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Biological Evaluation for the El Paso Natural Gas Company Vail Compressor Station Modifications in Pima County, Arizona

JUNE 2020

PREPARED FOR

El Paso Natural Gas Company, L.L.C.

PREPARED BY

SWCA Environmental Consultants

**BIOLOGICAL EVALUATION FOR THE EL PASO NATURAL GAS
COMPANY VAIL COMPRESSOR STATION MODIFICATIONS IN PIMA
COUNTY, ARIZONA**

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EXECUTIVE SUMMARY

This biological evaluation (BE) has been prepared to address the Endangered Species Act of 1973, as amended (ESA), for the El Paso Natural Gas Company (EPNG) Vail Compressor Station modifications project. The project site is located within the city limits of Tucson at Milepost 479.1 of EPNG's Line No. 1100 and Line No. 1103. It is located on approximately 40 acres of privately owned land in Section 4, Township 16 South, Range 15 East, Gila and Salt River Meridian, Pima County, Arizona. The objectives of this BE are to 1) describe vegetation communities in the project area and vicinity, and 2) evaluate habitat suitability for species listed under the ESA and make recommendations of determination of effects of the proposed project activities on such species.

Twenty-four species listed by the U.S. Fish and Wildlife Service (USFWS) as threatened, endangered, proposed, or non-essential experimental population, which receive protection under the authority of the ESA, have the potential to occur in Pima County (USFWS 2020). Six species listed under the ESA have the potential to occur in the 40 acre project area (USFWS 2020); four special-status species, the federally listed endangered Pima pineapple cactus (*Coryphantha scheeri* var. *robustispina*), Sonoran desert tortoise (*Gopherus morafkai*), cave myotis (*Myotis velifer*), and Cockrum's desert shrew (*Notiosorex cockrumi*) have been documented within 2 miles of the project area (Arizona Heritage Geographic Information System 2020). The Sonoran desert tortoise has a conservation agreement in place and is not protected under the ESA; therefore, this species is not addressed in this report. However, it is noted that no sign of Sonoran desert tortoise was observed during field reconnaissance of the site conducted for this evaluation. Cave myotis and Cockrum's desert shrew do not have official status under the ESA and therefore are not addressed in this report.

One of the 24 species evaluated in this study, the endangered Pima pineapple cactus (PPC), is known to occur in the project vicinity. A species specific survey for PPC was conducted using currently accepted methods within the undisturbed portions of the 40-acre site and none were observed. The remaining 23 ESA-listed species on the USFWS Pima County list are unlikely to occur in the project area, as the project area is either clearly beyond the known geographic or elevational range of these species, or it does not contain vegetation or landscape features known to support these species, or both. In addition, there are no designated or proposed critical habitats in the project area, and therefore, critical habitat would not be affected by the project activities. Therefore, the Vail Compressor Station modifications project would have no effect on any species, or critical habitats, listed or proposed for listing under the ESA.

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1 INTRODUCTION

SWCA Environmental Consultants (SWCA) was contracted by El Paso Natural Gas Company, L.L.C. (EPNG), to complete a biological evaluation (BE) for the EPNG Vail Compressor Station modification project. The Vail Compressor Station is located within the city limits of Tucson on approximately 40 acres and is 0.9 mile south of the Interstate 10 and Rita Road interchange. The project is located at approximately Milepost 479.1 of EPNG's Line No. 1100 and Line No. 1103 in Section 4, Township 16 South, Range 15 East, Gila and Salt River Meridian, Pima County, Arizona (Figures 1 and 2). The entire limits of the proposed workspace are privately owned and within the existing EPNG Vail Compressor Station property. The Vail Compressor Station is a 4.3-acre fenced facility within a larger 40-acre parcel of land that is owned by EPNG and used primarily for equipment storage. All project installations will take place within the 4.3-acre fenced station yard. For the purposes of the biological evaluation, the 40-acre parcel of land is considered the project area, as portions of it may be used for staging and storage during project construction.

EPNG proposes modifications to the existing piping at the Vail Compressor Station. Specifically, the modifications include adding gas cooling facilities (e.g., piping, valves, fans) and gas recycling to allow for operational flexibility. Cooling is required to preserve the pipe's anti-corrosion coating. The proposed modifications are considered a federal action because they require the Federal Energy Regulator Commission's (FERC's) review and approval for authorization under the blanket certificate program. The proposed modifications also require review and approval by Pima County Department of Environmental Quality (PDEQ) as they constitute a significant permit revision to EPNG's Title V Air Quality permit.

The purpose of this BE is to assess the proposed project activities to determine if they would have an effect on individuals of species or habitats listed under the Endangered Species Act of 1973 (ESA), as amended (16 United States Code [USC] 1531 et seq.) to satisfy FERC's obligations under the ESA and to satisfy PDEQ's requirements.

The scope of work for this BE included the following:

- A review of the U.S. Fish and Wildlife Service (USFWS) species lists for the project-specific footprint as well as for Pima County, available from the USFWS Information for Planning and Consultation (IPaC) website (USFWS 2020)
- A review of the Arizona Game and Fish Department (AGFD) Arizona Environmental Online Review Tool Report for records of special-status species near the project (Arizona Heritage Geographic Information System [AZHGIS] 2020)
- A field reconnaissance of the project area, including a species-specific survey using approved protocols for the federally endangered Pima pineapple cactus (*Coryphantha scheeri robustispina*) (PPC)
- An evaluation of the potential for the species reviewed for this BE to occur in the project area and a determination of any project-related effects to these species



Figure 1. General location of the project.

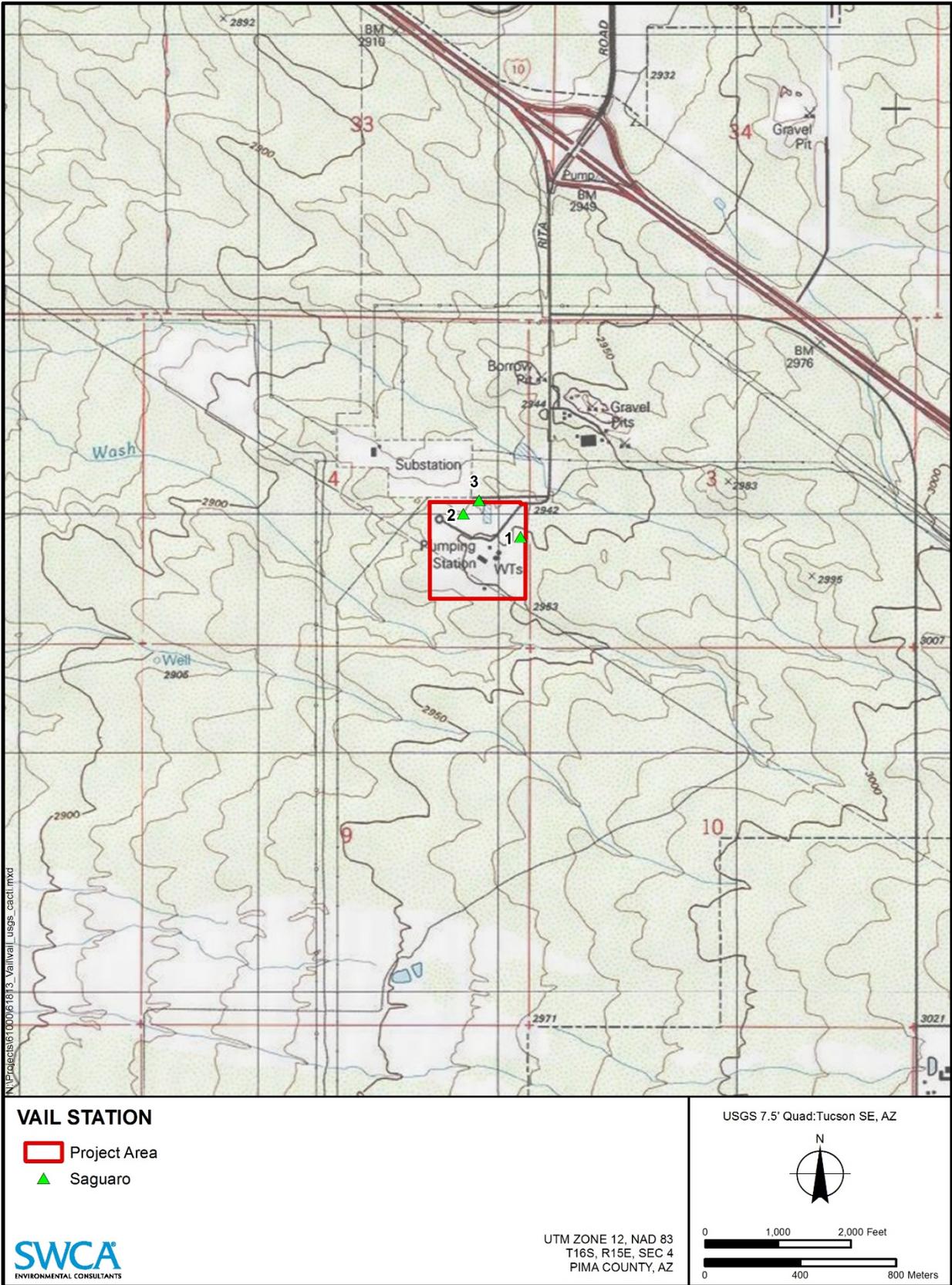


Figure 2. Project area.

2 METHODS

SWCA biologists conducted a field reconnaissance of the 40-acre project area on June 10, 2020. Project documents provided by EPNG were used to locate the Vail Station property line. The field reconnaissance consisted of a pedestrian survey of the project area to evaluate vegetation and landscape features considered important to the potential occurrence of special-status plant and animal species. Vegetation was classified to the community level according to the map “Biotic Communities of the Southwest” (Brown 1994). The Natural Resources Conservation Service’s (NRCS’s) PLANTS database was used for plant naming conventions (NRCS 2020). The project area can be found on the U.S. Geological Survey quadrangle Tucson SE, Arizona. The method used for the PPC survey involved parallel pedestrian transects spaced 4 to 6 meters wide (13–20 feet) across the project area using two qualified biologists.

2.1 Species Identification

The USFWS maintains a list of protected species and the critical habitats that are known to occur in each Arizona County. These species are currently listed or are proposed for listing as endangered or threatened under the ESA. The ESA specifically prohibits the “take” of a listed species. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct.”

Only species listed by the USFWS are afforded protection under the ESA. The species evaluated in this BE were based on the IPaC list of endangered, threatened, proposed, and non-essential experimental population species for Pima County, Arizona, available at the USFWS IPaC website (USFWS 2020). The IPaC website provides information on related resources, including potential national wildlife refuges, migratory birds of conservation concern, wetlands, and invasive species issues. Most bird species also receive legal protection under the federal Migratory Bird Treaty Act of 1918 (MBTA) (16 United States Code 703–712). The IPaC report is provided in Appendix A.

The AGFD maintains a statewide database, the Heritage Data Management System (HDMS), which tracks records for federally listed species and other species of special concern. SWCA accessed the HDMS through the AZHGIS online environmental review tool to determine whether any federally proposed or designated critical habitat or special-status species have been documented in or near the project vicinity (AZHGIS 2020). The AZHGIS report is provided in Appendix B.

The determination of potential for occurrence of the reviewed species in the project vicinity was based on 1) documented records; 2) existing information on distribution; and 3) qualitative comparisons of the habitat requirements of each species with vegetation communities or landscape features in the project vicinity.¹ Potential effects to these species were evaluated based on reasonably foreseeable project-related activities.

¹ We agree with Hall et al. (1997) that habitat is organism specific and thus not synonymous with vegetation community. However, we have refined their definition to read as follows: habitat is an area in which some members of a species regularly occur continuously or seasonally. In the field, habitat is operationally defined by the presence or absence of a species. Areas that appear suitable for a species but that have not been surveyed are considered possible habitat. We avoid using the term potential with respect to habitat because potential is defined as “capable of becoming but not yet in existence;” possible, on the other hand, is defined as “of uncertain likelihood.” We also avoid using the terms “unoccupied habitat” or “suitable, but unoccupied habitat,” which represent a contradiction in terms is defined as “of uncertain likelihood.” We also avoid using the terms “unoccupied habitat” or “suitable, but unoccupied habitat,” which represent a contradiction in terms.

2.2 Species Evaluation

The potential for occurrence of each species within the project area was summarized according to the categories listed below. Because not all species are accommodated precisely by a given category (i.e., category definitions may be too restrictive), an expanded rationale for each category assignment is provided. Potential for occurrence categories are as follows:

Known to occur—the species has been documented in the project vicinity by a reliable observer.

May occur—the project vicinity is within the species' currently known range, and vegetation communities, soils, etc., resemble those known to be used by the species.

Unlikely to occur—the project vicinity is within the species' currently known range, but vegetation communities, soils, etc., do not resemble those known to be used by the species, or the project area is clearly outside the species' currently known range.

Those species listed by the USFWS were assigned to one of three categories of possible effect, following USFWS recommendations. The effects determinations recommended by the USFWS are as follows:

May affect, is likely to adversely affect—the proposed project is likely to adversely affect a species if 1) the species occurs or may occur in the project area; and 2) any adverse effect on listed species may occur as a direct or indirect result of the proposed action or its interrelated or interdependent actions, and the effect is not discountable, insignificant, or beneficial. In the event that the overall effect of the proposed action is beneficial to the listed species but also is likely to cause some adverse effects, then the proposed action “is likely to adversely affect” the listed species.

May affect, is not likely to adversely affect—the proposed project is not likely to adversely affect a species if 1) the species may occur but its presence has not been documented and/or surveys following approved protocol have been conducted with negative results; and/or 2) project activity effects on a listed species are expected to be discountable, insignificant, or completely beneficial.

Beneficial effects are contemporaneous positive effects without any adverse effects on the species.

Insignificant effects relate to the size of the impact and should never reach the scale where take occurs.

Discountable effects are those extremely unlikely to occur. Based on best judgment, a person would not 1) be able to meaningfully measure, detect, or evaluate insignificant effects; or 2) expect discountable effects to occur.

No effect—the project will have no effect on a species if 1) it has no likelihood of effect on a listed species or its designated critical habitat (including effects that may be beneficial, insignificant, or discountable); or 2) the species' habitat does not occur in the project area.

3 RESULTS

3.1 Ecological Overview

The project area is located approximately 1 mile south of the Interstate 10 and Rita Road interchange. The elevation at the site is approximately 2,940 to 2,955 feet above mean sea level (amsl). The terrain is relatively flat with an overall slope from southeast to northwest. The project area is located about 10 miles northwest of the foothills of the Santa Rita Mountains and 12 miles southeast of the Santa Cruz River floodplain. The north and south forks of Airport Wash, an ephemeral drainage, are located to the

north and south of the site, respectively. According to the Federal Emergency Management Agency's floodplain insurance rate map (FIRM) of the area, the entire site is in an area of minimal flood hazard zone X, with a less than 0.2% chance of a flood event (FIRM Panel 04019C2925L). Soils are mapped as Stagecoach-Sahuarita association, 1 to 8 percent slopes. Both the soil types in this association are derived from mixed alluvium and are well drained (U.S. Department of Agriculture 2020). The site is mostly disturbed from the past construction of the station and associated infrastructure but contains some areas of undisturbed native vegetation.

Wildlife species observed during the site visit, which occurred during the daytime in early June, were limited to bird species; however, no active bird nests were identified within the project site. Birds observed include mourning dove (*Zenaida macroura*), black-chinned sparrow (*Spizella atrogularis*), greater roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles acutipennis*), house finch (*Haemorhous mexicanus*), turkey vulture (*Cathartes aura*), cactus wren (*Campylorhynchus brunneicapillus*), curve-billed thrasher (*Toxostoma curvirostre*), raven (*Corvus corax*), and Gambel's quail (*Callipepla gambelii*).

3.2 Vegetation

The project area is located within a mesquite-mixed cacti association of the Arizona Upland subdivision of the Sonoran Desertscrub biotic community (Brown 1994). A total of 26 plant species were recorded on or immediately adjacent to the project area during the field visit. Dominant plant species observed include velvet mesquite (*Prosopis velutina*), various cacti species and burweed (*Isocoma tenuisecta*). Additional plants observed include creosote bush (*Larrea tridentata*), catclaw acacia (*Acacia greggii*), triangle-leaf bursage (*Ambrosia deltoidea*), desert broom (*Baccharis sarothroides*), desert marigold (*Baileya multiradiata*), saguaro (*Carnegiea gigantea*), spiny hackberry (*Celtis ehrenbergiana*), jumping cholla (*Cylindropuntia fulgida*), Christmas cactus (*Cylindropuntia leptocaulis*), low woollygrass (*Dasyochloa pulchella*), walkingstick cactus (*Cylindropuntia spinosior*), pinkflower hedgehog cactus (*Echinocereus fasciculatus*), buckwheat (*Eriogonum* sp.), candy barrelcactus (*Ferocactus wislizeni*), pepperweed (*Lepidium* sp.), Graham's nipple cactus (*Mammillaria grahamii*), ocotillo (*Fouquieria splendens*), cactus apple (*Opuntia engelmannii*), foothill paloverde (*Parkinsonia microphylla*), penstemon (*Penstemon* sp.), and desert globemallow (*Sphaeralcea ambigua*).

Non-native species and/or noxious weed species were observed in the project area during the site visit. Species included buffelgrass (*Pennisetum ciliare*), Bermudagrass (*Cynodon dactylon*), mustard (*Brassica* sp.), desert tobacco (*Nicotiana obtusifolia*), and prickly Russian thistle (*Salsola tragus*).

3.3 Species Evaluation

Of the 24 species listed for Pima County by the USFWS under the ESA, only the endangered PCC has the potential to occur within the project area. The project area is clearly beyond the known geographic or elevational range of the remainder of species with the potential to occur in Pima County, or it does not contain vegetation or landscape features known to support those species, or both. Habitat requirements, potential for occurrence, and possible effects on these 24 species are summarized in Table 1.

The USFWS IPaC report for the specific 40-acre project area reported that there is not federally proposed or designated critical habitat in the project area (see Appendix A). The AGFD Arizona Environmental Online Review Tool Report for this project (HGIS-11338) returned occurrence records for four special-status species—PCC, Sonoran desert tortoise (*Gopherus morafkai*), cave myotis (*Myotis velifer*), and Cockrum's desert shrew (*Notiosorex cockrumi*)—within 2 miles of the project (see Appendix B). The Sonoran desert tortoise has a conservation agreement in place and is not protected under the ESA;

therefore, this species is not addressed in this report. It is noted that no sign of Sonoran desert tortoise was observed during field reconnaissance conducted for this evaluation. However, AGFD’s Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (Appendix C) would minimize the potential for impacts to this species should any be encountered during project related activities. Cave myotis and Cockrum’s desert shrew do not have official status under the ESA and therefore are not addressed in this report.

Table 1. Federally Listed Species Potentially Occurring in Pima County, Arizona

Range or habitat information is from HDMS (2020); USFWS IPaC Website (USFWS 2020); *Arizona Rare Plant Field Guide* (Arizona Rare Plant Committee n.d.); Brennan and Holycross (2006); and Corman and Wise-Gervais (2005).

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Acuña cactus (<i>Echinomastus erectocentrus</i> var. <i>acunensis</i>)	USFWS E	This cactus occurs in disjunct populations across southern Arizona on well-drained gravel ridges and knolls on granite-derived soils. It grows in the Arizona Upland subdivision of the Sonoran desertscrub plant association at elevations between 1,198 and 2,789 feet amsl. This species occurs in Maricopa, Pima, and Pinal Counties.	Unlikely to occur. The project area is at least 20 miles east of the nearest known population of this species.	No effect.
Bartram stonecrop (<i>Graptopetalum bartramii</i>)	PT	Occupies shaded areas on rocky outcrops and soil litter in arroyos and canyons of the sky island mountains of southeastern Arizona at an elevation range of 3,900 to 6,700 feet amsl.	There is no suitable habitat for this species in the project area. Further, known populations of this species are distant from the project area.	No effect.
Beardless chinchweed (<i>Pectis imberbis</i>)	PE	Occupies open grassland and oak/grassland habitats between 4,000 and 5,500 feet amsl. Known from Santa Cruz County, southeastern Pima County, and far southwestern Cochise County in Arizona.	Unlikely to occur. Project area is below the known elevational range of this species and is distant from known populations.	No effect.
California least tern (<i>Sterna antillarum browni</i>)	USFWS E	Forms nesting colonies on barren to sparsely vegetated areas. Nests in shallow depressions on open sandy beaches, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, and drainage systems. Found in Maricopa, Mohave, and Pima Counties.	Unlikely to occur. The project area does not contain habitats similar to those used by this species; there are no open sandy beaches, sand bars, gravel pits, or exposed shorelines of inland rivers, lakes, reservoirs, or drainage systems.	No effect.
Canelo Hills ladies' tresses (<i>Spiranthes delitescens</i>)	USFWS E	Found at elevations between 4,585 and 4,970 feet amsl in cienega wetlands, usually intermixed with tall grasses and sedges, on fine-grained, highly organic, saturated soils. Only known from four cienegas in southern Arizona.	Unlikely to occur. The project area is below the elevational range of this species, and it does not contain any cienega wetlands. In addition, the project area is distant to known occurrences of this species.	No effect.

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Chiricahua leopard frog (<i>Rana chiricahuensis</i>)	USFWS T	Restricted to springs, livestock tanks, and streams in the upper portions of watersheds at elevations between 3,281 and 8,890 feet amsl in central, east-central, and southeastern Arizona. Populations in central and east-central Arizona are disjunct from those in southeastern Arizona and may be distinct species.	Unlikely to occur. There are no permanent aquatic or semi-aquatic habitats in the project area, and the project area is below the elevational range of this species. Furthermore, there are no occurrence records within 2 miles of the project area (AZHGIS 2020), and according to HDMS (2020) species-specific occurrence maps, there are no known populations or occurrences in this portion of Pima County that could serve as a source population for dispersal of this species across the project area.	No effect.
Desert pupfish (<i>Cyprinodon macularius</i>)	USFWS E	Found in shallow waters of desert springs, small streams, and marshes at elevations below 5,000 feet amsl. One natural population still occurs in Quitobaquito Spring and Quitobaquito Pond in Pima County, and reintroductions have been made in Pima, Pinal, Maricopa, Graham, Cochise, La Paz, and Yavapai Counties.	Unlikely to occur. There are no permanent water sources suitable for this species in or adjacent to the project area.	No effect.
Gila chub (<i>Gila intermedia</i>)	USFWS E	Normally found in smaller headwater streams, cienegas, and springs or marshes of the Gila River Basin at elevations between 2,720 and 5,420 feet amsl.	Unlikely to occur. There are no permanent water sources suitable for this species in or adjacent to the project area.	No effect.
Gila topminnow (<i>Poeciliopsis occidentalis occidentalis</i>)	USFWS E	Occurs in small streams, springs, and cienegas at elevations below 4,500 feet amsl, primarily in shallow areas with aquatic vegetation and debris for cover. In Arizona, most of the remaining native populations are in the Santa Cruz River system.	Unlikely to occur. There are no permanent water sources suitable for this species in or adjacent to the project area.	No effect.
Huachuca water umbel (<i>Lilaeopsis schaffneriana</i> ssp. <i>recurva</i>)	USFWS E	Semi-aquatic to aquatic perennial plant species found in shallow water or saturated soil of cienegas or marshy wetlands at elevations between 4,000 and 6,500 feet amsl. Known from the Huachuca Mountains, Canelo Hills, headwaters of the Santa Cruz River to Black Draw, and the San Pedro River.	Unlikely to occur. There are no permanent aquatic or semi-aquatic habitats in the project area. Further, the project area is below the elevational range of this species.	No effect.

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Jaguar (<i>Panthera onca</i>)	USFWS E	Jaguars were once prominent in southern Arizona and were found in Sonoran desertscrub up through subalpine conifer forest at elevations between 1,600 and 9,000 feet amsl. Based on 25 historical (from 1902 to 2001) reliable and spatially accurate jaguar sighting records in Arizona, the majority of jaguars were observed in scrub grasslands (56%) and Madrean evergreen forests (20%); all were within 6.2 miles of a water source, and most occurred in moderately rugged to extremely rugged terrain. Additionally, river valleys and other drainage features likely "provide travel corridors for jaguars, along with higher prey densities, cooler air, and denser vegetation than surrounding habitats." (USFWS 2018)	Unlikely to occur. This species would be likely to avoid the project area because it occurs in close proximity to residential and industrial development, and Interstate 10. The nearest critical habitat for this species is about 10 miles south of the project area in the Santa Rita Mountains.	No effect.
Kearney's bluestar (<i>Amsonia kearneyana</i>)	USFWS E	Found on dry, open slopes (20–30 degrees) at elevations between 4,000 and 6,000 feet amsl in the transition zone between Madrean evergreen woodland and interior chaparral. Also occurs at elevations between 3,600 and 3,800 feet amsl on stable, partially shaded, coarse alluvium along dry washes under deciduous riparian trees and shrubs in Sonoran desertscrub or desertscrub-grassland ecotone. Known only from a west-facing drainage in the Baboquivari Mountains.	Unlikely to occur. This species is only known from a few small populations in the Baboquivari Mountains, which are more than 40 miles from the project area.	No effect.
Masked bobwhite (<i>Colinus virginianus ridgwayi</i>)	USFWS E	Found at elevations between 1,000 and 4,000 feet amsl in desert grasslands with diverse, moderately dense native grasses and forbs and adequate brush cover. This subspecies has been found to be closely associated with prairie acacia (<i>Acacia angustissima</i>). Known only from reintroduced populations on Buenos Aires National Wildlife Refuge.	Unlikely to occur. The habitats in the project area are not similar to those used by the species, and the project area is more than 40 miles northeast of Buenos Aires National Wildlife Refuge.	No effect.
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	USFWS T	Found in mature montane forests and woodlands and steep, shady, wooded canyons. Can also be found in mixed-conifer and pine-oak vegetation types. This species generally nests in older forests of mixed conifers or ponderosa pine (<i>Pinus ponderosa</i>)–Gambel oak (<i>Quercus gambelii</i>). Nests in live trees on natural platforms (e.g., dwarf mistletoe [<i>Arceuthobium</i> spp.] brooms), snags, and canyon walls at elevations between 4,100 and 9,000 feet amsl.	Unlikely to occur. There is no suitable habitat (i.e., mature montane forests or steep, shady wooded canyons) or appropriate vegetation types within the project area. The project area is also well below the elevational range of this species.	No effect.
Nichol's Turk's head cactus (<i>Echinocactus horzonthalonius</i> var. <i>nicholii</i>)	USFWS E	Found in Sonoran Desertscrub with limestone-derived alluvium at elevations between 2,000 and 3,600 feet amsl. In Arizona, its known range is limited to the Waterman and Vekol Mountains.	Unlikely to occur. The nearest known population of this species is in the Waterman Mountains, at least 40 miles northwest of the project area (USFWS 2009). In addition, qualified biologists surveyed 100% of the project area and no individuals were observed.	No effect.

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Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Northern Mexican gartersnake (<i>Thamnophis eques megalops</i>)	USFWS T	This species is most abundant at elevations between 3,000 and 5,000 feet amsl in densely vegetated habitat surrounding cienegas, streams, and stock tanks, in or near water along streams in valley floors and generally open areas, but not in steep mountain canyon stream habitat (Rosen and Schwalbe 1988). Considered extant in fragmented populations within the middle to upper Verde River drainage, middle to lower Tonto Creek, Cienega Creek, and a small number of isolated wetland habitats elsewhere in southeastern Arizona.	Unlikely to occur. There are no permanent aquatic or semi-aquatic habitats in the project area. There are no occurrence records within 2 miles of the project area (AZHGIS 2020), and according to HDMS (2020) species-specific occurrence maps, there are no known populations or occurrences in this portion of Pima County that could serve as a source population for dispersal of this species across the project area.	No effect.
Ocelot (<i>Leopardus pardalis</i>)	USFWS E	In Arizona, this species has typically been observed in subtropical thorn forest, thornscrub, and dense, brushy thickets at elevations below 8,000 feet amsl and is often found in riparian bottomlands. The critical habitat components are probably dense cover near the ground and complete avoidance of open country. In Arizona, there are five recent confirmed sightings of ocelot in Cochise County (2009–2012), one near Globe (2010), and unconfirmed sightings in the Chiricahua and Peloncillo Mountains.	Unlikely to occur. This species is extremely rare. In addition, the project area does not contain dense, brush thickets or thornscrub suitable for this species. In addition, there are no wildlife movement corridors in the project area.	No effect.
Pima pineapple cactus (<i>Coryphantha scheeri</i> var. <i>robustispina</i>)	USFWS E	Found on alluvial bajadas in sand or rocky loam soils that are on slopes with less than 10% grade within desert grassland and Sonoran desertscrub at elevations between 2,800 and 3,500 feet amsl. In Arizona, found in the Santa Cruz and Altar Valleys and Patagonia Mountains.	Unlikely to occur. Although the project area is within the range for this species and there are occurrence records of this species within 2 miles of the project area (AZHGIS 2020), a 100% survey of the project area was completed by qualified biologists using currently accepted survey protocol and no PPC plants were observed.	No effect.
Sonora chub (<i>Gila ditaenia</i>)	USFWS T	Found at an elevation of approximately 3,900 feet amsl in perennial and intermittent small to medium-sized streams, where it prefers pools near cliffs, boulders, or other cover in stream channels. In Arizona, its range includes Sycamore Creek and Peñasco Canyon in the Atascosa Mountains and California Gulch in Santa Cruz County.	Unlikely to occur. This species is not known to occur in Pima County except at the Arizona-Sonora Desert Museum as an assurance population. Further, the project area lacks suitable permanent water sources required by this species.	No effect.
Sonoran pronghorn (<i>Antilocapra americana sonoriensis</i>)	USFWS E/NEP	Found in Sonoran desertscrub within broad, intermountain, alluvial valleys with creosote-bursage (<i>Ambrosia</i> spp.) and palo verde–mixed cacti associations at elevations between 2,000 and 4,000 feet amsl. The only extant U.S. population is in southwestern Arizona.	Unlikely to occur. The project area is distant from known populations and range of this species and does not occur in any known reintroduction area.	No effect.
Sonoyta mud turtle (<i>Kinosternon sonoriense longifemorale</i>)	USFWS E	In Arizona, found only in pond and stream habitat at Quitobaquito Springs in Organ Pipe Cactus National Monument. This subspecies of the more common Sonora mud turtle (<i>Kinosternon sonoriense sonoriense</i>) also occurs in Rio Sonoyta, Mexico.	Unlikely to occur. This species is only found Quitobaquito Springs, which is more than 120 miles west of the project area.	No effect.

Common Name (Species Name)	Status*	Range or Habitat Requirements	Potential for Occurrence in Project Area	Determination of Effect
Southwestern willow flycatcher (<i>Empidonax traillii extimus</i>)	USFWS E	Found in dense riparian habitats along streams, rivers, and other wetlands where cottonwood (<i>Populus</i> spp.), willow (<i>Salix</i> spp.), boxelder (<i>Acer negundo</i>), saltcedar (<i>Tamarix</i> spp.), Russian olive (<i>Elaeagnus angustifolia</i>), buttonbush (<i>Cephalanthus</i> spp.), and arrowweed (<i>Pluchea sericea</i>) are present. Nests are found in thickets of trees and shrubs, primarily those that are 13 to 23 feet tall, among dense, homogeneous foliage. Habitat occurs at elevations below 8,500 feet amsl.	Unlikely to occur. Habitats in the project area are not similar to those used by this species; there are no dense riparian habitats along streams, rivers, and other wetlands in the project area. There are no occurrence records within 2 miles of the project area (AZHGIS 2020). The nearest occurrence record for this species is along the San Pedro River in Pinal County (eBird 2020).	No effect.
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	USFWS T	Typically found in riparian woodland vegetation (cottonwood, willow, or saltcedar) at elevations below 6,600 feet amsl. Dense understory foliage appears to be an important factor in nest site selection. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks.	Unlikely to occur. There is no suitable riparian woodland habitat for this species within the project area, and there are no occurrence records in the project vicinity (AZHGIS 2020; eBird 2020). The nearest recent sighting for this species is at least 8 miles to the east in the Cienega Creek Natural Preserve (eBird 2020).	No effect.

*USFWS Status Definitions

E = Endangered. Endangered species are those in imminent jeopardy of extinction. The ESA specifically prohibits the take of a species listed as endangered. Take is defined by the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct.

NEP = Non-Essential Experimental Population. Experimental populations of a species designated under Section 10(j) of the ESA for which the USFWS, through the best available information, believes is not essential for the continued existence of the species. Regulatory restrictions are considerably reduced under a NEP designation.

PT = Proposed threatened. Proposed threatened species are those that are not currently federally protected under the ESA but are eligible to be listed as threatened under the ESA.

PE = Proposed endangered. Proposed endangered species are those that are not currently federally protected under the ESA but are eligible to be listed as endangered under the ESA.

T = Threatened. Threatened species are those in imminent jeopardy of becoming endangered. The ESA prohibits the take of a species listed as threatened under Section 4d of the ESA. Take is defined by the ESA as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to engage in any such conduct.

4 SONORAN DESERT TORTOISE

Sonoran desert tortoises are protected by Arizona state law. If Sonoran desert tortoises are observed within the project area, adherence to the AGFD’s Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects (Appendix C) would minimize the potential for impacts to this species.

5 MIGRATORY BIRDS

5.1 Migratory Birds

Most of the bird species observed on the project area are protected under the Migratory Bird Treaty Act (MBTA), which provides federal protection to all migratory birds, including nests and eggs. In order to relocate or alter any MBTA-protected nests, it would be necessary to obtain a permit from the USFWS to maintain compliance with the MBTA. However, Section 1 of the Interim Empty Nest Policy of the USFWS, Region 2, states that if the nest is completely inactive at the time of destruction or movement, a permit is not required in order to comply with the MBTA. If an active nest is observed before or during

construction, measures should be taken to protect the nest from destruction and to avoid a possible violation of the MBTA.

Bird species observed within the project area that are protected by the MBTA included mourning dove, black-chinned sparrow, Greater roadrunner , lesser nighthawk, house finch, turkey vulture, cactus wren, curve-billed thrasher, and raven .

Should any species covered under the MBTA be discovered nesting within the project area, avoidance of active nests would be required and may limit the timing of some ground-disturbing activities. Nesting generally occurs from March 1 through September 1. Measures to prevent birds from nesting, such as placement of exclusionary netting or removal of nesting habitat (e.g., blading and tree removal) can be implemented prior to the breeding season and is allowable under the MBTA.

6 LIMITATIONS AND WARRANTY

Within the limitations of schedule, budget, and scope of work, SWCA warrants that this study was conducted in accordance with accepted environmental science practices, including the technical guidelines, evaluation criteria, and species' listing status in effect at the time this evaluation was performed, as outlined in the species evaluation.

The results and conclusions of this report represent the best professional judgment of SWCA scientists and are based on information provided by the project proponent and on information obtained from agencies and other sources during the course of the study. No other warranty, expressed or implied, is made.

7 LITERATURE CITED

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APPENDIX A

Pima County USFWS List



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Arizona Ecological Services Field Office

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

Phone: (602) 242-0210 Fax: (602) 242-2513

<http://www.fws.gov/southwest/es/arizona/>

http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html

In Reply Refer To:

June 08, 2020

Consultation Code: 02EAAZ00-2020-SLI-0940

Event Code: 02EAAZ00-2020-E-02103

Project Name: Vail Station Modifications

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The Fish and Wildlife Service (Service) is providing this list under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). The list you have generated identifies threatened, endangered, proposed, and candidate species, and designated and proposed critical habitat, that may occur within one or more delineated United States Geological Survey 7.5 minute quadrangles with which your project polygon intersects. Each quadrangle covers, at minimum, 49 square miles. In some cases, a species does not currently occur within a quadrangle but occurs nearby and could be affected by a project. Please refer to the species information links found at:

http://www.fws.gov/southwest/es/arizona/Docs_Species.htm

<http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf> .

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to consult with us if their projects may affect federally listed species and/or designated critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, we recommend preparing a biological evaluation similar to a Biological Assessment to determine whether the project may

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If the Federal action agency determines that listed species or critical habitat may be affected by a federally funded, permitted or authorized activity, the agency must consult with us pursuant to 50 CFR 402. Note that a "may affect" determination includes effects that may not be adverse and that may be beneficial, insignificant, or discountable. You should request consultation with us even if only one individual or habitat segment may be affected. The effects analysis should include the entire action area, which often extends well outside the project boundary or "footprint." For example, projects that involve streams and river systems should consider downstream effects. If the Federal action agency determines that the action may jeopardize a proposed species or adversely modify proposed critical habitat, the agency must enter into a section 7 conference. The agency may choose to confer with us on an action that may affect proposed species or critical habitat.

Candidate species are those for which there is sufficient information to support a proposal for listing. Although candidate species have no legal protection under the Act, we recommend considering them in the planning process in the event they become proposed or listed prior to project completion. More information on the regulations (50 CFR 402) and procedures for section 7 consultation, including the role of permit or license applicants, can be found in our Endangered Species Consultation Handbook at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>.

We also advise you to consider species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668 et seq.). The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when authorized by the Service. The Eagle Act prohibits anyone, without a permit, from taking (including disturbing) eagles, and their parts, nests, or eggs. Currently 1026 species of birds are protected by the MBTA, including species such as the western burrowing owl (*Athene cunicularia hypugea*). Protected western burrowing owls are often found in urban areas and may use their nest/burrows year-round; destruction of the burrow may result in the unpermitted take of the owl or their eggs.

If a bald eagle (or golden eagle) nest occurs in or near the proposed project area, you should evaluate your project to determine whether it is likely to disturb or harm eagles. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles:

<https://www.fws.gov/migratorybirds/pdf/management/nationalbaldeaglenagementguidelines.pdf>

<https://www.fws.gov/birds/management/managed-species/eagle-management.php>.

The Division of Migratory Birds (505/248-7882) administers and issues permits under the MBTA and Eagle Act, while our office can provide guidance and Technical Assistance. For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following: <https://www.fws.gov/birds/policies-and-regulations/incidental-take.php>. Guidance for minimizing impacts to migratory birds for communication tower projects (e.g. cellular, digital television, radio, and emergency broadcast) can be found at:

<https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php>.

Activities that involve streams (including intermittent streams) and/or wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We recommend that you contact the Corps to determine their interest in proposed projects in these areas. For activities within a National Wildlife Refuge, we recommend that you contact refuge staff for specific information about refuge resources.

If your action is on tribal land or has implications for off-reservation tribal interests, we encourage you to contact the tribe(s) and the Bureau of Indian Affairs (BIA) to discuss potential tribal concerns, and to invite any affected tribe and the BIA to participate in the section 7 consultation. In keeping with our tribal trust responsibility, we will notify tribes that may be affected by proposed actions when section 7 consultation is initiated.

We also recommend you seek additional information and coordinate your project with the Arizona Game and Fish Department. Information on known species detections, special status species, and Arizona species of greatest conservation need, such as the western burrowing owl and the Sonoran desert tortoise (*Gopherus morafkai*) can be found by using their Online Environmental Review Tool, administered through the Heritage Data Management System and Project Evaluation Program <https://www.azgfd.com/Wildlife/HeritageFund/>.

For additional communications regarding this project, please refer to the consultation Tracking Number in the header of this letter. We appreciate your concern for threatened and endangered species. If we may be of further assistance, please contact our following offices for projects in these areas:

Northern Arizona: Flagstaff Office 928/556-2001

Central Arizona: Phoenix office 602/242-0210

Southern Arizona: Tucson Office 520/670-6144

Sincerely,

/s/ Jeff Humphrey Field Supervisor

Attachment

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Arizona Ecological Services Field Office

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

(602) 242-0210

Project Summary

Consultation Code: 02EAAZ00-2020-SLI-0940

Event Code: 02EAAZ00-2020-E-02103

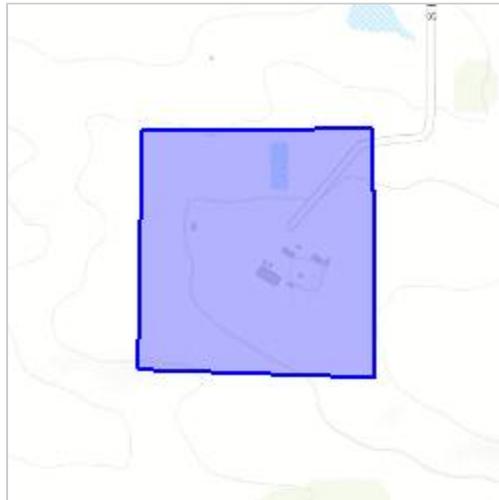
Project Name: Vail Station Modifications

Project Type: OIL OR GAS

Project Description: modify Vail station

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/32.0667472853153N110.81016953961577W>



Counties: Pima, AZ

Endangered Species Act Species

There is a total of 6 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Jaguar <i>Panthera onca</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3944	Endangered

Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northern Mexican Gartersnake <i>Thamnophis eques megalops</i> There is proposed critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7655	Threatened
Sonoyta Mud Turtle <i>Kinosternon sonoriense longifemorale</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7276	Endangered

Flowering Plants

NAME	STATUS
Pima Pineapple Cactus <i>Coryphantha scheeri var. robustispina</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4919	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

Arizona Ecological Services Field Office

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

Phone: (602) 242-0210 Fax: (602) 242-2513

<http://www.fws.gov/southwest/es/arizona/>

http://www.fws.gov/southwest/es/EndangeredSpecies_Main.html

In Reply Refer To:

June 08, 2020

Consultation Code: 02EAAZ00-2020-SLI-0941

Event Code: 02EAAZ00-2020-E-02105

Project Name: Vail Station Modifications

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The Fish and Wildlife Service (Service) is providing this list under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). The list you have generated identifies threatened, endangered, proposed, and candidate species, and designated and proposed critical habitat, that may occur within one or more delineated United States Geological Survey 7.5 minute quadrangles with which your project polygon intersects. Each quadrangle covers, at minimum, 49 square miles. In some cases, a species does not currently occur within a quadrangle but occurs nearby and could be affected by a project. Please refer to the species information links found at:

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<http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf> .

The purpose of the Act is to provide a means whereby threatened and endangered species and the habitats upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of Federal trust resources and to consult with us if their projects may affect federally listed species and/or designated critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, we recommend preparing a biological evaluation similar to a Biological Assessment to determine whether the project may

affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If the Federal action agency determines that listed species or critical habitat may be affected by a federally funded, permitted or authorized activity, the agency must consult with us pursuant to 50 CFR 402. Note that a "may affect" determination includes effects that may not be adverse and that may be beneficial, insignificant, or discountable. You should request consultation with us even if only one individual or habitat segment may be affected. The effects analysis should include the entire action area, which often extends well outside the project boundary or "footprint." For example, projects that involve streams and river systems should consider downstream effects. If the Federal action agency determines that the action may jeopardize a proposed species or adversely modify proposed critical habitat, the agency must enter into a section 7 conference. The agency may choose to confer with us on an action that may affect proposed species or critical habitat.

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<https://www.fws.gov/birds/management/managed-species/eagle-management.php>.

The Division of Migratory Birds (505/248-7882) administers and issues permits under the MBTA and Eagle Act, while our office can provide guidance and Technical Assistance. For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following: <https://www.fws.gov/birds/policies-and-regulations/incidental-take.php>. Guidance for minimizing impacts to migratory birds for communication tower projects (e.g. cellular, digital television, radio, and emergency broadcast) can be found at:

<https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds/collisions/communication-towers.php>.

Activities that involve streams (including intermittent streams) and/or wetlands are regulated by the U.S. Army Corps of Engineers (Corps). We recommend that you contact the Corps to determine their interest in proposed projects in these areas. For activities within a National Wildlife Refuge, we recommend that you contact refuge staff for specific information about refuge resources.

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We also recommend you seek additional information and coordinate your project with the Arizona Game and Fish Department. Information on known species detections, special status species, and Arizona species of greatest conservation need, such as the western burrowing owl and the Sonoran desert tortoise (*Gopherus morafkai*) can be found by using their Online Environmental Review Tool, administered through the Heritage Data Management System and Project Evaluation Program <https://www.azgfd.com/Wildlife/HeritageFund/>.

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Central Arizona: Phoenix office 602/242-0210

Southern Arizona: Tucson Office 520/670-6144

Sincerely,

/s/ Jeff Humphrey Field Supervisor

Attachment

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This species list is provided by:

Arizona Ecological Services Field Office

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

(602) 242-0210

Project Summary

Consultation Code: 02EAAZ00-2020-SLI-0941

Event Code: 02EAAZ00-2020-E-02105

Project Name: Vail Station Modifications

Project Type: OIL OR GAS

Project Description: modify Vail Station

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/31.970642541678572N111.78236885587899W>



Counties: Pima, AZ

Endangered Species Act Species

There is a total of 22 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Jaguar <i>Panthera onca</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3944	Endangered
Ocelot <i>Leopardus (=Felis) pardalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4474	Endangered
Sonoran Pronghorn <i>Antilocapra americana sonoriensis</i> Population: U.S.A. (AZ), Mexico No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4750	Experimental Population, Non- Essential
Sonoran Pronghorn <i>Antilocapra americana sonoriensis</i> Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4750	Endangered

Birds

NAME	STATUS
California Least Tern <i>Sterna antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Masked Bobwhite (quail) <i>Colinus virginianus ridgwayi</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3484	Endangered
Mexican Spotted Owl <i>Strix occidentalis lucida</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196 Species survey guidelines: https://ecos.fws.gov/ipac/guideline/survey/population/129/office/22410.pdf	Threatened
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is proposed critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Northern Mexican Gartersnake <i>Thamnophis eques megalops</i> There is proposed critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7655	Threatened
Sonoyta Mud Turtle <i>Kinosternon sonoriense longifemorale</i> There is proposed critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7276	Endangered

Amphibians

NAME	STATUS
Chiricahua Leopard Frog <i>Rana chiricahuensis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1516	Threatened

Fishes

NAME	STATUS
Desert Pupfish <i>Cyprinodon macularius</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7003	Endangered
Gila Chub <i>Gila intermedia</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/51	Endangered
Gila Topminnow (incl. Yaqui) <i>Poeciliopsis occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1116	Endangered
Sonora Chub <i>Gila ditaenia</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1394	Threatened

Flowering Plants

NAME	STATUS
Acuna Cactus <i>Echinomastus erectocentrus</i> var. <i>acunensis</i> There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5785	Endangered
Canelo Hills Ladies-tresses <i>Spiranthes delitescens</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8098	Endangered
Huachuca Water-umbel <i>Lilaeopsis schaffneriana</i> var. <i>recurva</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1201	Endangered
Kearney's Blue-star <i>Amsonia kearneyana</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/7485	Endangered
Nichol's Turk's Head Cactus <i>Echinocactus horizonthalonius</i> var. <i>nicholii</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/5343	Endangered
Pima Pineapple Cactus <i>Coryphantha scheeri</i> var. <i>robustispina</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4919	Endangered

Critical habitats

There are 10 critical habitats wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Acuna Cactus <i>Echinomastus erectocentrus</i> var. <i>acunensis</i> https://ecos.fws.gov/ecp/species/5785#crithab	Final
Beardless Chinch Weed <i>Pectis imberbis</i> For information on why this critical habitat appears for your project, even though Beardless Chinch Weed is not on the list of potentially affected species at this location, contact the local field office. https://ecos.fws.gov/ecp/species/1348#crithab	Proposed
Chiricahua Leopard Frog <i>Rana chiricahuensis</i> https://ecos.fws.gov/ecp/species/1516#crithab	Final
Desert Pupfish <i>Cyprinodon macularius</i> https://ecos.fws.gov/ecp/species/7003#crithab	Final
Gila Chub <i>Gila intermedia</i> https://ecos.fws.gov/ecp/species/51#crithab	Final
Jaguar <i>Panthera onca</i> https://ecos.fws.gov/ecp/species/3944#crithab	Final
Mexican Spotted Owl <i>Strix occidentalis lucida</i> https://ecos.fws.gov/ecp/species/8196#crithab	Final
Northern Mexican Gartersnake <i>Thamnophis eques megalops</i> https://ecos.fws.gov/ecp/species/7655#crithab	Proposed
Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i> https://ecos.fws.gov/ecp/species/6749#crithab	Final
Yellow-billed Cuckoo <i>Coccyzus americanus</i> https://ecos.fws.gov/ecp/species/3911#crithab	Proposed

APPENDIX B

AZHGIS Environmental Review Tool Report

Arizona Environmental Online Review Tool Report



Arizona Game and Fish Department Mission

To conserve Arizona's diverse wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations.

Project Name:

Vail Station Modifications

Project Description:

Modify Vail Compressor Station

Project Type:

Energy Storage/Production/Transfer, Energy Transfer, pipeline (gas/oil, maintenance)

Contact Person:

Russell Waldron

Organization:

SWCA

On Behalf Of:

PRIVATE

Project ID:

HGIS-11338

Please review the entire report for project type and/or species recommendations for the location information entered. Please retain a copy for future reference.

Disclaimer:

1. This Environmental Review is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
2. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. This review is also not intended to replace environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the Departments review of site-specific projects.
3. The Departments Heritage Data Management System (HDMS) data is not intended to include potential distribution of special status species. Arizona is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. HDMS data contains information about species occurrences that have actually been reported to the Department. Not all of Arizona has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.
4. HabiMap Arizona data, specifically Species of Greatest Conservation Need (SGCN) under our State Wildlife Action Plan (SWAP) and Species of Economic and Recreational Importance (SERI), represent potential species distribution models for the State of Arizona which are subject to ongoing change, modification and refinement. The status of a wildlife resource can change quickly, and the availability of new data will necessitate a refined assessment.

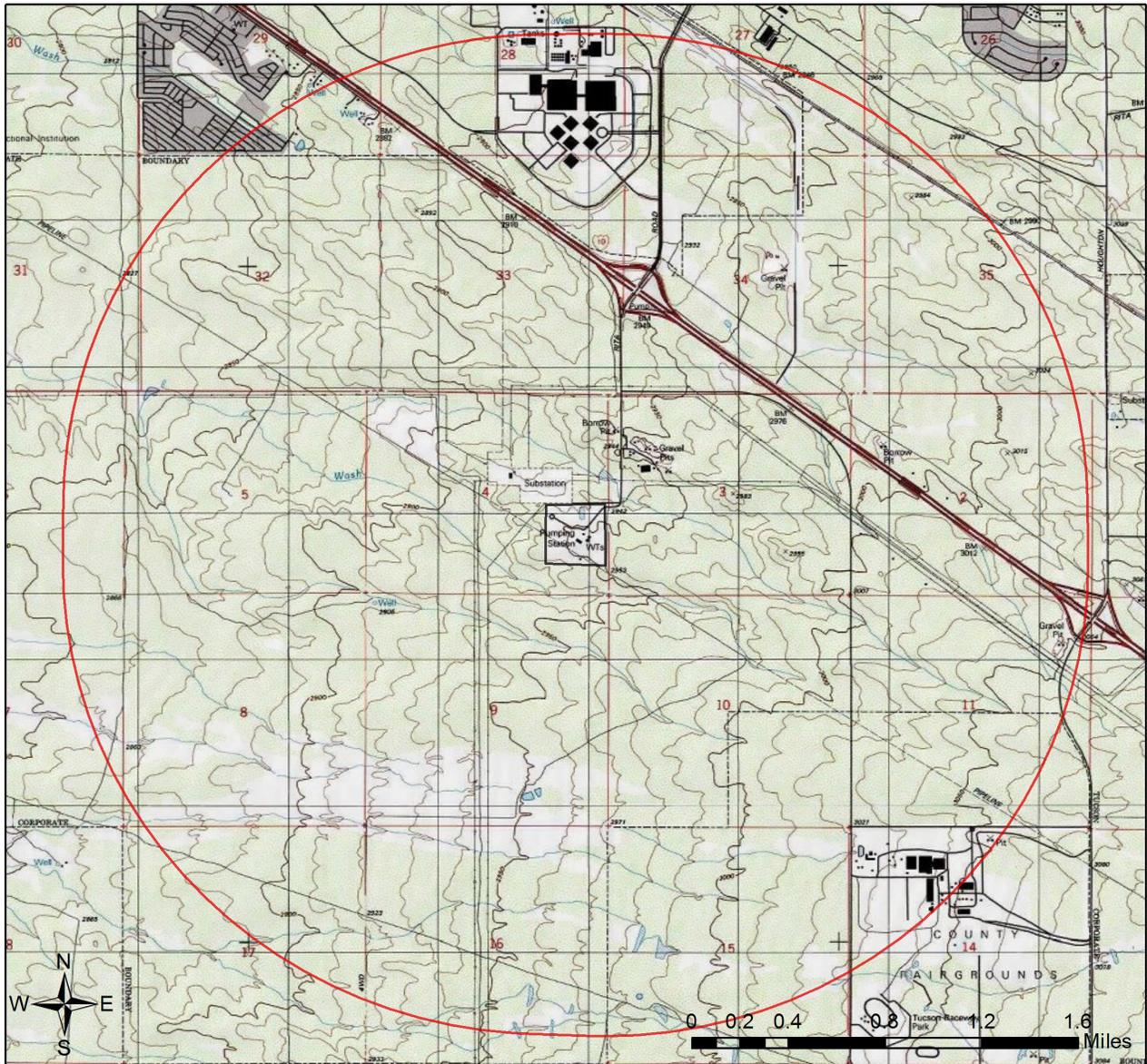
Locations Accuracy Disclaimer:

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Recommendations Disclaimer:

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:
Project Evaluation Program, Habitat Branch
Arizona Game and Fish Department
5000 West Carefree Highway
Phoenix, Arizona 85086-5000
Phone Number: (623) 236-7600
Fax Number: (623) 236-7366
Or
PEP@azgfd.gov
6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies

Vail Station Modifications USA Topo Basemap With Locator Map



-  Project Boundary
-  Buffered Project Boundary

Project Size (acres): 40.27

Lat/Long (DD): 32.0668 / -110.8102

County(s): Pima

AGFD Region(s): Tucson

Township/Range(s): T16S, R15E

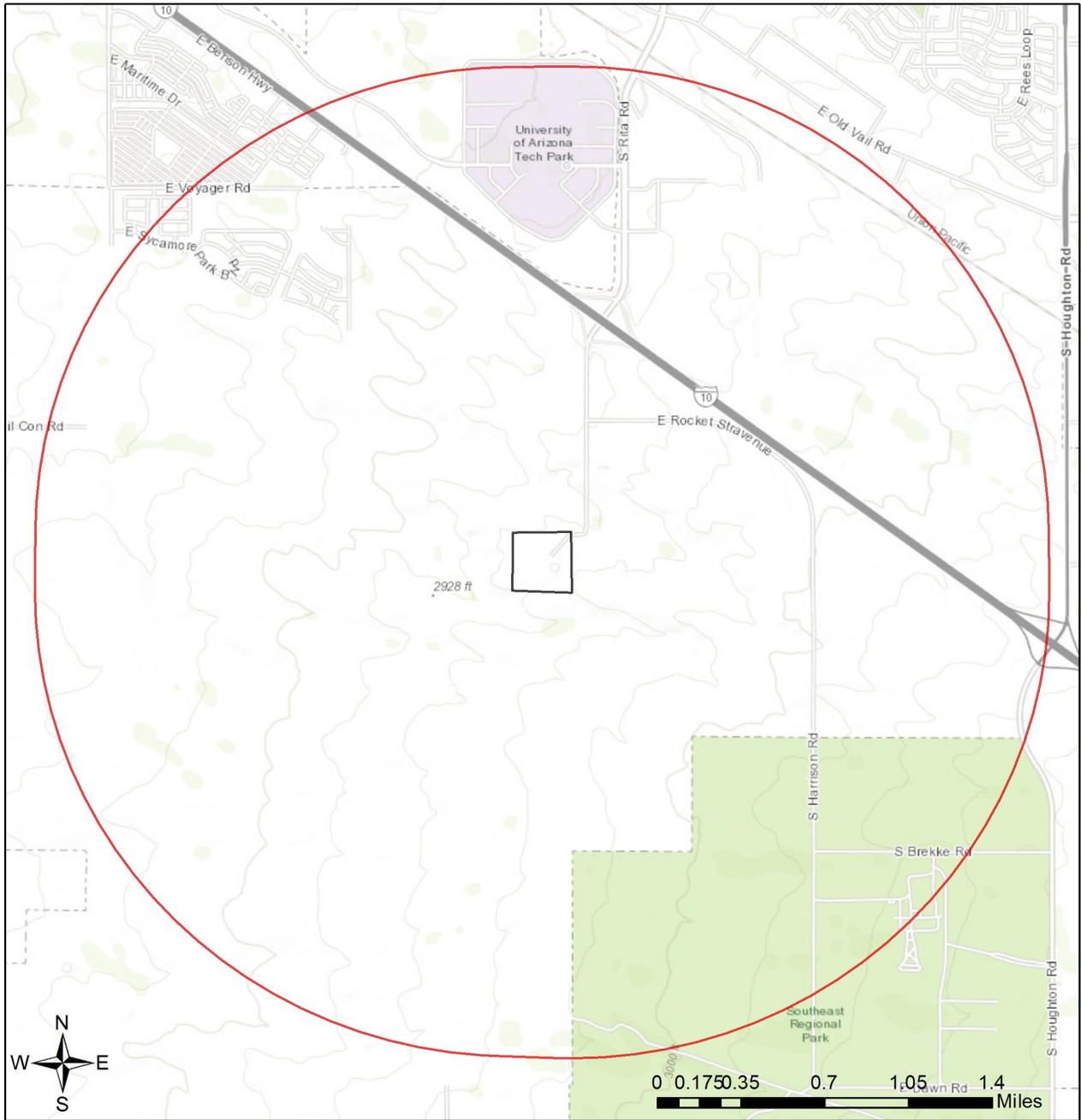
USGS Quad(s): TUCSON SE

Service Layer Credits: Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap



Vail Station Modifications

Web Map As Submitted By User

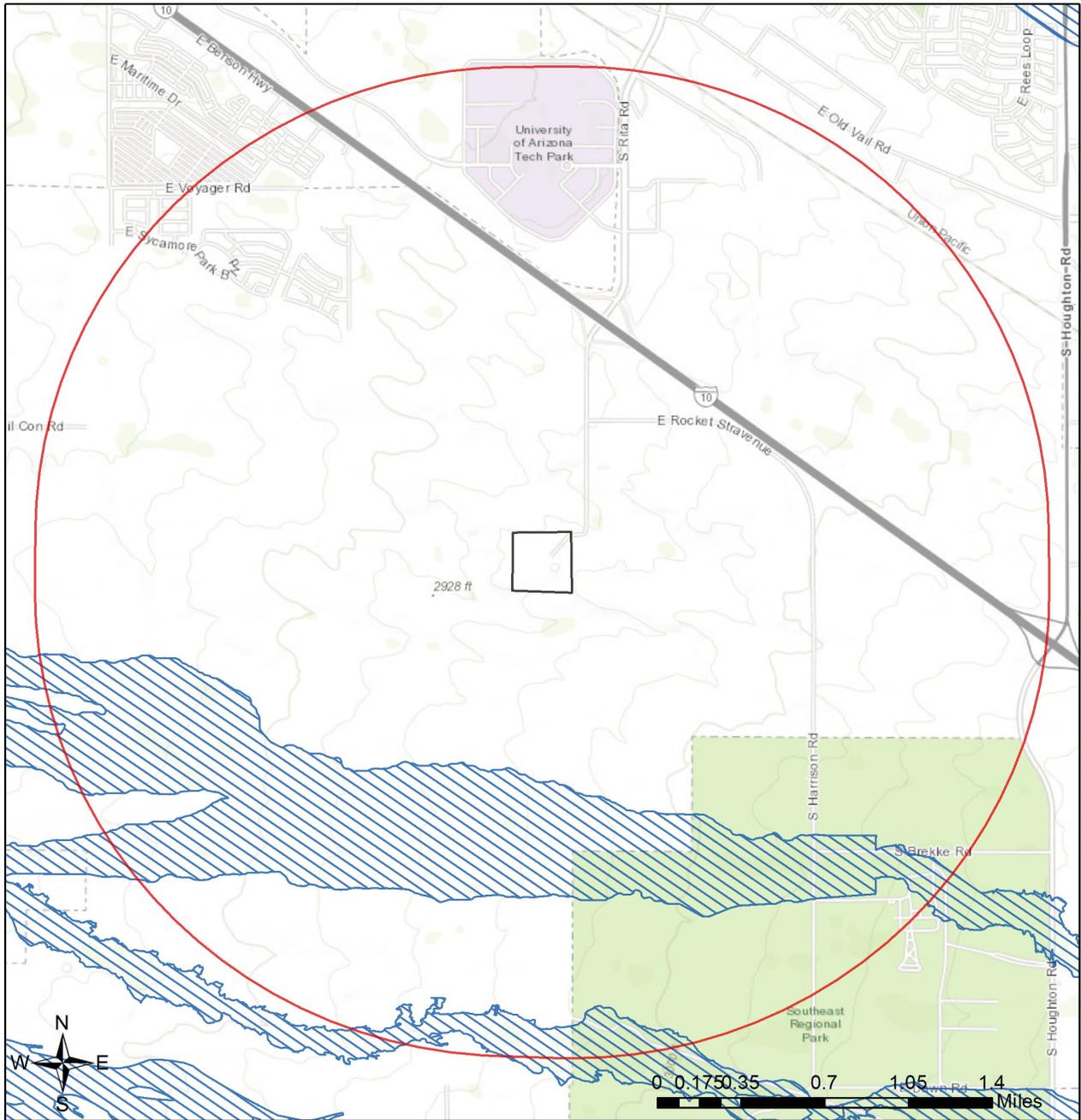


- Project Boundary
- Buffered Project Boundary

Project Size (acres): 40.27
Lat/Long (DD): 32.0668 / -110.8102
County(s): Pima
AGFD Region(s): Tucson
Township/Range(s): T16S, R15E
USGS Quad(s): TUCSON SE

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Vail Station Modifications Important Areas



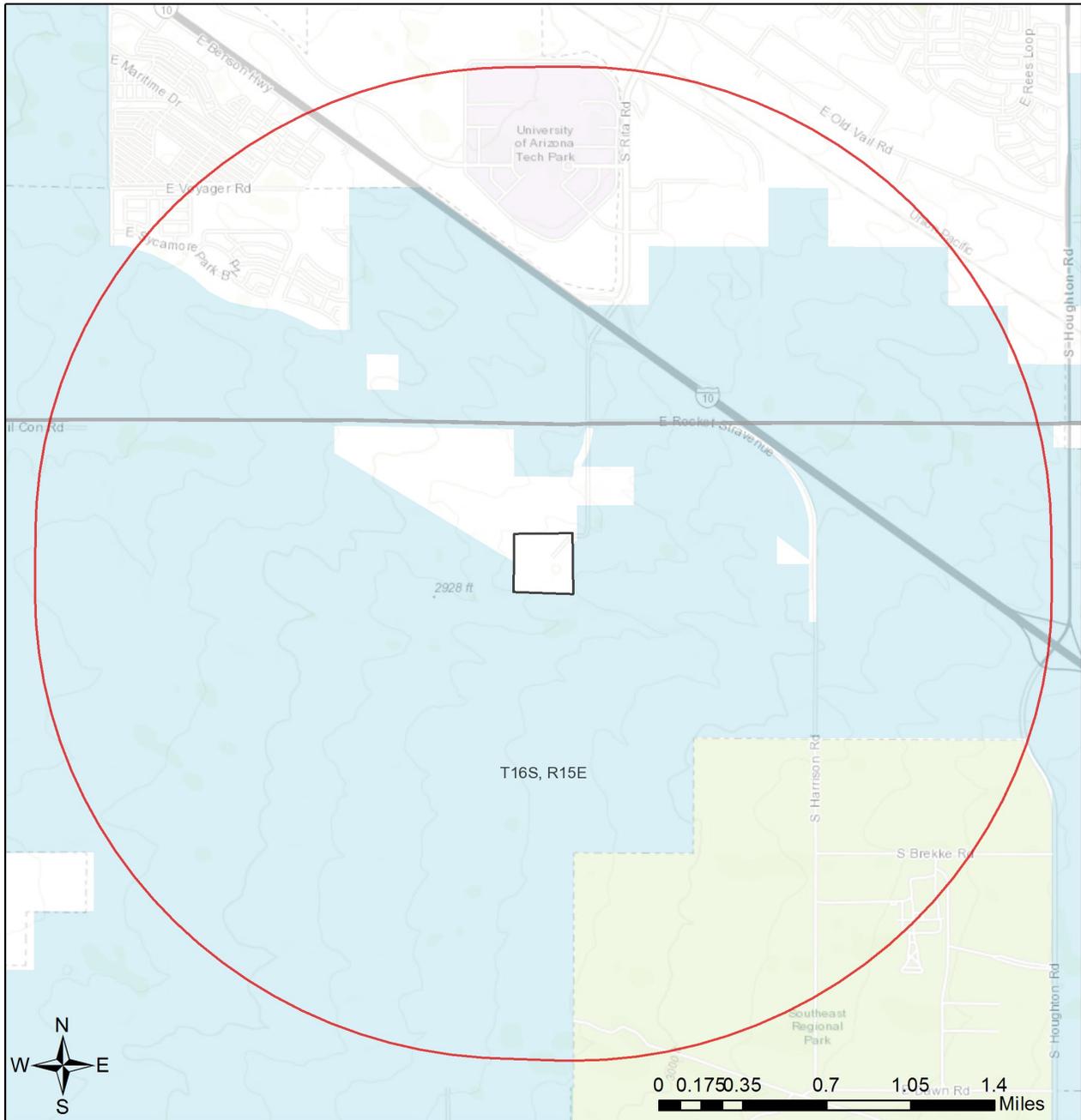
- | | |
|--------------------------------------|--|
| Project Boundary | Wildlife Movement Area - Riparian/Wash |
| Buffered Project Boundary | Wildlife Connectivity |
| County Stakeholder Assessment | Important Connectivity Zones |
| Wildlife Crossing Area | Pinal County Riparian |
| Wildlife Movement Area - Diffuse | Critical Habitat |
| Wildlife Movement Area - Landscape | Important Bird Areas |

Project Size (acres): 40.27
 Lat/Long (DD): 32.0668 / -110.8102
 County(s): Pima
 AGFD Region(s): Tucson
 Township/Range(s): T16S, R15E
 USGS Quad(s): TUCSON SE

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Vail Station Modifications

Township/Ranges and Land Ownership



- | | |
|---------------------------|------------------------|
| Project Boundary | Military |
| Buffered Project Boundary | Mixed/Other |
| Township/Ranges | National Park/Mon. |
| Land Ownership | |
| AZ Game & Fish Dept. | State & Regional Parks |
| BLM | State Trust |
| BOR | US Forest Service |
| Indian Res. | Wildlife Area/Refuge |

Project Size (acres): 40.27
 Lat/Long (DD): 32.0668 / -110.8102
 County(s): Pima
 AGFD Region(s): Tucson
 Township/Range(s): T16S, R15E
 USGS Quad(s): TUCSON SE

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

Special Status Species Documented within 2 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Coryphantha scheeri var. robustispina	Pima Pineapple Cactus	LE			HS	
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1A
Myotis velifer	Cave Myotis	SC		S		1B
Notiosorex cockrumi	Cockrum's Desert Shrew					1B

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/statusdefinitions/>

No Special Areas Detected

No special areas were detected within the project vicinity.

Species of Greatest Conservation Need Predicted within the Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Aix sponsa	Wood Duck					1B
Ammospermophilus harrisi	Harris' Antelope Squirrel					1B
Anthus spragueii	Sprague's Pipit	SC				1A
Anurostomus ridgwayi	Buff-collared Nightjar		S			1B
Aspidoscelis stictogramma	Giant Spotted Whiptail	SC	S			1B
Aspidoscelis xanthonota	Red-backed Whiptail	SC	S			1B
Athene cunicularia hypugaea	Western Burrowing Owl	SC	S	S		1B
Buteo swainsoni	Swainson's Hawk					1C
Calypte costae	Costa's Hummingbird					1C
Chilomeniscus stramineus	Variable Sandsnake					1B
Colaptes chrysoides	Gilded Flicker			S		1B
Coluber bilineatus	Sonoran Whipsnake					1B
Corynorhinus townsendii pallescens	Pale Townsend's Big-eared Bat	SC	S	S		1B
Crotalus tigris	Tiger Rattlesnake					1B
Cynanthus latirostris	Broad-billed Hummingbird		S			1B
Dipodomys spectabilis	Banner-tailed Kangaroo Rat			S		1B
Euderma maculatum	Spotted Bat	SC	S	S		1B
Eumops perotis californicus	Greater Western Bonneted Bat	SC		S		1B
Falco peregrinus anatum	American Peregrine Falcon	SC	S	S		1A
Glaucidium brasilianum cactorum	Cactus Ferruginous Pygmy-owl	SC	S	S		1B
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1A
Heloderma suspectum	Gila Monster					1A
Hypsiglena sp. nov.	Hooded Nightsnake					1B
Incilius alvarius	Sonoran Desert Toad					1B
Lasiurus xanthinus	Western Yellow Bat		S			1B
Leopardus pardalis	Ocelot	LE				1A
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A

Species of Greatest Conservation Need Predicted within the Project Vicinity based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Lepus alleni	Antelope Jackrabbit					1B
Macrotus californicus	California Leaf-nosed Bat	SC		S		1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolni	Lincoln's Sparrow					1B
Melospiza aberti	Abert's Towhee		S			1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Panthera onca	Jaguar	LE				1A
Peucaea carpalis	Rufous-winged Sparrow					1B
Phrynosoma solare	Regal Horned Lizard					1B
Phyllorhynchus browni	Saddled Leaf-nosed Snake					1B
Progne subis hesperia	Desert Purple Martin			S		1B
Setophaga petechia	Yellow Warbler					1B
Sphyrapicus nuchalis	Red-naped Sapsucker					1C
Spizella breweri	Brewer's Sparrow					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

Species of Economic and Recreation Importance Predicted within the Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Odocoileus hemionus	Mule Deer					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaida asiatica	White-winged Dove					
Zenaida macroura	Mourning Dove					

Project Type: Energy Storage/Production/Transfer, Energy Transfer, pipeline (gas/oil, maintenance)

Project Type Recommendations:

Minimize potential introduction or spread of exotic invasive species. Invasive species can be plants, animals (exotic snails), and other organisms (e.g., microbes), which may cause alteration to ecological functions or compete with or prey upon native species and can cause social impacts (e.g., livestock forage reduction, increase wildfire risk). The terms noxious weed or invasive plants are often used interchangeably. Precautions should be taken to wash all equipment utilized in the project activities before leaving the site. Arizona has noxious weed regulations (Arizona Revised Statutes, Rules R3-4-244 and R3-4-245). See Arizona Department of Agriculture website for restricted plants, <https://agriculture.az.gov/>. Additionally, the U.S. Department of Agriculture has information regarding pest and invasive plant control methods including: pesticide, herbicide, biological control agents, and mechanical control, <https://www.nrcs.usda.gov/wps/portal/nrcs/detailfull/national/water/quality/?cid=stelprdb1044769> The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information <https://www.azgfd.com/hunting/regulations>.

Follow manufacturer's recommended application guidelines for all chemical treatments. The U.S. Fish and Wildlife Service, Region 2, Environmental Contaminants Program has a reference document that serves as their regional pesticide recommendations for protecting wildlife and fisheries resources, titled "Recommended Protection Measures for Pesticide Applications in Region 2 of the USFWS", http://www.fws.gov/southwest/es/arizona/Documents/ECReports/RPMPA_2007.pdf. The Department recommends that direct or indirect impacts to sensitive species and their forage base from the application of chemical pesticides or herbicides be considered carefully.

Minimization and mitigation of impacts to wildlife and fish species due to changes in water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods) should be evaluated. Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing of the project in order to minimize impacts to spawning fish and other aquatic species (include spawning seasons), and to reduce spread of exotic invasive species. We recommend early direct coordination with Project Evaluation Program for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

Based on the project type entered, coordination with the Environmental Protection Agency may be required (<http://www.epa.gov/>).

Trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herptefauna (snakes, lizards, tortoise) from entering ditches.

Vegetation restoration projects (including treatments of invasive or exotic species) should have a completed site-evaluation plan (identifying environmental conditions necessary to re-establish native vegetation), a revegetation plan (species, density, method of establishment), a short and long-term monitoring plan, including adaptive management guidelines to address needs for replacement vegetation.

Project Location and/or Species Recommendations:

HDMS records indicate that one or more native plants listed on the **Arizona Native Plant Law and Antiquities Act** have been documented within the vicinity of your project area. Please contact:

Arizona Department of Agriculture
1688 W Adams St.
Phoenix, AZ 85007
Phone: 602.542.4373

<https://agriculture.az.gov/sites/default/files/Native%20Plant%20Rules%20-%20AZ%20Dept%20of%20Ag.pdf> starts on page 44

HDMS records indicate that one or more **Listed, Proposed, or Candidate** species or **Critical Habitat** (Designated or Proposed) have been documented in the vicinity of your project. The Endangered Species Act (ESA) gives the US Fish and Wildlife Service (USFWS) regulatory authority over all federally listed species. Please contact USFWS Ecological Services Offices at <http://www.fws.gov/southwest/es/arizona/> or:

Phoenix Main Office

9828 North 31st Avenue #C3
Phoenix, AZ 85051-2517
Phone: 602-242-0210
Fax: 602-242-2513

Tucson Sub-Office

201 N. Bonita Suite 141
Tucson, AZ 85745
Phone: 520-670-6144
Fax: 520-670-6155

Flagstaff Sub-Office

SW Forest Science Complex
2500 S. Pine Knoll Dr.
Flagstaff, AZ 86001
Phone: 928-556-2157
Fax: 928-556-2121

HDMS records indicate that **Sonoran Desert Tortoise** have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at: <https://www.azgfd.com/wildlife/nongamemanagement/tortoise/>



APPENDIX C

Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects

GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES
ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department
Revised September 22, 2014

The Arizona Game and Fish Department (Department) has developed the following guidelines to reduce potential impacts to desert tortoises, and to promote the continued existence of tortoises throughout the state. These guidelines apply to short-term and/or small-scale projects, depending on the number of affected tortoises and specific type of project.

The Sonoran desert tortoise occurs south and east of the Colorado River. Tortoises encountered in the open should be moved out of harm's way to adjacent appropriate habitat. If an occupied burrow is determined to be in jeopardy of destruction, the tortoise should be relocated to the nearest appropriate alternate burrow or other appropriate shelter, as determined by a qualified biologist. Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim. Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade. Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises. Tortoises must not be moved if the ambient air temperature exceeds 40° Celsius (105° Fahrenheit) unless an alternate burrow is available or the tortoise is in imminent danger.

A tortoise may be moved up to one-half mile, but no further than necessary from its original location. If a release site or alternate burrow is unavailable within this distance, and ambient air temperature exceeds 40° Celsius (105° Fahrenheit), contact the Department for guidance. Tortoises salvaged from projects which result in substantial permanent habitat loss (e.g. housing and highway projects), or those requiring removal during long-term (longer than one week) construction projects, may be placed in the Department's tortoise adoption program. *Managers of projects likely to affect desert tortoises should obtain a [scientific collecting license](#) from the Department to facilitate handling or temporary possession of tortoises.* Likewise, if large numbers of tortoises (>5) are expected to be displaced by a project, the project manager should contact the Department for guidance and/or assistance.

Please keep in mind the following points:

- Use the Department's [Environmental On-Line Review Tool Department](#) during the planning stages of any project that may affect desert tortoise habitat.
- Unless specifically authorized by the Department, or as noted above, project personnel should avoid disturbing any tortoise.
- Take is prohibited by state law.
- These guidelines do not apply to Mojave desert tortoises (north and west of the Colorado River). Mojave desert tortoises are listed as threatened under the Endangered Species Act, administered by the U.S. Fish and Wildlife Service.
- These guidelines are subject to revision at the discretion of the Department.