

BASELINE DATA REPORT

Section 5.0

Wildlife

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Revision 1

Submitted To:

New Mexico Mining and Minerals Division
&
U.S. Forest Service (Cibola National Forest)
&
New Mexico Environment Department

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5.0 Wildlife

NMAC 19.10.6.602 D.(13) (d)

Baseline data shall include, as applicable:

- d. Wildlife information shall be developed for the permit area and, to the extent practicable, the affected area. Where species may be impacted beyond these areas, the information shall include, to the extent practicable, the area of potential impact. Wildlife information shall include the following:*
 - (i) A map showing habitat types. The applicant is encouraged to contact the Director for recommendation on the preferred habitat classification system. Special or unique wildlife habitat features (e.g., cliffs, talus slopes, ponds, springs, known nests, etc.) within the area of potential impact by the mining operation, shall also be mapped.*
 - (ii) A list of species potentially occurring on the permit or affected area and any additional species potentially impacted by the mining operations. The list must also indicate legal status of each species and which species were confirmed present during baseline studies.*
 - (iii) Data gathered shall include: presence/absence, distribution by season and habitat type, and relative abundance. Key habitat areas shall be identified such as calving/fawning, nesting, foraging, wintering areas, etc. The quality and quantity of the data must be suitable for measuring the success of reclamation and the impacts of the mining operation. Survey methods must be suitable for each species.*
 - (iv) Information collected pursuant to this Part shall be summarized in a report which includes a discussion of the faunal characteristics of the habitats in the permit and affected area. The report shall discuss the anticipated direct, indirect, short- and long-term impacts associated with the proposed operation.*

5.1 Introduction

PWI conducted wildlife surveys at the site during 2006 and 2007 to support confirmatory drilling and monitor well installation at the Roca Honda permit area. The surveys were set up to determine the presence and absence of species only, with a focus on listed and special status species, as defined by the United States Fish and Wildlife Service (USFWS) and the New Mexico Department of Game and Fish (NMDGF). In 2008, when RHR determined it would submit a uranium mine permit application per 19.10.6 NMAC, formal methodologies for evaluating wildlife populations were developed and implemented.

A combination of survey methods and techniques were utilized to evaluate wildlife communities within the Roca Honda project area and associated access roads from 2006-2010. The surveyed area includes Section 9, 10, 11, 12, 16, and 21. Section 27 was selected as the reference/control site for avian, ungulate, and furbearing mammal monitoring based on its suitable distance from the permit area, and comparable habitat types, elevation, surface geological and habitat features to the permit area.

Data collected to date includes information on pre-mining habitat types and wildlife community use, and species composition, density, distribution and habitat affinity. These data will be used to assess potential impacts to those habitats and communities during the operational phase of the mine.

The results of the presence/absence surveys conducted in 2006 and 2007 and baseline data results for formal surveys conducted in 2008 and 2010 are included at the end of this section as Appendices 5-A, 5-B and 5-C. A general discussion of the Roca Honda permit area by section and wildlife communities present is provided below.

5.2 Wildlife Habitat Types

Five general wildlife habitat types, based upon vegetation classifications, were selected for the Roca Honda permit area. The five habitat types are depicted in Figure 5-1. Section 16 consists of juniper-savanna, shrub-grassland, and piñon-juniper woodland. The site has gently to moderately sloped topography interrupted by sheer rock faces, mesas, and arroyos. Elevation across Section 16 ranges from approximately 7,070 to 7,300 ft and contains several drainage areas. There is evidence of year-round livestock grazing as well as several dirt and two-track roads. Portions of the site are undisturbed, largely because of the geological features and rugged terrain. Vegetation throughout the juniper-savanna and shrub-grassland portions is dominated by sand sagebrush (*Artemisia filifolia*), four-wing saltbush (*Atriplex canescens*), rubber rabbitbrush (*Ericameria nauseosa*), ring muhly (*Muhlenbergia torreyi*), and gramma grasses (*Bouteloua spp.*). Piñon-juniper woodland areas are dominated by pinon pine (*Pinus edulis*), one-seed juniper (*Juniper monosperma*), Bigelow sagebrush (*Artemisia bigelovii*), and broom snakeweed (*Gutierrezia sarothrae*).

Section 16 wildlife communities present are typical of piñon-juniper woodlands interfaces along with juniper-savanna and shrub-grassland. Species include birds such as juniper titmouse (*Baeolophus ridgewayi*) and gray flycatcher (*Empidonax wrightii*) and ungulates such as mule deer (*Odocoileus hemionus*) and elk (*Cervus canadensis*).

The landscape and habitat in Section 9 varies from juniper-savanna and shrub-grassland to piñon-juniper (*Pinus sp.* / *Juniperus sp.*) woodland in the lower areas to sheer rock faces in the higher elevations. Elevation ranges from roughly 7,200 to 7,832 ft and changes sharply throughout Section 9. A topographic feature known as Jesus Mesa occupies approximately 50 percent of the section. A large portion of the surface area on and along Jesus Mesa is bedrock with semi-stabilized sand dunes in some areas. Rafael Canyon runs north to south along the section's western boundary.

Section 10 is positioned along the northeastern slope of Jesus Mesa. Terrain and habitat throughout the section is highly variable and ranges from flat mesa top with rock outcroppings to gentle slopes at the base of the mesa. An unnamed canyon is located in the NW1/4 of the section, with sheer cliff faces greater than 50 ft in height along its rim. Elevation in Section 10 ranges from 7,152 to 7,720 ft. Vegetation throughout the section is dominated by piñon-juniper woodland, with desert-scrub and grassland along the southeast corner and along the canyon bottom in the north.

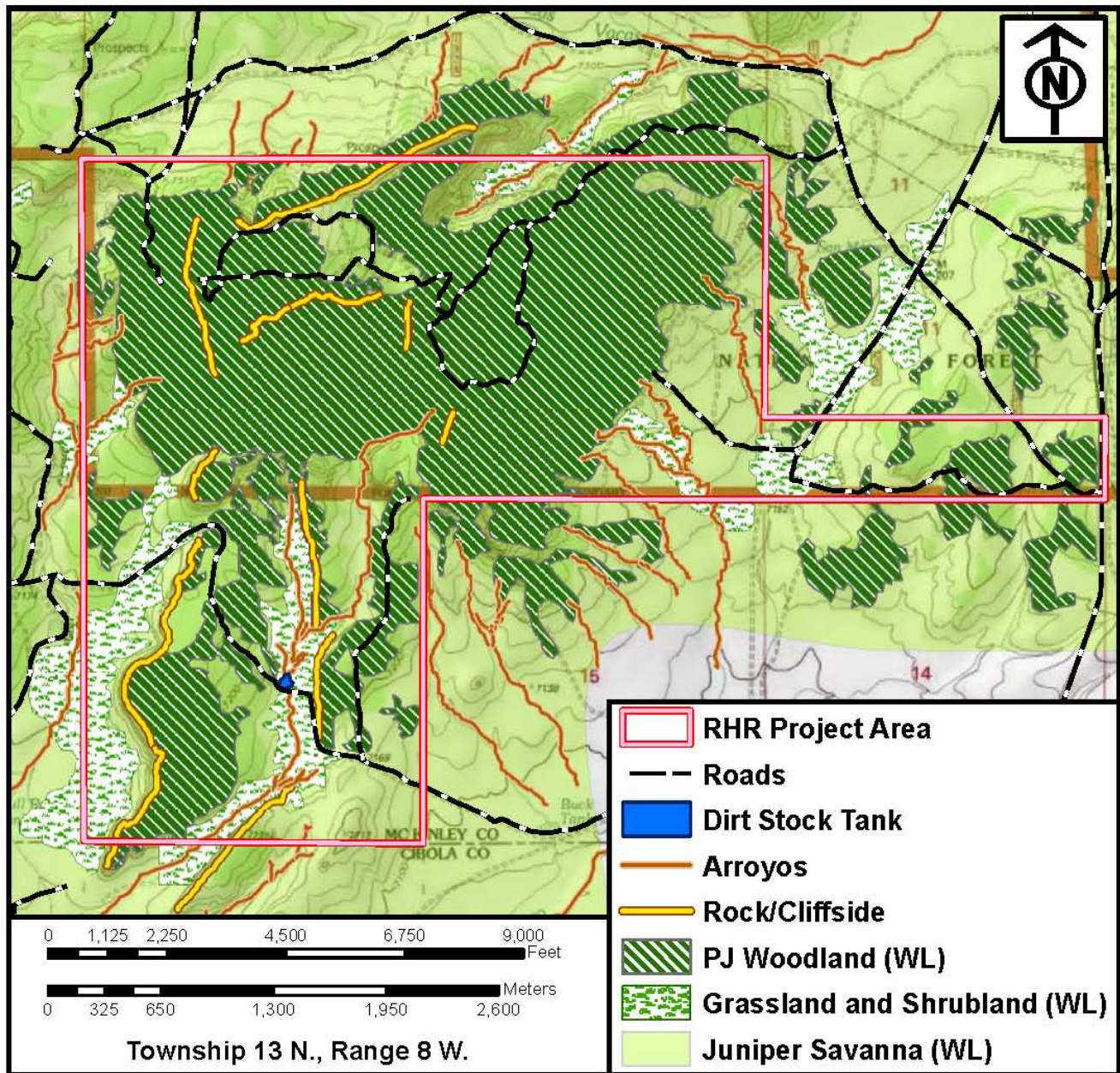


Figure 5-1. Wildlife Habitat Types

Plant communities in Sections 9, 10, and 16 graduate from shrub-grassland, dominated by gramma grasses (*Bouteloua spp.*), ring muhly, and annuals such as rubber rabbitbrush and broom snakeweed to juniper savanna/piñon-juniper woodland ecotone. Juniper savanna and piñon-juniper woodland, a cold-adapted evergreen habitat, tends to occur above shrub-grassland or juniper-savanna vegetation but below pine forest elevations (Peiper 1977). Piñon-juniper woodland areas in all sections are dominated by one-seed juniper and two-needle piñon pine. There are scattered clumps of Ponderosa pine (*Pinus ponderosa*), as well as single mature trees, in the higher elevations in Sections 9 and 10.

Because of the transitional properties of piñon-juniper woodlands, they support important wildlife communities. Wildlife documented at the sites is indicative of juniper-savanna and piñon-juniper interfaces. Avian species detected included obligates and semi-obligates such as western scrub-jay (*Aphlecoma californica*) and juniper titmouse (*Baeolophus griseus*). Typical mammalian species observed included animals such as blacktail jackrabbit (*Lepus californicus*), cliff chipmunk (*Tamias dorsalis*), and mule deer (*Odocoileus hemionus*).

Evidence of grazing by domestic livestock is apparent at lower levels with grazing by native and domestic ungulates at higher elevations. Bladed roads and jeep trails wind throughout the sections. There is evidence of multiple drill pads from historic exploratory drilling. United States Forest Service (USFS) boundary markers and fences are in place at both sections.

5.2.1 Special or Unique Wildlife Habitat Features

Special and unique wildlife features are discussed, mapped, and presented in Appendices 5-A, 5-B and 5-C of this section.

5.3 Wildlife Species Potentially Occurring On and Around Permit Area

Prior to implementation of all fieldwork, the current lists of Federal (USFWS 2006–2009) and State of New Mexico (NMDGF 2006–2009) listed and sensitive animal species known to occur in McKinley County, in which the permit area occurs, and Cibola County, which borders Section 16 to the south, were reviewed. In addition, Management Indicator Species, as identified by the USFS, Cibola National Forest (USFS 2005) were also of focus.

5.3.1 Threatened, Endangered, and Special Status Species (Wildlife)

No endangered or threatened species as listed by USFWS or NMDGF were detected during wildlife surveys in 2008 and 2010. However, two state-listed sensitive species, Loggerhead Shrike (*Lanius ludovicianus*) and Gunnison's prairie dog (*Cynomys gunnisoni*), and one state-listed threatened species, Gray Vireo (*Vireo vicinior*) were documented on site during different survey periods. Although the Gunnison's prairie dog was documented, listings for this species only apply to a high altitude subspecies population that does not correlate with the Roca Honda permit area. Additionally, the gray vireo was documented; however, justification for a likely misidentification is provided in Appendix 5-C. All listed or special status species with existing suitable habitat present and the potential to occur at the Roca Honda permit area are addressed in Table 5–1.

Table 5-1. USFWS and NMDGF Endangered, Threatened, Candidate, or Sensitive Species, McKinley and Cibola County, New Mexico

Common Name (scientific name)	Federal Status	State Status	Habitat Associations	Potential to Occur in Permit Area **
Mammals				
Western small-footed myotis bat (<i>Myotis ciliolabrum melanorhinus</i>)		S	Widespread. Roosts in rock crevices, buildings, caves, mine tunnels, and loose tree bark.	S
Occult little brown myotis bat (<i>Myotis lucifugus occultus</i>)		S	In the west. Found mainly in mountainous and riparian areas.	NP
Long-legged myotis bat (<i>Myotis volans interior</i>)		S	Piñon-juniper, oak, and coniferous forests (4,000–9,000 ft).	S
Fringed myotis bat (<i>Myotis thysanodes thysanodes</i>)		S	Roosts in caves, abandoned buildings, rock crevices, and trees.	S
Long-eared myotis bat (<i>Myotis evotis evotis</i>)		S	Coniferous forests in northern New Mexico (7,000–8,500 ft).	NP
Townsend's big-eared bat (<i>Corynorhinus townsendii pallescens</i>)	SOC	S	Found in a variety of desert scrub and relatively open, low- to mid-elevation mixed and coniferous woodlands.	S
Spotted bat (<i>Euderma maculatum</i>)		T	Highly variable habitats from coniferous forest to desert scrub.	S
Cebolleta southern pocket gopher (<i>Thomomys umbrinus paguatae</i>)	SOC		Limited to higher timbered parts of the Animas Mountains (Hidalgo County, NM).	NP
Gunnison's prairie dog (<i>Cynomys gunnisoni</i>)		S	Level to gently sloping grasslands, semi-desert and montane shrublands (6,000–12,000 ft).	K
Red fox (<i>Vulpes vulpes</i>)		S	Diverse habitats including forests, tundra, prairies, and farmland.	K
Black-footed ferret (<i>Mustela nigripes</i>)	E		Open grasslands with year-round prairie dog colonies. Strongly associated with Black-tailed Prairie Dogs.	NP
Western spotted skunk (<i>Spilogale gracilis</i>)		S	Variety of habitats including rocky bluffs, cliffs, and brush-bordered canyon streams or stream beds.	K
Birds				
Bald eagle (<i>Haliaeetus leucocephalus</i>) *downlisted July 2007	T	T	Mature shoreline forests with scattered openings and little human use, near water with abundant fish and waterfowl.	NP
Northern goshawk (<i>Accipiter gentilis</i>)	SOC	S	Ponderosa pine, mixed conifer, and spruce-fir forests.	NP
Peregrine falcon (<i>Falco peregrinus</i>)	SOC	T	Rare breeders (NM) in rocky, steep cliff areas, generally near water or mesic canyons.	S
Mountain plover (<i>Charadrius montanus</i>)	SOC	S	Dry, disturbed, or intensively grazed open and flat tablelands.	NP

Table 5-1 (Continued)

Common Name (scientific name)	Federal Status	State Status	Habitat Associations	Potential to Occur in Permit Area **
Birds (Continued)				
Least tern (<i>Sterna antillarum</i>)	E	E	Marine or estuarine shores, or on sandbar islands in large rivers. Prefers areas free from humans and predators.	NP
Black tern (<i>Chilidonias niger surinamensis</i>)	SOC		Freshwater marshes, wet meadows, lake margins, slow-moving rivers, bogs, shrub-swamps, and along prairie sloughs.	NP
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	C	S	Extensive, mature riparian corridors.	NP

(USFWS 2006-2009, NMDGF2006-2009)

Status

E Endangered T Threatened C Candidate SOC Species of Concern

S Sensitive Species

Presence**

K Known, documented observation within permit area.

S Habitat suitable and species suspected to occur within the permit area.

NS Habitat suitable but species is not suspected to occur within the permit area.

NP Habitat not present and species unlikely to occur within the permit area.

5.3.2 Management Indicator Species

The Land and Resource Management Plan for the Cibola National Forest and Grasslands, adopted in July 1985 and amended in 2005, identifies 15 Management Indicator Species (USFS 2005). Four Cibola National Forest Management Indicator Species - Rocky Mountain elk (*Cervus elaphus nelsoni*), mule deer (*Odocoileus hemionus*), juniper titmouse (*Baeolophus ridgwayi*), and hairy woodpecker (*Dendrocopos villosus*) - were documented in the permit area during the surveys and are addressed below. The remaining 11 species were not observed in the permit area.

Site use by Rocky Mountain elk (*Cervus elaphus*) was documented during all survey periods. Piñon-juniper and mixed grassland habitats at the permit area appear to support stable elk numbers. This observation is based upon presence and absence surveys only. Species' presence on site was documented by scat, observation of bedding areas, and visual confirmation of harems and cows with young. Suitable grazing, calving, and winter range habitat exists within the permit area.

Mule deer (*Odocoileus hemionus*) use of the permit area was documented during all survey periods by sign and visual confirmation. Does with fawns, juveniles, and sub-adults were also documented. Suitable grazing, fawning, and winter range habitat for mule deer exists within the permit area.

The juniper titmouse (*Baeolophus ridgwayi*) is a species closely tied to piñon–juniper woodland over much of its range with an estimated 39 percent of that habitat within the Cibola National Forest (USFS 2005). Juniper titmice were detected during all surveys, and breeding activity was documented within the permit area.

As primary cavity nesters, hairy woodpeckers (*Dendrocopos villosus*) utilize a wide range of habitats in the southwestern United States. They are a resident nesting species in New Mexico and are highly adaptable. Hairy woodpeckers were documented in and around the permit area during all survey periods, and evidence of nest-site use was documented within the permit area.

Several raptor species and active raptor nests were found during the surveys. No threatened, endangered, or special status species, as listed by state and federal agencies, were documented during the raptor surveys. Golden eagles (two sub-adults and/or juveniles and one adult) were observed during some on-site visits, and one eagle roost was located.

5.4 References

NMDGF (New Mexico Department of Game and Fish), 2006–2009. BISON-M/ threatened, endangered, and special status wildlife species in McKinley and Cibola counties, New Mexico, (<http://nmnhp.unm.edu/bisonm/bisonquery.php>).

Peiper, R.D., 1977. “The Southwestern Piñons -Juniper Ecosystem,” In: Aldon, E.F., and T.J. Loring, tech. cords, “Ecology, Uses, and Management of Piñons -Juniper Woodlands,” proceedings of the March 24–25, 1977 workshop, Albuquerque, New Mexico, Gen. Tech. Rep. RM-39, Fort Collins, Colorado, USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, 1–6.

USFS (U.S. Forest Service), 2005 (revised). “Management Indicator Species – Cibola National Forest,” Albuquerque, New Mexico.

USFWS, 2006–2009. *Listed and Sensitive Species in McKinley and Cibola Counties*, New Mexico Ecological Field Services Office, Albuquerque, New Mexico.

Appendix 5-A

Wildlife Survey Report on State Land
Section 16, T13N, R8W
August, 2007

Appendix 5-B

Wildlife Survey Report on Cibola National Forest
Sections 9 and 10, T13N, R8W
August, 2007

Appendix 5-C

Wildlife Survey Report,

Roca Honda Project 2008 and 2010 Field Seasons