade. Limited tree removal would be required to accommodate this work. Following completion of earth-moving activities, disturbed areas would be hydroseeded to promote revegetation and minimize erosion. Equipment-related noise levels are anticipated to remain below 90 decibels.

Under the Proposed Action, and for any alternatives that may be considered in the future, work would be limited to the 6-acre limits of ground disturbance and access to the waste rock piles and adit would occur from the south using only existing disturbed tracks. No machinery would cross the drainage mapped east to west within the project area.

1.3 Regulatory Background

This BA/BE has been prepared to document existing biological conditions in the APE that may be regulated under the following federal and state regulations:

1.3.1 Federal Regulations

- ▶ **ESA:** Protects federally listed plant and animal species with the goal of ensuring their long-term survival. The USFWS administers these requirements.
- ▶ **Migratory Bird Treaty Act (MBTA):** Protects birds, their active nests, and their eggs (except Rock Doves [*Columba livia*], European Starlings [*Sturnus vulgaris*], and some other non-native birds). The USFWS administers these requirements.
- ▶ **Bald and Golden Eagle Protection Act (BGEPA):** Protects Bald (*Haliaeetus leucocephalus*) and Golden (*Aquila chrysaetos*) Eagles. The USFWS administers these requirements.
- ▶ **Section 404 of the Clean Water Act (CWA):** Section 404 of the CWA regulates placement of dredge and/or fill material into Waters of the U.S. (WOTUS), which includes non-wetland waters and wetlands. The U.S. Army Corps of Engineers (USACE) administers the CWA.
- ▶ **Surface Mining Control and Reclamation Act (SMCRA):** SMCRA established the AML Program to remediate abandoned mine lands that predate modern reclamation standards.
- ▶ **Federal Land Policy and Management Act (FLPMA):** The FLPMA directs the BLM to manage public lands under principles of multiple use and sustained yield, including the conservation of natural and biological resources. Under BLM Manual Section-6840 (*Special Status Species Management*), the BLM identifies Sensitive Species to promote their conservation and minimize the likelihood of future listing under the ESA.

1.3.2 New Mexico State Regulations

- ▶ **New Mexico Wildlife Conservation Act:** Authorizes the New Mexico Department of Game and Fish (NMDGF) to identify and protect state-listed threatened and endangered species and their habitats.
- ▶ **New Mexico Endangered Plant Program:** Administered by the EMNRD, these regulations protect state-listed endangered plant species from collection, removal, or destruction without authorization.
- ▶ **New Mexico Noxious Weed Management Act:** Authorizes the New Mexico Department of Agriculture (NMDA) to designate and regulate noxious weeds within the state.
- ▶ **New Mexico Water Quality Act:** The New Mexico Environmental Department Surface Water Quality Bureau is developing a State Permitting Program under the authority of the New Mexico Water Quality Act to regulate point source and dredge and fill discharges into surface waters of the state (SWOTS). This permitting program is currently under development and may be formalized during the life of the project.

2. Methods

2.1 Desktop Assessment

Prior to the field survey, Pinyon biologists conducted a desktop investigation of biological resources in the APE using publicly available information. Sources included recent aerial imagery and street view photography (Google Earth Pro, 2025) the USFWS Information for Planning and Consultation (IPaC) system (USFWS 2025a), the NMDGF New Mexico Environmental Review Tool (NMERT; NMDGF, 2025a), the New Mexico Rare Plants website (NMRP, 2025), and the U.S. Department of Agriculture (USDA) Web Soil Survey (USDA, 2019). Land cover data from the National Land Cover Database (USGS, 2021), National Hydrography Dataset (NHD; USGS, 2023b), and USFWS National Wetlands Inventory (NWI; USFWS, 2025b) were also reviewed to identify potential habitats and surface water features within the APE.

Pinyon used these data sources to compile an inventory of federally listed and proposed species, state-listed species, and BLM Sensitive Species with potential to occur within the APE. This species list was coordinated with NMED and confirmed on August 28, 2025.

2.2 Field Surveys

Following the desktop analysis, Pinyon biologists conducted a field survey of the APE from September 15 - 17, 2025, to document vegetation, wildlife, and aquatic resource conditions and to evaluate habitat suitability for federally listed and proposed species, state-listed species, BLM Sensitive Species, and migratory birds.

Biologists carried field guides, species photographs, and reference materials to aid in accurate species identification. Incidental observations of wildlife and incidental plant species were also recorded throughout the APE. Biological resources were mapped in the field using ArcGIS *Field Maps*, and notes and photographs were taken to document general conditions. A Photographic Log is included in Appendix A.

2.2.1 Avian Point Count Surveys

Using the Integrated Monitoring in Bird Conservation Regions (IMBCR) program and USDA's Monitoring Bird Populations by Point Counts guidelines, Pinyon completed avian point count surveys to identify bird species occurring within the APE (IMBCR, 2018; USDA, 1995). Eleven point-count stations were established and randomly distributed across the site to represent the full range of habitat types (Figure 4). Each station was surveyed over a ten-minute period, beginning one-half hour before sunrise and concluding no later than five hours after sunrise. All birds seen or heard were recorded, along with the observation type (e.g., aural, visual, both, and/or flyover). The Avian Point Count Survey Forms are included as Appendix B.

2.2.2 Bat Emergence Survey

A bat emergence survey was conducted at sunset to assess the potential use of the mine decline. The survey was conducted between approximately 0.5 hour before sunset to 1 hour after sunset (USFWS, 2024a). Observers were positioned at appropriate vantage points around the mine decline

to record the number, timing, and direction of bats as they exited the mine. Appendix C includes information on survey start and end times, surveyor information, weather data, and other survey notes, along with a USFWS Bat Emergence Datasheet. The visual emergence survey included acoustic monitoring using a Wildlife Acoustics Echo Meter Touch ultrasonic detector to detect echolocation calls.

2.2.3 Waters of the U.S. Delineation

The potential for wetlands was assessed in accordance with the 1987 USACE “Wetland Delineation Manual” and the 2010 “Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0)” (Environmental Laboratory, 1987; USACE, 2008a). Ordinary high water marks (OHWMs) were assessed and mapped in accordance with the “National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams Final Version” (USACE, 2025) and with “A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States” (USACE, 2008b). Appendix D includes Wetland Determination Data Sheets associated with the aquatic resources delineation.

2.2.4 Special Status Plant Species Surveys and Vegetation Mapping

A 100-percent coverage pedestrian survey was conducted within the APE to identify potential occurrences of special status plant species and to characterize vegetation communities. Surveyors employed systematic meandering transects to provide thorough visual coverage of all vegetation types and topographic features. Vegetation communities were identified and mapped in the APE based on dominant vegetation, topography, and geology. Each vegetation community was delineated in the field using GPS and verified against aerial imagery.

3. Environment and Existing Conditions

3.1 Geography

The APE is located within the Semiarid Tablelands level IV ecoregion of the Arizona/New Mexico Plateau of the North American Deserts. The Semiarid Tablelands ecoregion consists of mesas, plateaus, cliffs, canyons, and valleys composed of ephemeral and intermittent streams, and scattered shrubland, grassland, and juniper and pinyon-juniper woodland (Griffith et al. 2006).

3.2 Geology

The APE is located within the southern portion of the Colorado Plateau physiographic province, where broad mesas and cuestas are underlain by gently dipping sedimentary formations. The dominant bedrock unit is the Dakota Sandstone (Cenomanian), composed of yellowish-brown to light-gray shore-zone sandstone and gray mudstone, approximately 25 meters thick (Appendix A, Photo 1). Overlying this formation are eolian and alluvial deposits (Upper Pleistocene–Holocene) consisting of reddish-brown eolian sand and loessic silt locally reworked by alluvial processes (USGS, 2025). These surficial deposits are generally stabilized by vegetation but may become more erodible where disturbed.

3.3 Soils

Two soil complexes are mapped in the APE: the Celavar-Atarque complex and the Penistaja-Tintero complex (USDA, 2019). These soils are described in detail in Table 2 and the sections below.

Table 2: Soils within the APE

Soil Type Name	Soil Map Unit Symbol	Acres in Project Area	Percent of Project Area
Celavar-Atarque complex, 1 to 8 percent slopes	305	89.7	89.6%
Penistaja-Tintero complex, 1 to 10 percent slopes	205	10.4	10.4%

NRCS Web Soil Survey (NRCS, 2019)

3.3.1 Celavar–Atarque Complex

The Celavar–Atarque complex occurs on mesas and dip slopes of cuestas at elevations between approximately 6,500 and 7,500 feet above mean sea level (amsl). Soils formed in eolian deposits over slope alluvium derived from sandstone and shale. The complex consists of approximately 50 percent Celavar and 35 percent Atarque soils, with the remainder composed of minor inclusions such as rock outcrop and Flugle soils.

- ▶ Celavar soils are well-drained loams with a typical profile of loam and sandy clay loam horizons over bedrock at depths of 20–40 inches. They occur on convex, linear, and concave slopes and

have low runoff potential, moderately high to high permeability (0.20–1.98 inches per hour), and are not hydric.

- ▶ Atarque soils are somewhat shallower (10–20 inches to bedrock) and coarser textured, consisting of sandy loam and sandy clay loam horizons. They are well-drained but have higher runoff potential and very low to moderately high permeability (0.00–0.20 inches per hour), and are not hydric.

Both soils exhibit low available water capacity, are nonsaline to very slightly saline, and are not considered prime farmland.

3.3.2 Penistaja–Tintero Complex

The Penistaja–Tintero complex occurs on fan remnants, mesas, and dip slopes between approximately 6,030 and 7,860 feet amsl. These soils formed in eolian deposits and slope alluvium derived from sandstone and shale. The complex is composed of roughly 45 percent Penistaja and 40 percent Tintero soils, with 15 percent minor components such as Sparank, Hagerwest, and Bond soils.

- ▶ Penistaja soils are well-drained, deep sandy loams that extend to more than 80 inches before reaching a restrictive layer. They occur on gentle slopes (1–5 percent), have low runoff, moderate water-holding capacity (about 6.3 inches), and are not hydric.
- ▶ Tintero soils are finer sandy loams that are somewhat excessively drained, also extending beyond 80 inches in depth. They exhibit low runoff and high permeability (1.98–5.95 inches per hour) and are not hydric.

3.4 Vegetation

Vegetation within the APE reflected a transition between semi-arid grassland and pinyon-juniper woodland communities typical of the Colorado Plateau region in western New Mexico (USGS, 2021). Vegetation composition and cover varied according to soil type, slope position, and past surface disturbance associated with legacy mining activities.

Generally, upland areas were dominated by scattered twoneedle pinyon (*Pinus edulis*) and one-seed juniper (*Juniperus monosperma*), with an understory composed of blue grama (*Bouteloua gracilis*), broom snakeweed (*Gutierrezia sarothrae*), and scattered yucca (*Yucca* spp.) and prickly pear (*Opuntia* spp.). Ground cover was low, with patches of exposed bedrock and bare soil common throughout much of the site.

Vegetation along the mapped drainage feature showed slightly greater cover and structural diversity compared to upland areas, supporting species such as Baltic rush (*Juncus balticus*) and rubber rabbitbrush (*Chrysothamnus nauseosus*) in localized areas where runoff and sediment accumulation occur.

3.4.1 Land Cover

Land cover types mapped on the National Land Cover Dataset within the APE included inter-mountain basins semi-desert grassland (74 percent), Colorado Plateau pinyon-juniper woodland (17

percent), inter-mountain basins semi-desert shrub steppe (5 percent), inter-mountain basins juniper savanna (4 percent), and inter-mountain basins mixed salt desert scrub (1 percent) (USGS, 2021).

3.4.2 Vegetation Communities

Three vegetation communities were mapped in the APE. These communities are shown in Figure 4 and described in detail in the sections below.

3.4.2.1 Desert Grassland

The desert grassland community occurred along the northwestern boundary and in patches near the southeastern and southwestern boundary of the APE (Figure 4; Appendix A, Photos 2 and 3). This community was dominated by herbaceous species, primarily blue grama, interspersed with bare ground. Shrubs included broom snakeweed (*Gutierrezia sarothrae*), rubber rabbitbrush, redberry juniper (*Juniperus pinchotii*), and one-seed juniper (*Juniperus monosperma*). Scattered twoneedle pinyons were also present. Disturbance in this vegetation community mainly consisted of two-track access roads.

3.4.2.2 Pinyon-Juniper Woodland and Grasslands

The pinyon-juniper woodland and grassland community occurred in the interior of the APE, between the exterior desert grassland areas and the interior pinyon-juniper woodland and rocky outcrops vegetation community (Figure 4; Appendix A, Photos 4 and 5). This community was vegetated similarly to the desert grassland community, with higher densities of shrubs and trees. Blue grama, and sulphurflower buckwheat (*Eriogonum umbellatum*) were the dominant herbaceous species, and prickly pear cacti (*Opuntia* sp.) were also noted in the understory. Shrubs included rubber rabbitbrush, broom snakeweed, redberry juniper, one-seed juniper, and fragrant sumac (*Rhus aromatica*). Pinyon pines occurred in higher densities than the desert grassland community, as well as scattered ponderosa pines (*Pinus ponderosa*). This vegetation community was mainly undisturbed.

3.4.2.3 Pinyon-Juniper Woodland and Rocky Outcrops

The pinyon-juniper woodland and rocky outcrops community occurred in the innermost portion of the APE, surrounding a discontinuous, dry wash (Figure 4; Appendix A, Photos 6 and 7). While vegetation in the pinyon-juniper woodland and rocky outcrops community was generally consistent with that of the pinyon-juniper woodland and grasslands community, vegetation was less dense, though a higher diversity of herbaceous species was noted. Herbaceous species in the community included hairy false goldenaster (*Heterotheca villosa*), purple three-awn (*Aristida purpurea*), sand dropseed (*Sporobolus cryptandrus*), and violet wood-sorrel (*Oxalis violacea*). Cacti included prickly pear and hedgehog cacti (*Echinocereus* sp.). Baltic rush (*Juncus balticus*) was observed near the dry wash. Disturbance from historic mining activities is primarily concentrated in this vegetation community and includes remnant equipment and mining materials, as well as the mine decline.

3.4.3 Noxious Weeds

No noxious weeds were noted during the site visit.

3.5 General Wildlife

3.5.1 Birds

Avian point count surveys were conducted within the APE on September 16, 2025, at eleven point count stations. Each station was established at randomly distributed locations across the site to represent the full range of habitat types (Figure 4). A total of 23 bird species were detected during the surveys, or incidentally during other fieldwork, and are summarized in Table 3.

Table 3: Avian Species Observed in the APE

Common Name	Scientific Name	Special Status
American Crow	<i>Corvus brachyrhynchos</i>	MBTA
Black-throated Sparrow	<i>Amphispiza bilineata</i>	MBTA
Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>	MBTA
Canyon Towhee	<i>Melospiza fusca</i>	MBTA
Chipping Sparrow	<i>Spizella passerina</i>	MBTA
Common Raven	<i>Corvus corax</i>	MBTA
Dusky Flycatcher	<i>Empidonax oberholseri</i>	MBTA
Hairy Woodpecker	<i>Picoides villosus</i>	MBTA
Horned Lark	<i>Eremophila alpestris</i>	MBTA
Juniper Titmouse	<i>Baeolophus ridgwayi</i>	BLM W, MBTA
Mountain Bluebird	<i>Sialia currucoides</i>	MBTA
Mourning Dove	<i>Zenaidura macroura</i>	MBTA
Northern Flicker	<i>Colaptes auratus</i>	MBTA
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	BLM S, BCC, MBTA
Ruby-crowned Kinglet	<i>Regulus calendula</i>	MBTA
Say's Phoebe	<i>Sayornis saya</i>	MBTA
Spotted Towhee	<i>Pipilo maculatus</i>	MBTA
Townsend's Solitaire	<i>Myadestes townsendi</i>	MBTA
Turkey Vulture	<i>Cathartes aura</i>	MBTA
Vesper Sparrow	<i>Pooecetes gramineus</i>	MBTA
Western Bluebird	<i>Sialia mexicana</i>	MBTA
White-breasted Nuthatch	<i>Sitta carolinensis</i>	MBTA
Yellow-rumped Warbler	<i>Setophaga coronata</i>	MBTA

MBTA = Protected by the Migratory Bird Treaty Act; BLM S = BLM Sensitive; BLM W = BLM Watchlist; BCC = USFWS Bird of Conservation Concern

The Avian Point Count Survey Forms are included as Appendix B. While the vegetation within the APE provides suitable foraging and potential nesting habitat for migratory birds, no nests or were observed during the field visit.

3.5.2 Other Wildlife

The APE provides potential habitat for a wide variety of wildlife, including small mammals such as deer mice (*Peromyscus maniculatus*) and Merriam's kangaroo rats (*Dipodomys merriami*); reptiles such as side-blotched lizards (*Uta stansburiana*) and western whiptails (*Aspidoscelis tigris*); and avian species such as Rock Wren (*Salpinctes obsoletus*), Western Meadowlark (*Sturnella neglecta*), and Loggerhead Shrike (*Lanius ludovicianus*). These species are common in arid grassland and pinyon-juniper habitats throughout McKinley County (NMDGF, 2025b).

Incidental wildlife observations noted during the site visit included black-tailed jackrabbits (*Lepus californicus*), cottontail rabbits (*Sylvilagus* sp.), and spiny lizards (*Sceloporus* spp.).

3.6 Aquatic Resources

No aquatic resources are depicted within the APE on the NHD or the USGS topographic maps (USGS, 2023; USGS, 2022). An intermittently flooded riverine feature (R4SBJ) is mapped within the APE on the NWI (USFWS, 2025b). Although it was mapped as intermittent on the NWI, this drainage was field-verified during the biological survey and is more likely an ephemeral feature. The OHWM was delineated based on the presence of flow indicators such as defined bed and banks, wrack lines, sediment sorting, and minor scour features (Figure 4; Appendix A, Photos 8 and 9). The OHWM ranged from 1 to 13 feet in width with a substrate of sand and bedrock, similar to the surrounding landscape. Localized surface water was present within bedrock depressions at the time of the field visit, consistent with short-term ponding that occurs in ephemeral features following precipitation events (Appendix A, Photos 10 and 11). When present, flow within the feature generally occurs southwest to northeast through the center of the APE, though the OHWM was non-continuous. No flow was noted at the time of the site visit, and no aquatic habitats occurred within the OHWM.

To evaluate potential wetlands associated with the drainage, data at three sample points (SP-1, SP-2, and SP-3) were collected along the channel (Figure 4; Appendix A, Photos 12-14). Each sample point was evaluated for the presence of wetland hydrology, hydric soils, and hydrophytic vegetation.

Although all three sample points exhibited one or more primary hydrology indicators, none met all three parameters (wetland hydrology, hydric soils, and hydrophytic vegetation) required to classify an area as a wetland. Hydrology in the area is likely ephemeral, with water present only during periods of heavy rainfall or runoff. Therefore, no wetlands were delineated within the APE. The completed Wetland Determination Data Sheets are provided in Appendix D.

4. Species Considered for Analysis

4.1 Threatened, Endangered and Proposed Species Being Considered

Based on a review of the USFWS IPaC (USFWS, 2025a), there are four federally listed or proposed species whose consultation ranges overlap with the APE: the Yellow-billed Cuckoo (*Coccyzus americanus*; federally listed as threatened [FT]), Mexican wolf (*Canis lupus baileyi*; federally listed as endangered [FE]), monarch butterfly (*Danaus plexippus*; proposed for federal listing as threatened [PT]), and Suckley's cuckoo bumble bee (*Bombus suckleyi*; proposed for federal listing as endangered [PE]). The Zuni fleabane (*Erigeron rhizomatus*; FT), was not included in the USFWS IPaC; however, the species is known to occur in McKinley County and was therefore considered for analysis. This analysis is summarized in Table 4 below and species with the potential to occur in, or be affected by, a project in this area are discussed in detail in subsequent sections below.

Table 4: Potential for Threatened, Endangered, and Proposed Species to Occur in the APE

Common Name	Species	Federal Status	Habitat ¹	Potential for Occurrence in the APE
Birds				
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FT	Moist, thick stands of deciduous vegetation near water sources for nesting, particularly cottonwood (<i>Populus</i> spp.) and willow woodland. Outside of the breeding season, Yellow-billed Cuckoos use woodlands and scrub-dominated landscapes for foraging.	None. The APE lacks suitable riparian habitat for nesting and scrub-dominated vegetation communities for foraging.
Mammals				
Mexican wolf	<i>Canis lupus baileyi</i>	FE	A wide variety of habitats including montane woodlands, mixed-conifer forests, and pinyon-juniper ecosystems, particularly those in areas of low human occupancy.	Low. See discussion below.
Insects				
Monarch butterfly	<i>Danaus plexippus</i>	PT	A variety of habitats that feature the obligate larval host plant, milkweeds (<i>Asclepias</i> spp.)	Low. See discussion below.
Suckley's cuckoo bumble bee	<i>Bombus suckleyi</i>	PE	Open, herbaceous habitats that support host bumble bee (<i>Bombus</i> spp.) colonies with a variety of native floral resources.	None. No occurrence records of Suckley's cuckoo bumble bees have been reported in the state and the most recent observation of the species in the U.S. was in 2016 (USFWS, 2024b).

Common Name	Species	Federal Status	Habitat ¹	Potential for Occurrence in the APE
Plants				
Zuni fleabane	<i>Erigeron rhizomatus</i>	FT	Pinyon-juniper woodlands with sandstone slopes and clay banks at elevations between 7,180 and 7,875 feet.	None. The APE is outside of the species' elevational range. No Zuni fleabane were noted during rare plant surveys.

FT = federally listed as threatened; FE = federally listed as endangered; PT = proposed for federal listing as threatened; PE = proposed for federal listing as endangered

¹ Based on habitat descriptions from the USFWS and NatureServe Explorer (USFWS, 2025c; NatureServe, 2025).

4.1.1 Mexican Wolf

The Mexican wolf is a subspecies of the gray wolf (*Canis lupus*) and is native to the southwestern United States and northern Mexico. The subspecies was federally listed as endangered in 1976. To support recovery, the USFWS established the Mexican Wolf Experimental Population Area (MWEPA) in Arizona and New Mexico, extending from Interstate 40 south to the U.S.–Mexico border, where the species is managed as a nonessential experimental population under Section 10(j) of the ESA (USFWS, 2015). The most recent recovery plan identifies limited genetic diversity, small population size, and human-caused mortality as primary ongoing threats (USFWS, 2022).

Mexican wolves typically inhabit montane forest and woodland habitats with suitable prey and limited human disturbance. Across their range, they occur primarily in mixed-conifer, ponderosa pine, and pinyon-juniper woodland between approximately 4,000 and 9,000 feet above sea level (USFWS, 2010). In New Mexico, established packs occur mainly in the Gila National Forest and adjacent areas of the Apache–Sitgreaves National Forest in Arizona, where contiguous forested habitat and adequate prey populations are available (USFWS, 2022).

Although the APE's pinyon-juniper woodland and desert grassland partially overlap the species' broader habitat preferences, the site lacks dense forest structure, sufficient prey, and proximity to established wolf pack territories necessary to support the species. The project area is also outside the MWEPA boundary, and no signs of wolves were observed during field surveys. Five individual Mexican wolves have been recorded north of the MWEPA since 2017. These five individuals traveled to the area near Mount Taylor, to the east of the APE (Center for Biological Diversity, 2025). Accordingly, Mexican wolf occurrence within the APE is unlikely.

4.1.2 Monarch Butterfly

The monarch butterfly ("monarch") is an iconic species of large butterfly whose range occurs mainly in North America, but also extends to Central America, South America, Hawaii, Australia, the Pacific Islands, and parts of Asia, Africa, and southern Europe (NatureServe, 2025). The monarch was proposed for federal listing as threatened in 2024.

Monarch butterflies utilize a variety of habitats within their breeding and migratory range that provide sufficient nectar resources, particularly those that also host trees or shrubs for shading and roosting

structures. As the obligate larval host plant, milkweeds (*Asclepias* spp.) provide breeding habitat for the monarch, but monarchs may occur anywhere with sufficient nectar resources (Western Association of Fish and Wildlife Agencies [WAFWA], 2019; NatureServe, 2025).

The APE occurs within monarch summer breeding range (WAFWA, 2019); however, no milkweeds were noted during the site visit. Monarchs have the potential to occur within the APE while migrating or while traveling between areas of suitable habitat.

4.2 Critical Habitats

The APE does not overlap designated or proposed critical habitat for federally listed and/or proposed species. Therefore, there the project will have **No Effect** on critical habitat and critical habitats are not discussed further in this BA/BE.

4.3 Special Status Species Being Considered

Based on a review of the NMERT and a Rare Plant List for McKinley County, there are thirteen state-listed species, Species of Greatest Conservation Need, or BLM Sensitive species (collectively referred to as “special status species”) whose ranges overlap with the APE (NMDFG, 2025a; NMRP, 2025). The results of the analysis are summarized in Table 5 below, and species with the potential to occur in or be affected by the project are discussed in detail in subsequent sections. Based on habitat assessments of the APE and a review of occurrence records, eleven of these species have the potential to occur in or be impacted by a project in the APE.

Two species, the Goodding’s onion (*Allium gooddingii*; state-listed endangered [SE]) and Parish’s alkali grass (*Puccinellia parishii*; SE and BLM Sensitive [BLM S]) do not have potential to occur in the APE.

Table 5: Potential for Special Status Species to Occur in the APE

Common Name	Scientific Name	State/BLM Status	Habitat ¹	Potential for Occurrence in the APE ¹
Birds				
Peregrine Falcon	<i>Falco peregrinus</i>	ST; SGCN	Nests on cliffs and forages over adjacent coniferous and riparian forests. Migrants and winter residents occur mostly around reservoirs, rivers, and marshes, but may be seen in grasslands, agricultural areas, and other habitats.	Moderate. See discussion below.
Gray Vireo	<i>Vireo vicinior</i>	ST; SGCN	Inhabits arid shrublands and pinyon-juniper woodlands in central and western New Mexico. Found in foothill slopes, mesas, and canyon rims with juniper, pinyon pine, and shrub species. Prefers areas with open canopy structure, moderate shrub density, and sparse understory vegetation.	Moderate. See discussion below.
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>	BLM S	Occupies open grasslands, shrublands, and desert habitats with low vegetation; nests and roosts in abandoned burrows of mammals such as prairie dogs (<i>Cynomys</i> spp.).	Moderate. See discussion below.
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	BLM S	Occurs primarily in piñon-juniper woodlands and nearby shrub or grassland ecotones; requires mature pinon stands for foraging and nesting.	High. See discussion below.
Virginia's Warbler	<i>Leiothlypis virginiae</i>	BLM S	Inhabits arid shrublands, open pinon-juniper woodlands, and riparian scrub areas at mid-elevations, typically with dense understory vegetation for nesting.	Moderate. See discussion below.
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	BLM S	Found in short- and mixed-grass prairies and open grasslands with sparse vegetation; prefers level terrain with low herbaceous cover.	Low. See discussion below.
Mammals				
Spotted bat	<i>Euderma maculatum</i>	ST; SGCN	A variety of habitats from montane to desert; roosts in cracks and crevices in cliffs, often near water sources. Forages over open desert, grassland, and woodland habitat.	Low. See discussion below.
Pale Townsend's big-eared bat	<i>Corynorhinus townsendii pallascens</i>	BLM S	A variety of xeric to mesic habitats; roost in caves, mines, and rock cliffs, often associated with riparian corridors or canyon terrain.	Low. See discussion below.

Common Name	Scientific Name	State/BLM Status	Habitat ¹	Potential for Occurrence in the APE ¹
Gunnison's prairie dog	<i>Cynomys gunnisoni</i>	BLM S	Inhabits grasslands, semi-desert shrublands, and montane meadows; prefers well-drained, fine-textured soils suitable for burrowing and maintenance of short-statured vegetation.	Moderate. See discussion below.
Plants				
Goodding's onion	<i>Allium gooddingii</i>	SE	Found on moist, shaded slopes and canyon bottoms within mixed conifer or aspen forest, typically between 6,500 - 10,000 feet elevation.	None. Suitable habitat does not occur in the APE. Species is not discussed further.
Parish's alkali grass	<i>Puccinellia parishii</i>	SE; BLM S	Occurs in seasonally wet areas such as springs, seeps, and alkaline flats with saline soils, often associated with ephemeral wetland environments.	None. Suitable habitat does not occur in the APE. Species is not discussed further.
Acoma fleabane	<i>Erigeron acomanus</i>	BLM S	Sandy slopes beneath sandstone and limestone cliffs in pinyon-juniper woodland	Low. See discussion below.
Clipped wild buckwheat	<i>Eriogonum lachnogynum</i> var. <i>colobum</i>	BLM S	Restricted to sandy benches and slopes beneath sandstone cliffs in piñon-juniper woodland or desert scrub, typically at 6,800–7,200 feet elevation in west-central New Mexico.	Low. See discussion below.

ST = State-listed as Threatened; SGCN = Species of Greatest Conservation Need; BLM S = Bureau of Land Management Sensitive Species; SE = State-listed as Endangered

¹ Based on habitat descriptions in NMGFD's Biota Information System of New Mexico (BISON-M) database (NMDGF, 2025b), NMRP's Rare Plants List (NMRP, 2025), and NatureServe Explorer (NatureServe, 2025).

4.3.1 Birds

The Peregrine Falcon (*Falco peregrinus*), Gray Vireo (*Vireo vicinior*), Western Burrowing Owl (*Athene cunicularia hypugaea*), Pinyon Jay, Virginia's Warbler (*Leiothlypis virginiae*), and Chestnut-collared Longspur (*Calcarius ornatus*) utilize habitat types available within the APE during their life histories. Desert grasslands and pinyon-juniper woodlands provide foraging habitat for these species. With the exception of the Peregrine Falcon, these species may nest in grasses, shrubs, trees, or small mammal burrows in the APE.

4.3.2 Spotted Bat and Pale Townsend's Big-Eared Bat

The spotted bat (*Euderma maculatum*) and pale Townsend's big-eared bat (*Corynorhinus townsendii pallascens*) have the potential to utilize habitats in the APE for foraging, roosting, breeding, and hibernating.

There are no verified records of spotted bats or pale Townsend's big-eared bats recorded to BISON-M in McKinley County (NMDGF, 2025b) and the nearest unverified observations of the spotted bat and Townsend's big-eared bat are recorded over 100 miles from the APE and over 60 miles from the APE, respectively (iNaturalist, 2025). No bats were observed near the entrance to the mine during the sunset bat emergence survey (Appendix A, Photo 15). While the mine entrance and surrounding area provides potential roosting and foraging habitat for the species, their occurrence within the APE is unlikely.

4.3.3 Gunnison's Prairie Dog

Suitable habitat for the Gunnison's prairie dog (*Cynomys gunnisonii*) occurs within the APE and the species is known to occur in similar habitats nearby (NatureServe, 2025). Small mammal burrows were noted (primarily in the desert grassland vegetation community); however, no Gunnison's prairie dogs or other fossorial mammals were noted in or around the burrows during the site visit. The site visit was conducted during the species' active season (generally April through November; NHNM, 2025).

4.3.4 Acoma Fleabane and Clipped Wild Buckwheat

Suitable habitat for the Acoma fleabane (*Erigeron acomanus*) and clipped wild buckwheat (*Eriogonum lachnogynum* var. *colobum*) occurs within the pinyon-juniper rocky outcrops vegetation community mapped in the APE.

Neither species was observed during the site visit, and the APE is not located near a recorded population of either species. Acoma fleabane is known to occur in McKinley County in the Cibola National Forest, at least 25 miles west of the APE. Clipped wild buckwheat is known to occur in McKinley County in a small area between Prewitt and Thoreau, west of the APE (NMRP, 2025).

5. Environmental Consequences

This section evaluates the impacts/effects of the Proposed Action (described in Section 1.2) on federally listed and proposed species, special status species, and unprotected species within the APE. The Proposed Action will result in temporary physical, visual, and noise disturbances within the APE. Noise levels will be highest within the immediate limits of ground disturbance and are anticipated to decrease in volume with distance.

Direct, indirect, and cumulative impacts of the Proposed Action on federally listed and proposed species, special status species, and unprotected species are described below.

5.1 Direct Impacts

The Proposed Action is not anticipated to result in direct impacts to federally listed or proposed species, special status species, or unprotected wildlife species. The Proposed Action is limited in spatial and temporal extent, and similar wildlife habitats are available in the surrounding areas outside the APE. Together with limited observations of wildlife use within the APE, direct impacts to unprotected wildlife species are unlikely. However, there is potential that individual wildlife may occur in the APE for foraging, nesting, roosting, migrating, or other life history activities.

Minor, short-term impacts to unprotected plant species in the APE, particularly herbaceous species and junipers, are likely to occur. Some vegetation, including trees or shrubs, may be removed to allow for grading of mining materials. Additionally, some vegetation may be destroyed by heavy equipment.

5.2 Indirect (Secondary) and Cumulative Impacts

The Proposed Action may result in indirect impacts to federally listed and proposed species, special status species, and unprotected species. Temporary human presence and ground disturbance may discourage wildlife, including the Mexican wolf, monarch butterfly, special status species, and unprotected wildlife species, from using habitats within the APE during project implementation. Increased noise disturbance from heavy equipment and personnel on site may also temporarily discourage these species' use of habitats in the surrounding areas where noise from project implementation is louder than ambient noise levels.

As there are no other state or federal actions anticipated to occur in the APE outside of the Proposed Action, the project is not anticipated to result in cumulative impacts to federally listed or proposed species, special status species, or unprotected species.

5.3 Effect Determinations for Federally Listed and Proposed Species¹

Based on habitat conditions and occurrence records, there is no potential for the Yellow-billed Cuckoo, Suckley's cuckoo bumble bee, or Zuni fleabane to occur in, or be affected by, a project within the APE. Therefore, the project would result in **No Effect** to the Yellow-billed Cuckoo or Zuni

¹ The term "Effect Determinations" applies to federally listed and proposed species, whereas "Impact Determinations" refers to other special status species.

fleabane and is **Not Likely to Jeopardize the Continued Existence** of the Suckley's cuckoo bumble bee.

Based on the APE's location and availability of habitats, the Mexican wolf and monarch butterfly have low potential to occur in the APE. Given the limited spatial and temporal extent of Project activities and availability of similar habitats adjacent to the APE, the Proposed Action would result in **No Effect** to the Mexican wolf and is **Not Likely to Jeopardize the Continued Existence** of the monarch butterfly.

Effect determinations for federally listed and proposed species are summarized in Table 6.

Table 6: Effect Determinations for Federally Listed and Proposed Species

Common Name	Scientific Name	Federal Status	Effect Determination
Birds			
Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	FT	No Effect
Mammals			
Mexican wolf	<i>Canis lupus baileyi</i>	FE	No Effect
Insects			
Monarch butterfly	<i>Danaus plexippus</i>	PT	Not Likely to Jeopardize the Continued Existence of the Species
Suckley's cuckoo bumble bee	<i>Bombus suckleyi</i>	PE	Not Likely to Jeopardize the Continued Existence of the Species
Plants			
Zuni fleabane	<i>Erigeron rhizomatus</i>	FT	No Effect

FT = federally listed as threatened; FE = federally listed as endangered; PT = proposed for federal listing as threatened; PE = proposed for federal listing as endangered

5.4 Impact Determinations for Special Status Species

Impacts to nesting special status bird species may occur as a result of the Proposed Action. As no nesting habitat for the Peregrine Falcon or Chestnut-collared Longspur occurs within the APE, and large areas of foraging habitat for the species is available outside the APE, the Proposed Action would result in **No Impact** to the Peregrine Falcon and Chestnut-collared Longspur.

Other special status bird species may nest within the APE and be impacted by the Proposed Action. Given the limited spatial and temporal extent of project activities and availability of nesting habitat outside the APE, the Proposed Action **May Impact Individuals or Habitat but is Not Likely to Result in a Loss of Viability or a Trend toward Federal Listing** for the Gray Vireo, Western Burrowing Owl, Pinyon Jay, and Virginia's Warbler.

No bats were noted during bat emergence surveys, and no bats were incidentally observed within the APE during the site visit. There is low potential that the spotted bat or pale Townsend's big-eared bat may occur within the APE while foraging or using the mine adit for roosting, breeding, or hibernation. Given the low potential for these species to use these habitats, the Proposed Action ***May Impact Individuals or Habitat but is Not Likely to Result in a Loss of Viability or a Trend toward Federal Listing*** for the spotted bat and pale Townsend's big-eared bat.

Potential habitat for the Gunnison's prairie dog was noted within the APE. However, no Gunnison's prairie dogs or burrows were noted within the APE. Given the low potential for occurrence in the APE, the Proposed Action ***May Impact Individuals or Habitat but is Not Likely to Result in a Loss of Viability or a Trend toward Federal Listing*** for the Gunnison's prairie dog.

There is potential for two special status plant species (Acoma fleabane and clipped wild buckwheat) to occur within the APE. However, given the limited spatial distribution of special status plant species, habitat conditions in the APE, lack of observations during plant surveys, and history of mining disturbances to the APE, it is unlikely that special status plant species occur within or have the potential to be impacted by a project in the Analysis or APEs. Therefore, the Proposed Action will result in ***No Impact*** to the Gooding's onion, Parish's alkali grass, Acoma fleabane, and clipped wild buckwheat.

These impact determinations are summarized in Table 7.

Table 7: Impact Determinations for Special Status Species

Common Name	Scientific Name	State/BLM Status	Impact Determination
Birds			
Peregrine Falcon	<i>Falco peregrinus</i>	ST; SGCN	<i>No Impact</i>
Gray Vireo	<i>Vireo vicinior</i>	ST; SGCN	<i>May Impact Individuals or Habitat but is Not Likely to Result in a Loss of Viability or a Trend toward Federal Listing</i>
Western Burrowing Owl	<i>Athene cunicularia hypugaea</i>	BLM S	
Pinyon Jay	<i>Gymnorhinus cyanocephalus</i>	BLM S	
Virginia's Warbler	<i>Leiothlypis virginiae</i>	BLM S	
Chestnut-collared Longspur	<i>Calcarius ornatus</i>	BLM S	<i>No Impact</i>
Mammals			
Spotted bat	<i>Euderma maculatum</i>	ST; SGCN	<i>May Impact Individuals or Habitat but is Not Likely to Result in a Loss of Viability or a Trend toward Federal Listing</i>
Pale Townsend's big-eared bat	<i>Corynorhinus townsendii pallescens</i>	BLM S	
Gunnison's prairie dog	<i>Cynomys gunnisoni</i>	BLM S	
Plants			
Goodding's onion	<i>Allium gooddingii</i>	SE	<i>No Impact</i>
Parish's alkali grass	<i>Puccinellia parishii</i>	SE; BLM S	
Acoma fleabane	<i>Erigeron acomanus</i>	BLM S	
Clipped wild buckwheat	<i>Eriogonum lachnogynum</i> var. <i>colobum</i>	BLM S	

ST = State-listed as Threatened; SGCN = Species of Greatest Conservation Need; BLM S = Bureau of Land Management Sensitive Species; SE = State-listed as Endangered

5.5 Recommended Minimization Measures

Impacts to wildlife and plants can be avoided or minimized by following the recommended minimization measures provided. These measures are similar for protected and unprotected species alike; they are given by taxa without regard to listing or regulatory status.

5.5.1 General Best Management Practices

- Ground disturbance activities should be limited to the smallest extent possible to achieve project objectives, and equipment and vehicular access should be limited to existing roads and disturbed areas.

5.5.2 Wildlife

- ▶ Conduct project activities during daytime hours and avoid the use of artificial lighting to the extent possible.
- ▶ Prior to beginning work each day, check equipment for any wildlife that may shelter under or within equipment. This is especially true when nighttime temperatures drop and wildlife (particularly reptiles) may seek warmth on or within equipment.
- ▶ Avoid filling entrances to any burrows to the extent possible. If burrows occur where materials must be moved or graded, Pinyon recommends using a mirror or pole-mounted camera to check for the presence of wildlife within the burrow prior to filling the entrance.
 - Avoid placing any body part within a burrow to check for wildlife. Wildlife, including venomous species such as rattlesnakes and scorpions, may bite or sting if cornered.

5.5.2.1 Migratory Birds and Raptors

- ▶ Remove any vegetation to be disturbed during project implementation outside of the primary nesting season for migratory birds, which generally occurs between March 1 and August 31.
 - If this timeline is not feasible, a qualified biologist should conduct surveys for nesting birds within one week prior to the implementation of project activities. Any inactive nests (i.e., those without eggs or young) may be removed at any time. Active nests should be flagged, and disturbance should be avoided within 50 feet of active migratory bird nests.
- ▶ The following is recommended by the NMDGF regarding Burrowing Owls: “Before any ground disturbing activities occur, the [NMDGF] recommends that a preliminary burrowing owl survey be conducted by a qualified biologist using the [NMDGF]’s [Burrowing Owl Survey Protocol](#). Should burrowing owls be documented in the project area, please contact the Department or USFWS for further recommendations regarding relocation or avoidance of impacts” (NHNM, 2025; NMDGF, 2007).

5.5.2.2 Terrestrial Mammals

- ▶ Avoid impacts to prairie dog and/or other small-mammal burrows.
 - If impacts cannot be avoided, a qualified biologist should conduct presence/absence surveys for Gunnison’s prairie dogs between April and October. If prairie dogs are noted where project activities must occur, the NMDGF recommends live-trapping and relocation of prairie dogs. If live-trapping and relocation is to occur, the NMDGF should be contacted for project-specific recommendations (NHNM, 2025).

5.5.2.3 Bats

- ▶ When feasible, mine safeguarding methods for consideration may include a wildlife-friendly enclosure to promote bat habitat. The American Cave Conservation Association and Bat Conservation international, together with the Missouri Department of Conservation, created guidelines for the design and construction of bat-friendly gating (ACCA and BCI, 2009).

5.5.3 Plants

- ▶ Ground disturbance activities should be limited to the smallest extent possible to achieve project objectives, and equipment and vehicular access should be limited to existing roads and disturbed areas.
- ▶ Revegetation and restoration of disturbed areas should include the use of native seed mixes.
- ▶ Fertilizer use for revegetation should be avoided, as this may encourage the growth of non-native or noxious vegetation that can outcompete native vegetation.

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Figures

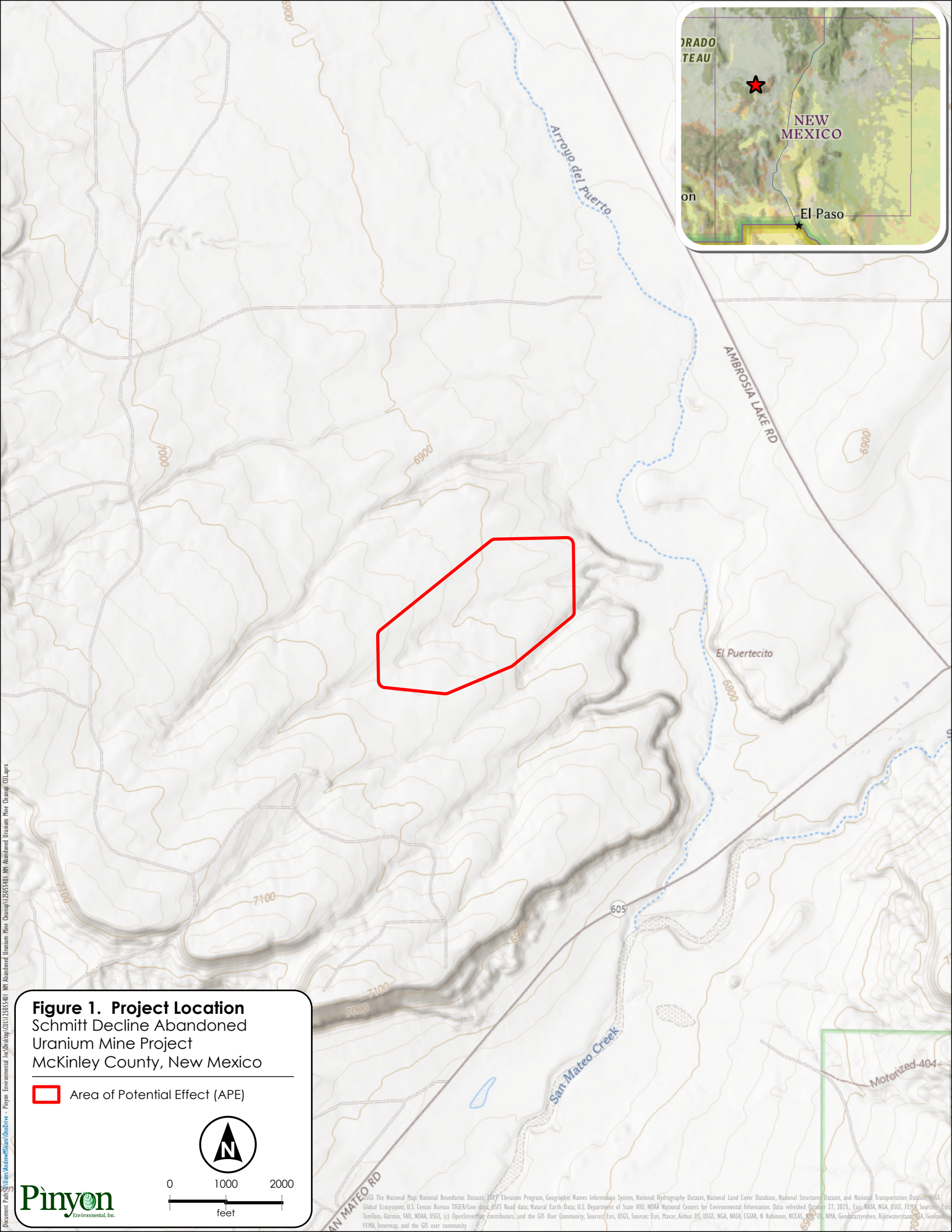
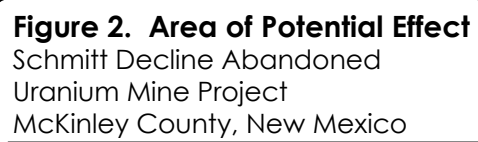


Figure 1. Project Location
Schmitt Decline Abandoned
Uranium Mine Project
McKinley County, New Mexico

 Area of Potential Effect (APE)



0 1000 2000
feet



-  Limits of Ground Disturbance
-  Area of Potential Effect (APE)
-  Access Road
-  Mine Entrance



A horizontal number line with tick marks at 0, 200, and 400. The word "feet" is written below the tick mark at 200.

Document Path: C:\Users\pnyon\OneDrive\Documents\Projects\Environmental\Schmitt Decline\Uranium Mine Cleanup\04Layers

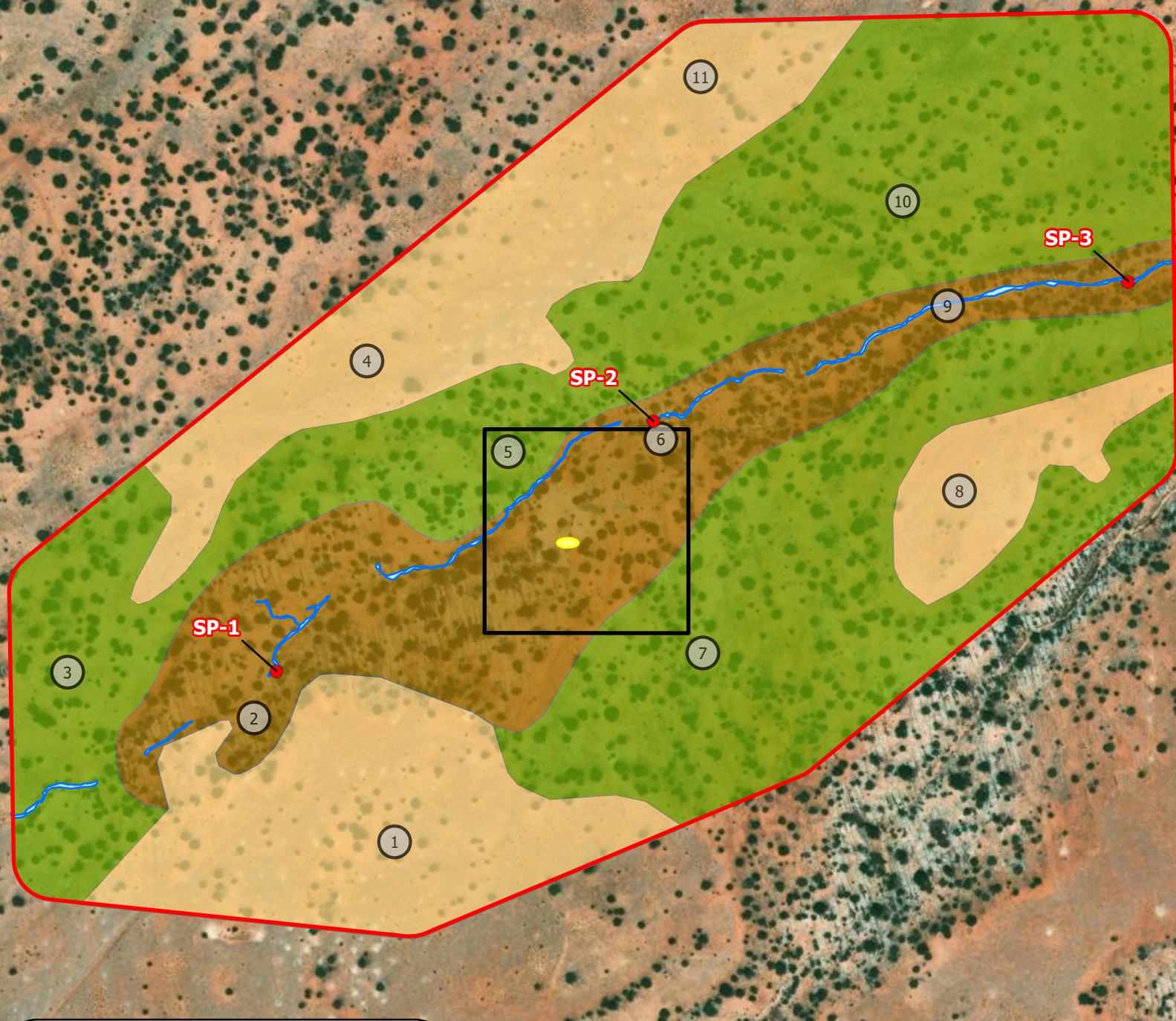
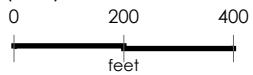


Figure 4. Biological Resources
Schmitt Decline Abandoned
Uranium Mine Project
McKinley County, New Mexico

- Habitat Type**
- Desert Grassland
 - Pinyon-Juniper Woodland & Grasslands
 - Pinyon-Juniper Woodland & Rocky Outcrops
 - Sampling Point
 - Avian Point Count Station
 - Ephemeral Drainage
 - Limits of Ground Disturbance
 - Mine Entrance
 - Area of Potential Effect (APE)



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Appendices

Appendix A Photographic Log

Photo 1. Geology within the Area of Potential Effect (APE) included exposed bedrock of the Dakota Sandstone Formation, showing weathered sandstone benches and shallow soils. Photo taken from the central portion of the APE facing east.



Photo 2. Taken from the northern portion of the APE within the desert grassland vegetation community, characterized by herbaceous species such as blue grama (*Bouteloua gracilis*). Photo taken facing south.



Photo 3. Taken from the southwest portion of the APE within the desert grassland vegetation community. Other species within this community included broom snakeweed (*Gutierrezia sarothrae*) and rubber rabbitbrush (*Ericameria nauseosa*). Photo taken facing north.



Photo 4. Taken from the central portion of the APE within the pinyon-juniper woodland and grasslands vegetation community, which contained a higher density of trees and shrubs like redberry juniper (*Juniperus pinchotii*), and one-seed juniper (*Juniperus monosperma*). Photo taken facing east.



Photo 5. Taken from the northeast portion of the APE within the pinyon-juniper woodland and grasslands vegetation community. Photo taken facing west.



Photo 6. Taken from the central portion of the APE, within the pinyon-juniper woodland and rocky outcrops vegetation community. Vegetation in this area was characterized by a lower density but higher diversity of herbaceous species. Photo taken facing west.



Photo 7. Taken from the western portion of the APE within the pinyon-juniper woodland and rocky outcrops vegetation community. Herbaceous species included hairy false goldenaster (*Heterotheca villosa*) and purple three-awn (*Aristida purpurea*). Photo taken facing east.



Photo 8. View of the drainage in the central portion of the APE. Ordinary high water mark indicators included defined bed and banks, wrack lines, and sediment sorting. Photo facing west/upstream.



Photo 9. View of the same drainage from the eastern portion of the APE. Photo taken facing west/upstream.



Photo 10. View of the drainage in the eastern portion of the APE. Localized surface water was present within bedrock depressions at the time of the site visit, consistent with short-term ponding that occurs in ephemeral features following precipitation events. Photo taken facing west/upstream.



Photo 11. View of the drainage within the western portion of the APE. Surface water was also present in this portion of the drainage. Photo taken facing north from the southern portion of the channel.



Photo 12. View of sample point (SP) 1 taken along the western portion of the drainage on a sand bar. The SP did not pass for hydrophytic vegetation or hydric soils, but several wetland hydrology indicators were observed.



Photo 13. View of SP-2 taken along the central portion of the drainage. Similar to SP-1, SP-2 was located on a sand bar adjacent to a pool feature.



Photo 14. View of SP-3 taken along the eastern portion of the drainage. The image shows a large, dark rock formation with a sampling tool positioned on a sand bar in the foreground.



Photo 15. View of the Schmitt Decline mine entrance. Sunset bat emergence surveys were conducted at this location; no bat species were observed.



Appendix B Avian Point Count Survey Forms

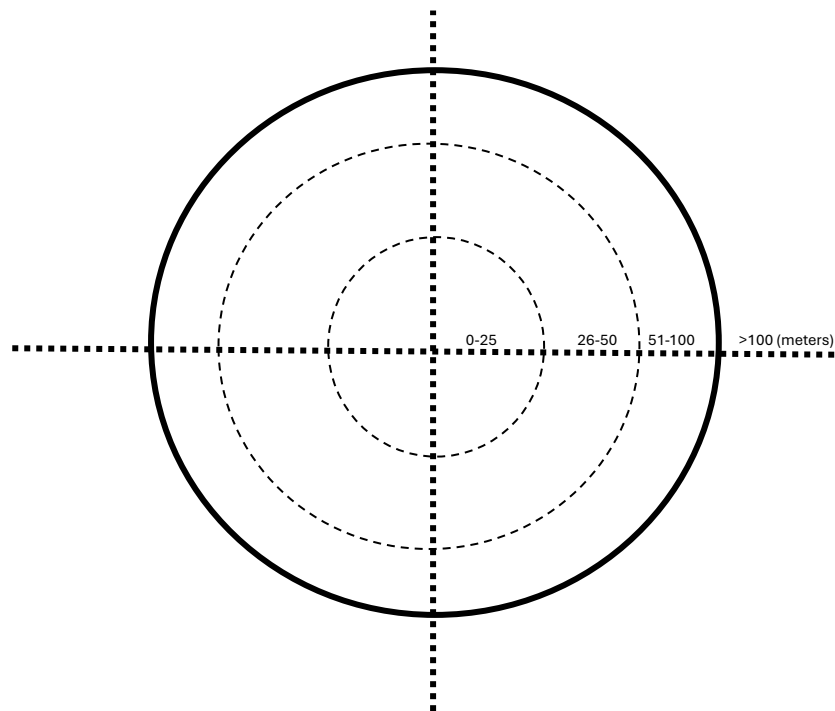
Modified Field Sheet from "Managing and Monitoring Birds Using Point Counts: Standards and Applications" by C. John Ralph and others

(https://www.fs.usda.gov/psw/publications/documents/psw_gtr149/psw_gtr149.pdf)

GENERAL NOTES

Point Number:	1
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Desert grassland
Weather:	Mostly sunny, 52°, no wind
Start Time:	7:20 AM
End Time:	7:30 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	7:22	CORA	1	>100 m	West	A	
2	7:23	WBNU	1	26-50m	East	A	
3	7:27	CORA	3	51-100m	West	Fly	
4	7:27	CORA	4	>100m	West	A	

5	7:29	MODO	1	0-25m	East	V	
6	7:30	NOFL	1	26-50m	East	A	
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both, Fly=Flyover

Notes: M=Male, F=Female (if determined)

Species Codes: CORA = Common Raven, MODO = Mourning Dove, NOFL = Northern Flicker, WBNU = White-breasted Nuthatch

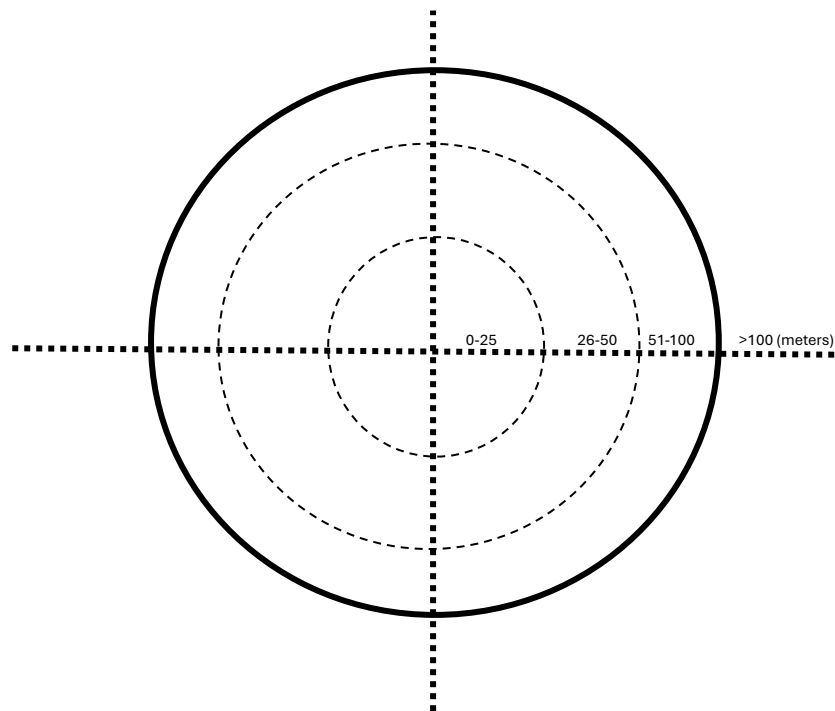
Modified Field Sheet from "Managing and Monitoring Birds Using Point Counts: Standards and Applications" by C. John Ralph and others

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GENERAL NOTES

Point Number:	2
Date:	9/16/205
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Pinyon-juniper woodland and rocky outcrops
Weather:	Sunny, 54°, no wind
Start Time:	7:36 AM
End Time:	7:46 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	7:36	AMCR	1	51-100m	West	A	
2	7:36	SAPH	1	26-50m	North	A	
3	7:37	CORA	2	50m	North	A	
4	7:38	JUTI	1	50m	East	A	

5	7:38	CORA	2	50m	West	Fly	
6	7:40	JUTI	1	50m	North	A	
7	7:43	RCKI	1	0-25m	North	B	
8							
9							
10							
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13							
14							
15							
16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: AMCR = American Crow, CORA = Common Raven, JUTI = Juniper Titmouse, RCKI = Ruby-crowned Kinglet, SAPH = Say's Phoebe

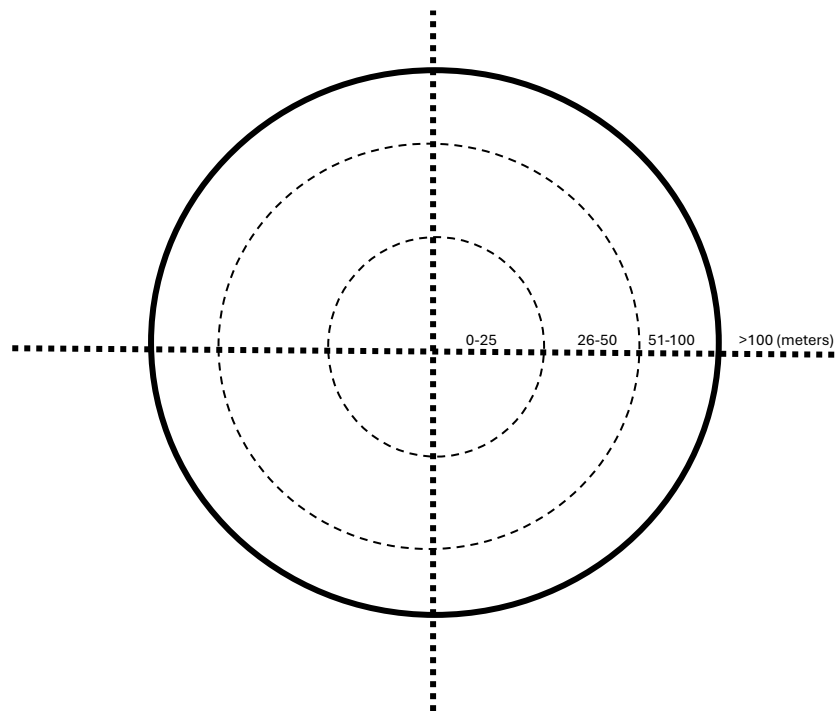
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GENERAL NOTES

Point Number:	3
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine
Location:	Grants, New Mexico
Habitat Type:	Pinyon-juniper woodlands and grasslands
Weather:	Sunny, 58°, no wind
Start Time:	7:53 AM
End Time:	8:03 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	7:56	CORA	1	>100m	West	A	
2	7:56	YRWA	1	0-25m	West	A/Fly	
3	7:57	SAPH	1	>100m	South	A	
4	7:58	SAPH	1	0-25m	South	V	

5	7:59	JUTI	1	26-50m	West	A	
6	7:59	PIJA	1	26-50m	West	V	
7	8:01	JUTI	1	26-50m	West	A	
8	8:02	CORA	1	51-100m	West	A	
9	8:02	CORA	3	25-50m	West	Fly	
10							
11							
12							
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16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: CORA = Common Raven, JUTI = Juniper Titmouse, PIJA = Pinyon Jay,
SAPH = Say's Phoebe, YRWA = Yellow-rumped warbler

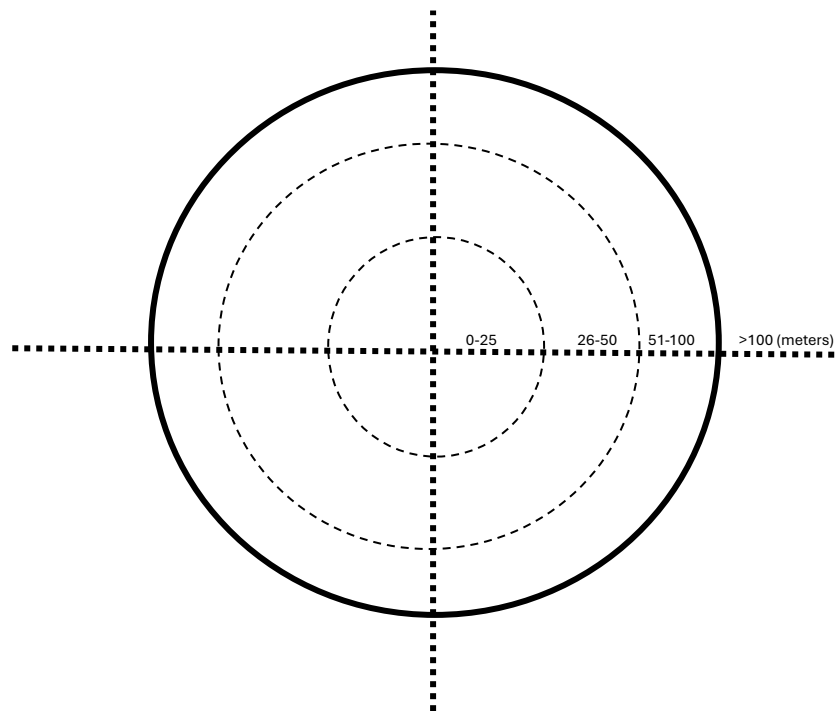
Modified Field Sheet from "Managing and Monitoring Birds Using Point Counts: Standards and Applications" by C. John Ralph and others

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GENERAL NOTES

Point Number:	4
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Desert grassland
Weather:	Sunny, 60°, no breeze
Start Time:	8:12 AM
End Time:	8:22 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	8:16	SAPH	1	51-100m	West	V	
2	8:17	CORA	1	>100m	East	A	
3	8:19	MOBL	1	>100m	West	A	
4	8:19	YRWA	1	>100m	West	A	

5	8:22	HAWO	1	51-100m	East	V	
6							
7							
8							
9							
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11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: CORA = Common Raven, HAWO = Hairy Woodpecker, MOBL = Mountain Bluebird, SAPH = Say's Phoebe, YRWA = Yellow-rumped Warbler

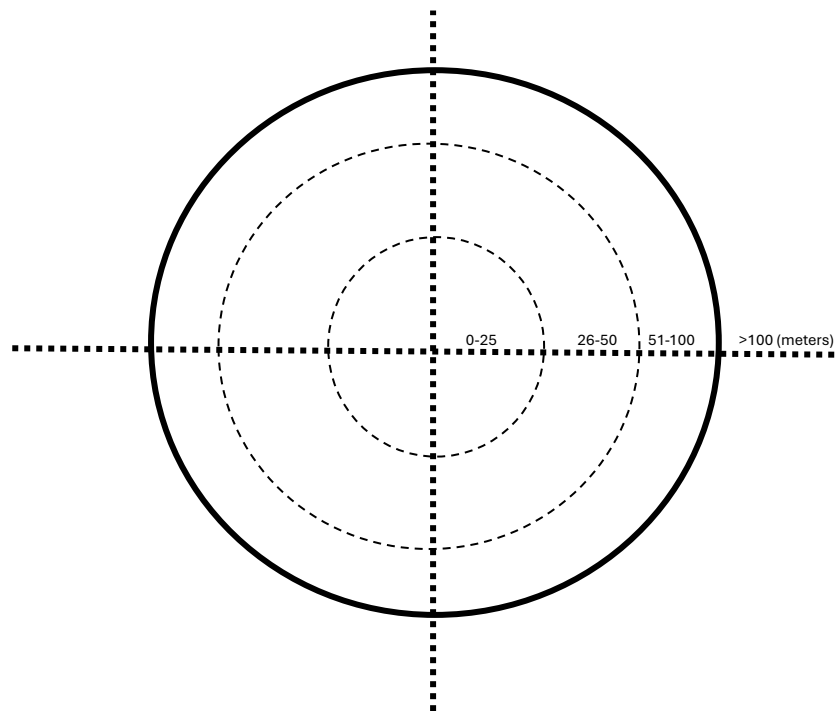
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GENERAL NOTES

Point Number:	5
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Pinyon-Juniper woodland and grasses
Weather:	Sunny, 60°, no wind
Start Time:	8:28 AM
End Time:	8:38 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	8:29	YRWA	1	26-50m	East	A	
2	8:29	HOLA	1	26-50m	East	A	
3	8:31	JUTI	1	0-25m	North	A	
4	8:32	PIJA	1	51-100m	South	V	

5	8:33	SPTO	1	51-100m	South	A	
6	8:37	TOSO	1	0-25m	South	V	
7	8:37	PIJA	50	>100m	South	Fly	
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: HOLA = Horned Lark, JUTI = Juniper Titmouse, PIJA = Pinyon Jay,

SPTO= Spotted Towhee, TOSO = Townsend's Solitaire, YRWA = Yellow-rumped Warbler

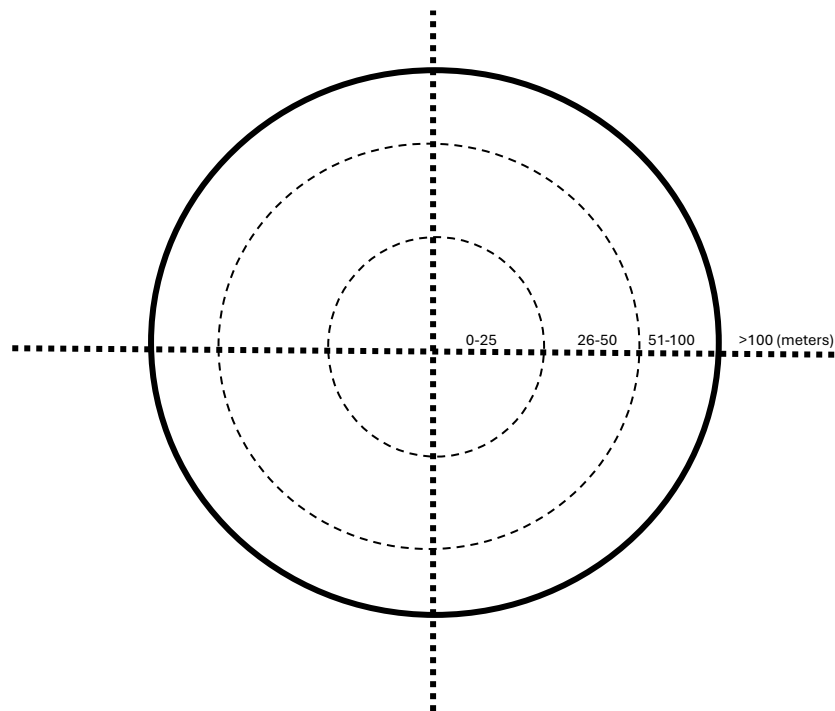
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GENERAL NOTES

Point Number:	6
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Pinyon-juniper woodland and rocky outcrops
Weather:	Sunny, 60°, no wind
Start Time:	8:46 AM
End Time:	8:56 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	8:46	CORA	1	>100m	North	Fly	
2	8:49	TOSO	1	26-50m	North	V	
3	8:50	YRWA	1	26-50m	East	A	
4	8:50	DUFL	1	26-50m	East	A	

5	8:56	CHSP	2	51-100m	North	A	
6	8:56	WCSP	1	51-100m	East	A	
7							
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13							
14							
15							
16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: CHSP = Chipping Sparrow, CORA = Common Raven, DUFL = Dusky Flycatcher, TOSO = Townsend's Solitaire, WCSP = White-crowned Sparrow, YRWA = Yellow-rumped Warbler

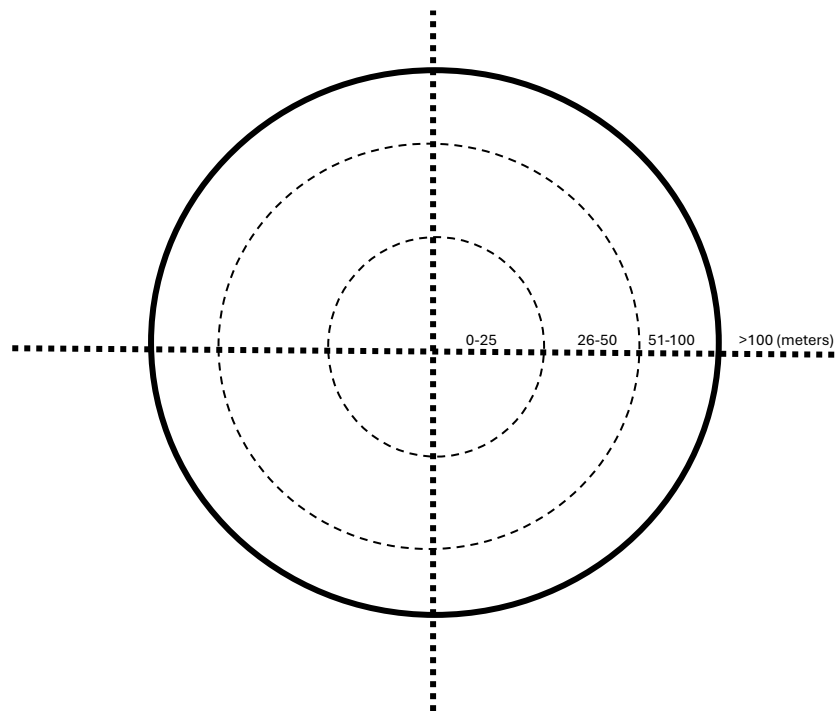
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GENERAL NOTES

Point Number:	7
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Pinyon-juniper woodland and grasslands
Weather:	Sunny, 66°, light breeze
Start Time:	9:05 AM
End Time:	9:15 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	9:09	PIJA	2	51-100m	South	A	
2	9:10	CORA	1	>100m	South	A	
3	9:13	PIJA	2	51-100m	South	A	
4	9:13	BTSP	1	26-50m	West	Fly	

5							
6							
7							
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11							
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14							
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16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: BTSP = Black-throated Sparrow, CORA = Common Raven, PIJA = Pinyon Jay

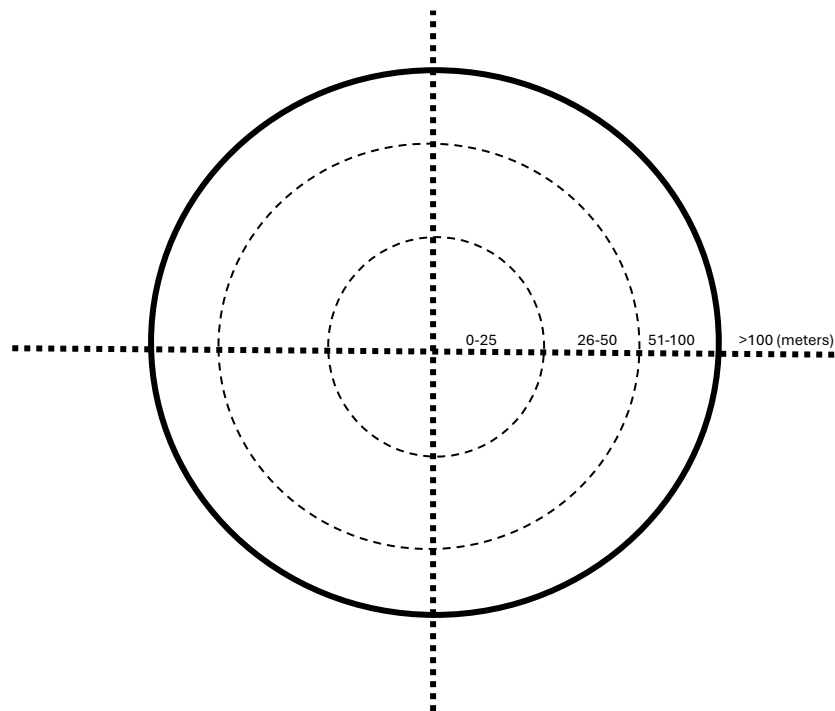
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GENERAL NOTES

Point Number:	8
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Desert grassland
Weather:	Sunny, 66°, light breeze
Start Time:	9:36 AM
End Time:	9:46 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	9:36	CORA	1	>100m	South	A	
2	9:38	HOLA	1	26-50m	North	A	
3	9:38	CHSP	1	51-100m	West	A	
4	9:38	BGGN	1	51-100m	East	A	

5	9:40	CORA	1	>100m	West	A	
6	9:40	VESP	1	51-100m	South	A	
7	9:42	BGGN	1	51-100m	South	A	
8	9:42	YRWA	1	0-25m	North	Fly	
9							
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17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: BGGN = Blue-gray gnatcatcher, CHSP = Chipping Sparrow, CORA = Common Raven, HOLA = Horned Lark, VESP = Vesper Sparrow, YRWA = Yellow-rumped Warbler

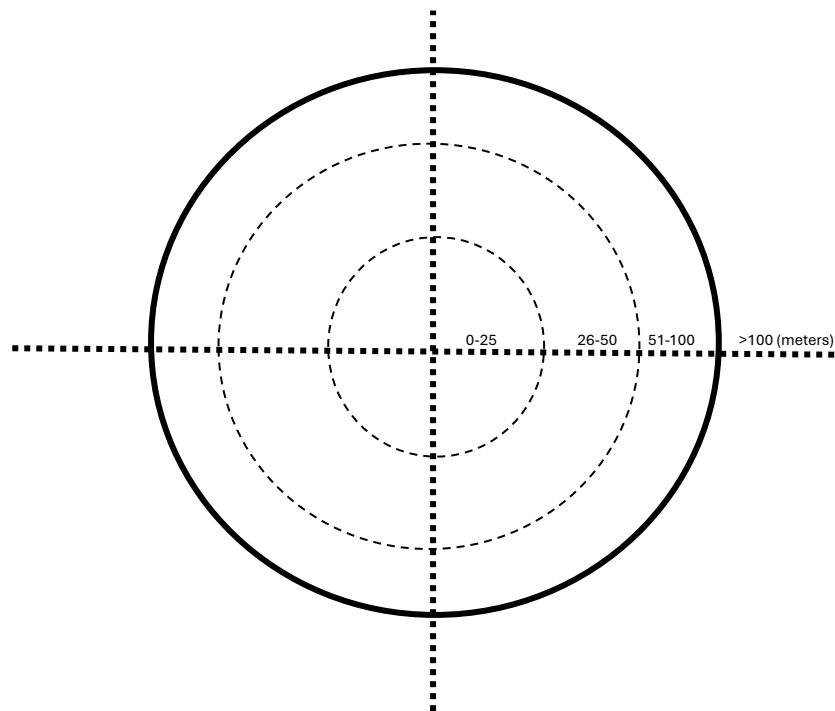
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GENERAL NOTES

Point Number:	9
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Pinyon-juniper woodland and rocky outcrops
Weather:	Sunny, 66°, light breeze
Start Time:	10:00 AM
End Time:	10:10 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	10:00	CORA	2	>100m	South	A	
2							
3							
4							

5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
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16							
17							
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19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: CORA = Common Raven

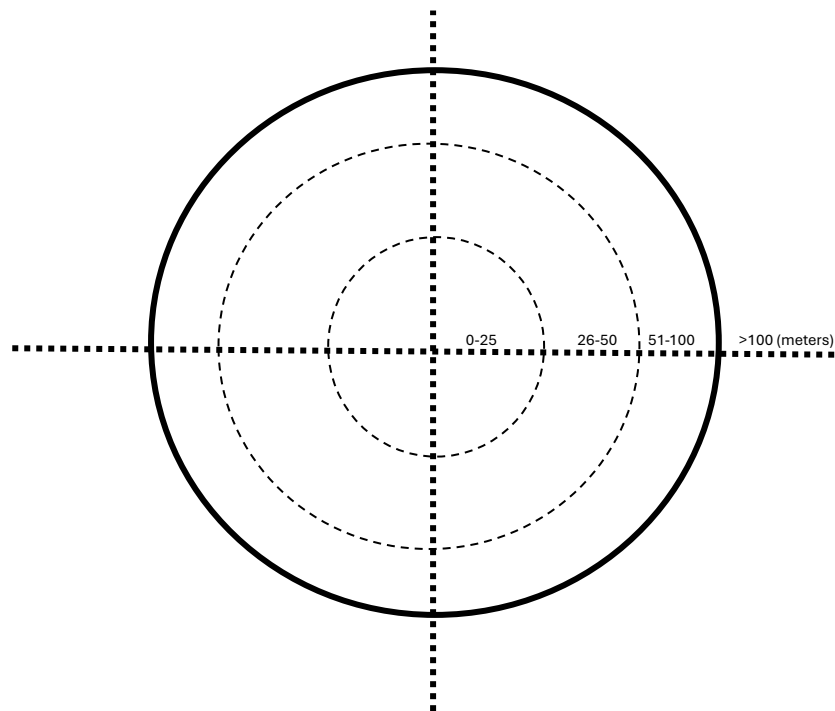
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GENERAL NOTES

Point Number:	10
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Pinyon-juniper woodland and grasslands
Weather:	Sunny, 68°, no wind
Start Time:	10:14 AM
End Time:	10:24 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	10:14	PIJA	1	51-100m	South	A	
2	10:15	CORA	1	26-50m	South	Fly	
3	10:16	CORA	1	>100m	South	A	
4	10:21	CORA	1	>100m	South	A	

5	10:23	RCKI	1	26-50m	South	B	
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: CORA = Common Raven, PIJA = Pinyon Jay, RCKI = Ruby-crowned Kinglet

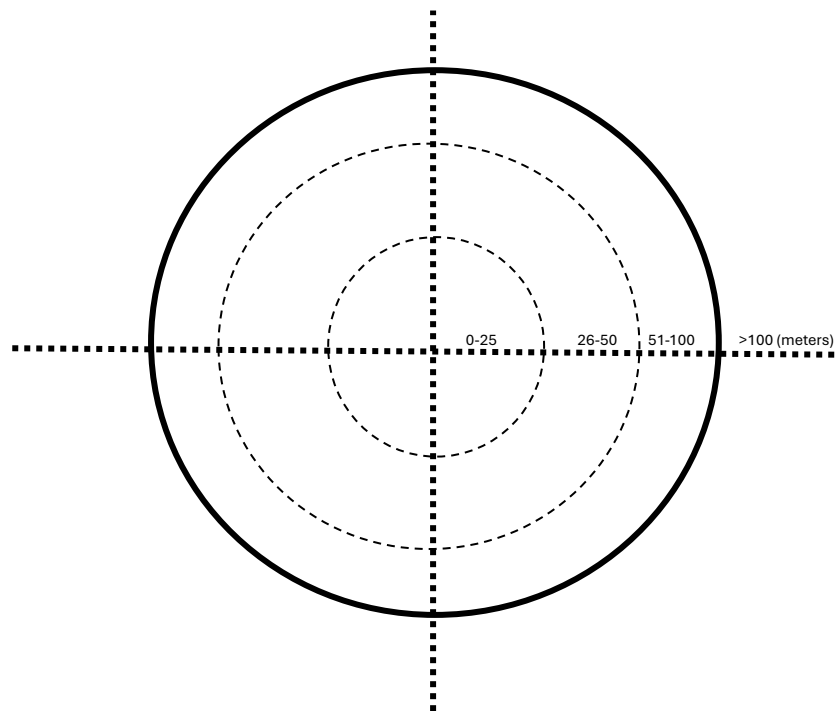
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GENERAL NOTES

Point Number:	11
Date:	9/16/2025
Surveyor(s):	JGH + MMH (Pinyon Environmental, Inc.)
Project:	Schmitt Decline Abandoned Uranium Mine Project
Location:	Grants, New Mexico
Habitat Type:	Desert grassland
Weather:	Sunny, 70°, no wind
Start Time:	10:30 AM
End Time:	10:40 AM

POINT COUNT LOCATION MAPPING



POINT COUNT TABLE

Observation #	Time	Species Code	# of Birds	Distance	Direction	Observation Type	Notes
1	10:32	CORA	1	>100m	North	A	
2	10:38	CORA	1	>100m	North	V	
3							
4							

5							
6							
7							
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16							
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19							
20							

Table Notes

Distance (meters): 0-25, 26-50, 51-100, and >100

Direction: N=North, E=East, S=South, W=West

Observation Type: A=Audio, V=Visual, B=Both,

Fly=Flyover Notes: M=Male, F=Female (if determined)

Species Codes: CORA = Common Raven

Appendix C Bat Emergence Data Sheets



Bat Emergence Datasheet

PROJECT & SURVEY INFORMATION

Date: 09/15/2025 Surveyor(s) Full Name: Jeff Henderson & Madi Hepplewhite
 State: NM County: McKinley County Project Name: Schmitt Decline Abandoned Mine
 Site Name/#: Mine Attic/Entrance #1 Roost Name/#: _____ Bat #: _____
 Lat/Long or UTM of Roost: 35.349578°, -107.803581°
 Description of Roost/Habitat Feature Surveyed: Abandoned mine attic/entrance

Bat Species Known to be using this Roost/Feature (if not known, leave blank): _____

Other Suspected Bat Species (explain): _____

Weather Conditions during Survey (temperature, precipitation, wind speed): _____

Sunset, partly cloudy, no rain, 75-70F, no wind

Survey Start Time: 19:00 Time of Sunset: 19:17 Survey End Time: 20:30

NOTE: Emergence surveys should begin ½ hour before sunset and continue until at least one hour after sunset or until it is otherwise too dark to see emerging bats. The surveyor(s) should position him or herself so that emerging bats will be silhouetted against the sky as they exit the roost. Tallies of emerging bats should be recorded every few minutes or as natural breaks in bat activity allow. Ensure that surveyor(s) are close enough to the roost to observe all exiting/returning bats, but not close enough to influence emergence (i.e., do not stand directly beneath the roost and do not make unnecessary noise and/or conversation, and minimize use of lights other than a small flashlight to record data, if necessary). Do not shine a light on the roost tree crevice/cave/mine entrance itself as this may prevent or delay bats from emerging. If available, use of an infrared, night vision, or thermal-imaging video camera or spotting scope and an ultrasonic bat detector are strongly recommended but not required.

Time	No. of Bats Leaving Roost *	Comments/Notes
20:30	0	No bats visually noted during the emergence survey. A Wildlife Acoustic Echo Meter Touch
		was used complimentary to the emergence survey. No bats were detected by the meter
		during the emergence survey. It was noted that there may be additional attics to this mine;
		however, not confirmed.

Appendix D Wetland Determination Data Sheets

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Schmitt Decline Abandoned Uranium Mine City/County: McKinley County Sampling Date: 9/17/2025

Applicant/Owner: EA Engineering State: NM Sampling Point: SP-1

Investigator(s): JGH and MMH (Pinyon Environmental, Inc.) Section, Township, Range: S17 T13 North R9 West

Landform (hillside, terrace, etc.): Drainage feature Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): LRR D Lat: 35.348731 Long: -107.805999 Datum: WGS84

Soil Map Unit Name: Celvar-Atarque complex, 1 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: SP-1 is located within the drainage feature. SP-1 is located on a depositional feature (sand bar) within the drainage feature. The geomorphic position is a pool. No flow is noted within the drainage feature, but surface water is noted nearby.	

VEGETATION – Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum</th> <th style="text-align: center;">(Plot size: <u>30' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u><i>Pinus edulis</i></u></td><td></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td style="text-align: center;">10</td><td colspan="2" style="text-align: right;">=Total Cover</td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum</th> <th style="text-align: center;">(Plot size: <u>15' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u><i>Juniperus monosperma</i></u></td><td></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>2. <u><i>Fallugia paradoxa</i></u></td><td></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>3. <u><i>Pinus ponderosa</i></u></td><td></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td style="text-align: center;">25</td><td colspan="2" style="text-align: right;">=Total Cover</td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum</th> <th style="text-align: center;">(Plot size: <u>5' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u><i>Juncus tenuis</i></u></td><td></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u><i>Juncus balticus</i></u></td><td></td><td style="text-align: center;">20</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>3. <u><i>Bouteloua gracilis</i></u></td><td></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">UPL</td></tr> <tr><td>4. <u><i>Achnatherum hymenoides</i></u></td><td></td><td style="text-align: center;">10</td><td style="text-align: center;">No</td><td style="text-align: center;">UPL</td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td style="text-align: center;">60</td><td colspan="2" style="text-align: right;">=Total Cover</td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum</th> <th style="text-align: center;">(Plot size: <u>15' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td></td><td colspan="2" style="text-align: right;">=Total Cover</td></tr> </table> % Bare Ground in Herb Stratum <u>40</u> % Cover of Biotic Crust <u>0</u>	Tree Stratum	(Plot size: <u>30' r</u>)	Absolute % Cover	Dominant Species?	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Remarks:
 SP-1 does not pass the dominance test for hydrophytic vegetation.

ENG FORM 6116-1, JUL 2018 Arid West – Version 2.0

SOIL

Sampling Point: SP-1

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)	
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)	
☐ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)	
☐ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☒ Drainage Patterns (B10)	
☒ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Dry-Season Water Table (C2)	
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)	
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes ☐ No ☐ Depth (inches): Water Table Present? Yes ☐ No ☐ Depth (inches): Saturation Present? Yes ☐ No ☐ Depth (inches): (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks:			
SP-1 passes for wetland hydrology with primary indicator Sediment Deposits (B2).			

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Schmitt Decline Abandoned Uranium Mine City/County: McKinley County Sampling Date: 9/17/2025

Applicant/Owner: EA Engineering State: NM Sampling Point: SP-2

Investigator(s): JGH and MMH (Pinyon Environmental, Inc.) Section, Township, Range: S16 T13 North R9 West

Landform (hillside, terrace, etc.): Drainage feature Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): LRR D Lat: 35.350416 Long: -107.802897 Datum: WGS84

Soil Map Unit Name: Celvar-Atarque complex, 1 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
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Remarks:
 SP-2 is located within a drainage feature. SP-2 is located on a depositional feature (sand bar) within the drainage feature. The geomorphic position is a pool. Surface water was noted nearby but there is no flow.

VEGETATION – Use scientific names of plants.

<table style="width: 100%;"> <tr> <th style="text-align: left;">Tree Stratum</th> <th style="text-align: center;">(Plot size: <u>30' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Juniperus monosperma</u></td><td></td><td style="text-align: center;">10</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>2. <u>Pinus ponderosa</u></td><td></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td style="text-align: center;">15</td><td colspan="2" style="text-align: center;">=Total Cover</td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Sapling/Shrub Stratum</th> <th style="text-align: center;">(Plot size: <u>15' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Forestiera shrevei</u></td><td></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>2. <u>Juniperus monosperma</u></td><td></td><td style="text-align: center;">5</td><td style="text-align: center;">Yes</td><td style="text-align: center;">UPL</td></tr> <tr><td>3. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td style="text-align: center;">10</td><td colspan="2" style="text-align: center;">=Total Cover</td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Herb Stratum</th> <th style="text-align: center;">(Plot size: <u>5' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u>Juncus balticus</u></td><td></td><td style="text-align: center;">25</td><td style="text-align: center;">Yes</td><td style="text-align: center;">FACW</td></tr> <tr><td>2. <u>Unknown sage #1</u></td><td></td><td style="text-align: center;">5</td><td style="text-align: center;">No</td><td style="text-align: center;">FACU</td></tr> <tr><td>3. <u>Bouteloua gracilis</u></td><td></td><td style="text-align: center;">3</td><td style="text-align: center;">No</td><td style="text-align: center;">UPL</td></tr> <tr><td>4. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>5. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>6. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>7. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>8. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td style="text-align: center;">33</td><td colspan="2" style="text-align: center;">=Total Cover</td></tr> </table> <table style="width: 100%;"> <tr> <th style="text-align: left;">Woody Vine Stratum</th> <th style="text-align: center;">(Plot size: <u>15' r</u>)</th> <th style="text-align: center;">Absolute % Cover</th> <th style="text-align: center;">Dominant Species?</th> <th style="text-align: center;">Indicator Status</th> </tr> <tr><td>1. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td>2. <u> </u></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="2"></td><td></td><td colspan="2" style="text-align: center;">=Total Cover</td></tr> </table> % Bare Ground in Herb Stratum <u>67</u> % Cover of Biotic Crust <u>0</u>	Tree Stratum	(Plot size: <u>30' r</u>)	Absolute % Cover	Dominant Species?	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Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>25</u>	x 2 = <u>50</u>	FAC species <u>0</u>	x 3 = <u>0</u>	FACU species <u>10</u>	x 4 = <u>40</u>	UPL species <u>23</u>	x 5 = <u>115</u>	Column Totals: <u>58</u> (A)	<u>205</u> (B)	Prevalence Index = B/A = <u>3.53</u>	
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Remarks:
 SP-2 does not pass the dominance test or prevalence index for hydrophytic vegetation. Unknown sage #1 is assumed to be FACU.

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SOIL

Sampling Point: SP-2

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)	
☒ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)	
☒ Saturation (A3)	☐ Aquatic Invertebrates (B13)	☐ Drift Deposits (B3) (Riverine)	
☒ Water Marks (B1) (Nonriverine)	☐ Hydrogen Sulfide Odor (C1)	☒ Drainage Patterns (B10)	
☒ Sediment Deposits (B2) (Nonriverine)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Dry-Season Water Table (C2)	
☐ Drift Deposits (B3) (Nonriverine)	☐ Presence of Reduced Iron (C4)	☐ Crayfish Burrows (C8)	
☐ Surface Soil Cracks (B6)	☐ Recent Iron Reduction in Tilled Soils (C6)	☐ Saturation Visible on Aerial Imagery (C9)	
☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)	
Field Observations: Surface Water Present? Yes ☐ No ☒ Depth (inches): Water Table Present? Yes ☒ No ☐ Depth (inches): 12 Saturation Present? Yes ☒ No ☐ Depth (inches): 8 (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: SP-2 passes for wetland hydrology with primary indicators High Water Table (A2), Saturation (A3), Water Marks (B1) and Sediment Deposits (B2), along with secondary indicator Drainage Patterns (B10).			

U.S. Army Corps of Engineers WETLAND DETERMINATION DATA SHEET – Arid West Region See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R	OMB Control #: 0710-0024, Exp: 11/30/2024 Requirement Control Symbol EXEMPT: (Authority: AR 335-15, paragraph 5-2a)
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Project/Site: Schmitt Decline Abandoned Uranium Mine City/County: McKinley County Sampling Date: 9/17/2025

Applicant/Owner: EA Engineering State: NM Sampling Point: SP-3

Investigator(s): JGH and MMH (Pinyon Environmental, Inc.) Section, Township, Range: S16 T13 North R9 West

Landform (hillside, terrace, etc.): Drainage feature Local relief (concave, convex, none): Concave Slope (%): 0

Subregion (LRR): LRR D Lat: 35.351356 Long: -107.798988 Datum: WGS84

Soil Map Unit Name: Celvar-Atarque complex, 1 to 8 percent slopes NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes X No

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u> Hydric Soil Present? Yes <u> </u> No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No <u> </u>	Is the Sampled Area within a Wetland? Yes <u> </u> No <u>X</u>
Remarks: SP-3 is located within a drainage feature. SP-3 is located beneath a drop in a geomorphic pool feature. No flow or surface water is noted nearby.	

VEGETATION – Use scientific names of plants.

Tree Stratum	(Plot size: <u>30' r</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33.3%</u> (A/B)																
1.																					
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1. <u>Unidentified sedge</u>		<u>30</u>	<u>Yes</u>	<u>OBL</u>																	
2.																					
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1.																					
2.																					
=Total Cover																					
% Bare Ground in Herb Stratum <u>70</u>		% Cover of Biotic Crust <u>0</u>																			

Remarks:
Unknown sedge was grazed, and assumed to be OBL. SP-3 does not pass the dominance test or prevalence index for hydrophytic vegetation.

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SOIL

Sampling Point: SP-3

[illegible]

HYDROLOGY

Wetland Hydrology Indicators:			
Primary Indicators (minimum of one is required; check all that apply)		Secondary Indicators (minimum of two required)	
☐ Surface Water (A1)	☐ Salt Crust (B11)	☐ Water Marks (B1) (Riverine)	
☐ High Water Table (A2)	☐ Biotic Crust (B12)	☐ Sediment Deposits (B2) (Riverine)	
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☐ Inundation Visible on Aerial Imagery (B7)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)	
☐ Water-Stained Leaves (B9)	☐ Other (Explain in Remarks)	☐ FAC-Neutral Test (D5)	
Field Observations:			
Surface Water Present?	Yes ☐ No ☒	Depth (inches):	
Water Table Present?	Yes ☐ No ☒	Depth (inches):	
Saturation Present?	Yes ☐ No ☒	Depth (inches):	
(includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:			
Remarks: SP-3 passes for wetland hydrology with primary indicators Water Marks (B1) and Sediment Deposits (B2), along with secondary indicator Drainage Patterns (B10).			