

**EXHIBIT D
BIOLOGICAL RESOURCES**

In accordance with Arizona Administrative Code R14-3-219, the Applicant provides the following information:

List the fish, wildlife, plant life and associated forms of life in the vicinity of the proposed site or route and describe the effects, if any, the proposed facilities will have thereon.

Introduction

To identify vegetation and wildlife that may occur at or in the vicinity of the proposed South Mountain Transmission Project (SMT Project or Project), KP Environmental, Inc. (KPE) reviewed the following sources:

- Topographical and aerial maps and land use, land cover, and elevation data.
- The U.S. Fish and Wildlife Service (USFWS) species list for the Project area obtained from the USFWS online Information for Planning and Consultation (IPaC) system (**Exhibit C-1**) (USFWS, 2024).
- Species information obtained from the USFWS Environmental Conservation Online System, the USFWS Arizona Ecological Services document library, the Arizona Game and Fish Department (AGFD) Online Environmental Review Tool (**Exhibit C-2**) and special-status species listed in the AGFD Heritage Data Management System (HDMS) within Maricopa County (AGFD, 2006; 2024a; 2024b).

In addition, a habitat assessment survey was conducted within the Project area for biological resources:

- On May 21, 2024, a KPE biologist with knowledge of the biology of flora and fauna of the region completed an on-ground habitat assessment survey of the Project area.

Results

Exhibit D-1 contains **Tables D-1, D-2, D-3, and D-4** which include lists of common plant life, mammals, birds, reptiles, and amphibians potentially present in Maricopa County and within the vicinity of the Project.

The habitat assessment survey determined that overall habitat quality, plant diversity, and density are very low. The entire Project area is clear of native vegetation and natural habitat. The surrounding area consists of primarily urban housing development, commercial areas, agricultural operations, and bare or disturbed land that is being developed. There were no burrows, nests or nest-building behavior identified during the survey, nor were there any special-status species observed during the field habitat assessment.

In addition, the Project is located in an area with active residential, commercial, and agricultural development with the agricultural transitioning into industrial development. No protected areas, or any areas of biological wealth were noted within the Project area.

Vegetation

The proposed Project area is located within the Lower Colorado River Valley subdivision of the Sonoran Desertscrub Biotic Community (Brown, 1994) with an elevational range of approximately 985 to 1,015 feet above mean sea level (amsl). The Project area immediately borders the South Mountain Loop 202 Freeway (Loop 202). Land uses in the Project area include residential, commercial, and agricultural developments. The Laveen Area Conveyance Channel (LACC), a concrete-lined aquatic conveyance channel, runs perpendicular to the northern portion of the proposed transmission right-of-way (ROW) with ornamental and disturbed grass along the channel in some areas. The vegetation communities found within the area are described below. **Table D-1** in **Exhibit D-1** lists some of the native vegetation that could be found within the Project area and Maricopa County generally.

Riparian Habitat

There is a small corridor of historically riparian habitat mapped along the southern terminus of the Project area (see **Exhibit C-2**); however, the entire portion of the mapped riparian habitat in the vicinity of the Project area is now occupied by agricultural operations. There is riparian habitat located intermittently along the Salt River which runs in a southwest direction. The Salt River – Saguaro Lake to Gila River Riparian Movement Area is located approximately 0.7 mile north of the northernmost point of the Project area. The Gila River Landscape Movement Area and Estrella Mountain – South Mountain Landscape Movement Area are located approximately 2.3 miles southeast and approximately three miles southeast of the southernmost point on the Project routes, respectively (AGFD, 2012). There is no riparian habitat or native vegetation within the Project area. At the time of the field assessment, no native vegetation was recorded in the Project area, and no broadleaf deciduous riparian vegetation communities (i.e., communities containing willow [*Salix* sp.], cottonwood [*Populus* sp.], etc.) were observed.

Disturbed Habitat

The Project area contains graded areas and several paved and dirt roadways, including Loop 202 which runs parallel to several of the proposed 230 kilovolt (kV) transmission line routes. Residential developments include new construction of housing developments, and roadside landscaping exist within and adjacent to the Project south of West Dobbins Road, north of West Baseline Road, and south of the LACC. There are also commercial businesses and recreational facilities in the areas east of the northern portion of the Project. Non-native species observed in proximity to these areas included stinknet (*Oncosiphon pilulifer*), Russian thistle (*Salsola tragus*), sandbur (*Cenchrus* sp.), Saharan mustard (*Brassica tournefortii*), tamarisk (*Tamarix* sp.), prickly lettuce (*Lactuca serriola*) and acacia (*Acacia* sp.). Saharan mustard, stinknet, sandbur, and tamarisk are listed as Arizona noxious weeds.

Agricultural Habitat

The Project area contains some agricultural fields that are transitioning to industrial along the proposed 230 kV transmission line routes west of Loop 202 extending from West Southern Avenue, located 0.5 mile north of the northern Project limit, to West Elliot Road, located 0.5 mile south of the southern Project limit. Some agricultural plots observed were either currently active or served as vehicle/equipment storage areas overgrown with non-native vegetation.

Wildlife

Wildlife resources within the Project area are predominantly associated with agricultural, disturbed, or landscaped habitats. Species occurrence, abundance, and distribution are strongly influenced by the topography and habitat types. Wildlife species that were observed during the field survey include common raven (*Corvus corax*), great-tailed grackle (*Quiscalus mexicanus*), and greater roadrunner (*Geococcyx californianus*). **Tables D-2, D-3, and D-4 in Exhibit D-1** present lists of common mammals, birds, reptiles, and amphibians that may occur or that have been observed within Maricopa County in habitats similar to those in the Project area. Some of the species are also included in **Exhibit C** as special-status species. Although there is a potential for these species to occur, field verification and lack of native vegetation or suitable habitat within the Project area shows that it is unlikely.

Mammals

Most mammalian species likely to be present are small, inconspicuous, largely nocturnal species of rodents and bats. Desert-adapted rodents include pocket mice and kangaroo rats. Additionally, several species of bats could be present within the Project area. Medium-sized mammals that could be found within the Project area include the desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Felis rufus*), and badger (*Taxidea taxus*). Large mammals are not expected to occur. **Table D-2 in Exhibit D-1** presents a more comprehensive list of mammalian species that may occur within the Project area and Maricopa County.

Birds

Most bird species likely to be present are associated with agricultural land use, urbanized land uses, and disturbed areas. Waterfowl and other birds may be attracted to the LACC that runs perpendicular to the Project area with ornamental and disturbed grass along the channel in some areas; however, it is unlikely that the portion of the LACC within the Project area would be used for nesting, roosting, foraging, or reproduction. The majority of the birds present during any given season are small songbirds, doves, waterfowl, and raptors, such as the red-tailed hawk (*Buteo jamaicensis*) (**Table D-3 in Exhibit D-1**). Western burrowing owls (*Athene cunicularia hypugaea*) were not observed during the field survey but may occur within the Project area as they have been known to nest in burrows located along ditches and roads in agricultural areas and along the LACC.

Amphibians and Reptiles

Relatively undisturbed desert habitats represent the best habitat for reptiles, although some species could be found in disturbed areas. The only water resource within the Project area is the LACC that runs perpendicular to the northern portion of the proposed transmission ROW; therefore, amphibians would not be expected to be present in the Project area. **Table D-4** in **Exhibit D-1** provides a list of amphibian and reptilian species that could be present in the vicinity of the Project area and in Maricopa County.

Invasive Weed Species and Noxious Weeds

Non-native and weed species typically dominate disturbed and unmaintained areas. Non-native species observed in proximity to these areas included stinknet (*Oncosiphon pilulifer*), Russian thistle (*Salsola tragus*), sandbur (*Cenchrus* sp.), Saharan mustard (*Brassica tournefortii*), tamarisk (*Tamarix* sp.), prickly lettuce (*Lactuca serriola*) and acacia (*Acacia* sp.). Saharan mustard, stinknet, sandbur, and tamarisk are listed as Arizona noxious weeds.

Summary of Potential Effects

The following sections address the potential effects from development of the Project.

Vegetation

The Project does not overlap with any areas of biological wealth. Residential, commercial, and agricultural development, along with Loop 202 and other local roads and infrastructure, have converted and degraded areas of natural vegetation (wildlife habitat). The Project would permanently impact a very small area of previously degraded riparian habitat, and the majority of the Project-related impacts would be temporary and short-term in nature. No wildlife corridors, wetlands, riparian areas, or Important Bird Areas (IBAs) are located within or adjacent to the Project. The Project would permanently impact only areas associated with pole locations and the access road. With implementation of SRP's proposed measures described in **Exhibit C, Table C-3**, and **Exhibit D** there would be no change in species composition and there would only be a small impact to vegetation present at the actual pole locations as a result of construction and operation. Therefore, the proposed 230 kV transmission lines would have minor impacts on vegetation communities within the Project area.

Wildlife

Potential impacts to special-status species related to the construction of the Project could include displacement of individuals from the construction area, possible abandonment of nests due to construction activities, injury or death from vehicle strikes during construction, collision or electrocution risk with power lines, temporary impacts on foraging behaviors in adjacent habitat, and noise-related disturbance. Project work areas are expected to be very small, and vehicle speed would be limited to 15 miles per hour (mph), reducing the potential for injury or death to special status-species during construction due to vehicle strikes.

Mammals

Project construction activities could cause death or injury to terrestrial mammals that may not be able to flee from heavy equipment or vehicular traffic, with a higher likelihood of these impacts for individuals of species that are small, nocturnal, or fossorial. Project-related construction activities could cause behavior changes, as individuals would be expected to flee from an increase of noise, vibration, and human presence within the Project area, however, construction activities would be short-term and temporary. The loss and degradation of mammal habitat from short- and long-term Project activities would be negligible as the proposed Project area is relatively small, contains no native vegetation or suitable habitat, and is entirely previously disturbed. Similarly, because the Project area is largely disturbed and contains agricultural, residential, and commercial developments and associated roads (including Loop 202), any loss of vegetation from construction activities would not contribute meaningfully to habitat fragmentation for mammals or decrease connectivity between habitats.

Project activities that may occur at night or nighttime could impact bat activity patterns. The increase of nighttime lighting in the Project area has the potential to attract insects, which could have minor beneficial impacts to some bat species if their food source increases. However, some bat species would likely shift their foraging activities away from construction. Potential impacts to bat species are expected to be short term and minor.

With implementation of SRP's proposed measures, impacts on mammals associated with the Project's construction activities would be minor. Operation of the facility would include periodic maintenance activities in existing disturbed areas; because of this, impacts to mammalian wildlife species are expected to be very minimal.

Birds

Potential impacts to bird species could include changes in behavior due to Project-related noise, vibration, and the presence of workers and equipment; loss of breeding and foraging habitat; and impacts to nesting species. Bird nests could be encountered on existing transmission structures, in ornamental trees and shrubs, and on the ground within the vicinity of the proposed 230 kV transmission lines. Potential impacts to nesting birds and their eggs covered under the Migratory Bird Treaty Act (MBTA) would be avoided and/or minimized by limiting ground-clearing/vegetation removal activities to outside the breeding season (generally March–September with raptors breeding generally January–June). If construction occurs during the breeding season, a pre-construction nest survey would be conducted 30 days prior to construction by a qualified biologist, and active nests would be avoided or removed before becoming active, if possible. If active nests cannot be avoided, on-site personnel would contact the SRP Avian Protection Program for steps to take to ensure the nesting birds are protected. Therefore, there would be no impacts to active nests.

Transmission lines can pose a collision risk to birds (APLIC, 2012). However, many factors influence whether birds are likely to collide with a specific transmission line. Because the proposed 230 kV transmission lines are being built in close proximity to Loop 202, there is a lack of native vegetation or natural habitat within or adjacent to the proposed ROW, there is significant commercial and residential development in the Project area, and there is a lack of high-quality

foraging and migration areas in the Project area, this risk would be low and would represent a minor adverse impact on bird species. Additionally, collision risk is relatively low when multiple transmission lines are co-located or placed near other infrastructure (APLIC, 2012). The Project would be constructed in an area with numerous existing transmission lines and would be unlikely to contribute to an increase in bird mortality within the Project area. To minimize that risk, the Applicant would construct the proposed transmission lines following the guidelines outlined in the current version of the *APLIC Suggested Practices for Avian Protection on Powerlines and Reducing Avian Collisions with Power Lines* manuals. Electrical transmission and distribution lines can also cause bird electrocution, although the risk is highest with lower voltage lines. Electrocution occurs when a bird simultaneously contacts energized and grounded electrical components. High-voltage lines require spacing between those components that cannot be spanned even by very large birds so that electrocution risk is precluded almost entirely (APLIC, 2006).

Amphibians and Reptiles

Construction-related impacts to reptile and amphibian species including death, injury, or impacts arising from behavior changes would be the same as those described for terrestrial mammals. With implementation of SRP's proposed measures, impacts on reptiles and amphibians associated with the proposed 230 kV transmission lines would be short-term and minor. Operation of the facilities would include periodic maintenance activities along existing disturbed areas; because of this, impacts to reptiles and amphibians are expected to be very minimal.

Invasive Weed Species and Noxious Weeds

Invasive weed species and/or noxious weeds occur in the Project area as a result of disturbance associated with ongoing development, commercial area use, agricultural operations, and unmaintained vehicle/equipment storage areas present along the proposed 230 kV transmission lines. Measures would be taken to avoid introducing or spreading noxious weeds in the Project Area; therefore, the Project would be unlikely to contribute to an increase of noxious weeds, in extent or abundance, in the vicinity of the Project. The spread of invasive weeds is not expected due to the implementation of SRP's proposed mitigation measures. To minimize the potential spread of invasive weed species into the Project area, all heavy equipment from other geographic areas utilized during construction would be washed prior to arrival on site. This would ensure that weed seed from a different area is not transported into the area.

Mitigation Measures

The following mitigation measures reduce risk of animal injury or spread of invasive species. For mitigation measures specific to special-status species, please see **Exhibit C**.

- To minimize risks to birds, the new transmission lines would be constructed following industry suggested practices aimed at reducing avian collisions and electrocutions (APLIC, 2006; 2012). If avian-line interactions become an issue, SRP would move quickly to evaluate the issue and craft a solution using appropriate measures. Therefore, potential impacts to migratory birds and their populations would be minimized.

- Pre-construction surveys for nesting birds would be conducted by qualified biologists if vegetation clearing activities would occur during bird nesting season (generally March–September and January–June for raptors).
- To minimize the introduction and spread of invasive species and noxious weeds, standard best management practices (BMPs) would be used during construction. These BMPs can include measures such as washing equipment prior to and following mobilization to the Project area.

References

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**EXHIBIT D-1
BIOLOGICAL RESOURCES TABLES**

Table D-1
Plant Species
Potential Occurrence in Isolated Disturbed/Native Habitats in the Vicinity of the Project Area¹

Common Name	Scientific Name	Ecosystem
Triangleleaf bursage	<i>Ambrosia deltoidea</i>	Sonoran Desertscrub, Sonoran Riparian
White bursage	<i>Ambrosia dumosa</i>	Sonoran Desertscrub
Fiddlehead	<i>Amsinckia intermedia</i>	Sonoran Riparian
Fiddleneck	<i>Amsinckia spp.</i>	Sonoran Desertscrub, Disturbed
Purple three-awn	<i>Aristida purpurea</i>	Sonoran Desertscrub
Four-wing saltbush	<i>Atriplex canescens</i>	Sonoran Desertscrub
All scale	<i>Atriplex polycarpa</i>	Sonoran Desertscrub
Red brome	<i>Bromus madritensis ssp. rubens</i>	Sonoran Desertscrub, Disturbed
Blue palo verde	<i>Cercidium floridum</i>	Sonoran Desertscrub, Sonoran Riparian
Datura	<i>Datura stramonium</i>	Sonoran Riparian
Englemann's hedgehog cactus	<i>Echinocereus englemannii</i>	Sonoran Desertscrub
Brittlebush	<i>Encelia farinosa</i>	Sonoran Desertscrub, Sonoran Riparian
Skeletonweed	<i>Eriogonum dejlexum</i>	Sonoran Desertscrub
Filaree	<i>Eradium cicutarium</i>	Sonoran Desertscrub, Disturbed
Barrel cactus	<i>Ferocactus wislizenii</i>	Sonoran Desertscrub
Ocotillo	<i>Fouquieria splendens</i>	Sonoran Desertscrub
Halogeton	<i>Halogeton glomeratus</i>	Sonoran Desertscrub, Disturbed
Rhatany	<i>Krameria parviflora</i>	Sonoran Desertscrub, Sonoran Riparian
Creosote bush	<i>Larrea tridentata</i>	Sonoran Desertscrub, Sonoran Riparian
Wolftberry	<i>Lycium spp.</i>	Sonoran Desertscrub, Sonoran Riparian
Little fishhook cactus	<i>Mammillaria thornberi</i>	Sonoran Desertscrub
Teddybear cholla	<i>Opuntia bigelovii</i>	Sonoran Desertscrub
Prickly pear cactus	<i>Opuntia engelmannii</i>	Sonoran Desertscrub
Jumping cholla	<i>Opuntia fulgida</i>	Sonoran Desertscrub
Desert mistletoe	<i>Phoradendron californicum</i>	Sonoran Desertscrub
Plantago	<i>Plan/ago spp.</i>	Sonoran Desertscrub, Disturbed
Galleta grass	<i>Pleuraphis Jamesii</i>	Sonoran Desertscrub, Sonoran Riparian
Mesquite	<i>Prosopis spp.</i>	Sonoran Riparian
Bladdersage	<i>Salazaria mexicana</i>	Sonoran Desertscrub
Russian thistle	<i>Sa/sofa tragus</i>	Sonoran Desertscrub, Sonoran Riparian
London rocket	<i>Sisymbrium irio</i>	Sonoran Desertscrub, Sonoran Riparian
Globe mallow	<i>Sphaera/cea spp.</i>	Sonoran Desertscrub, Sonoran Riparian
Mediterranean grass	<i>Schismus arabicus and S. barbatus</i>	Sonoran Desertscrub, Disturbed

¹ Brown, 1994

Table D-2
Mammal Species
Potential Occurrence in the Vicinity of the Project Area¹

Common Name	Scientific Name
Pallid bat	<i>Antrozous pallidus</i>
Ringtail	<i>Bassariscus astutus</i>
Coyote	<i>Canis latrans</i>
Mexican long-tongued bat	<i>Choeronycteris mexicana</i>
Desert kangaroo rat	<i>Dipodomys deserti</i>
Merriam's kangaroo rat	<i>Dipodomys merriami</i>
Big brown bat	<i>Eptesicus fuscus</i>
Spotted bat	<i>Euderma macu/atum</i>
Western mastiff bat	<i>Eumops perotis</i>
Mountain lion	<i>Fe/is concolor</i>
Bobcat	<i>Fe/is rufus</i>
Red bat	<i>Lasiurus borealis</i>
Hoary bat	<i>lasiurus cinereus</i>
Southern yellow bat	<i>Lasiurus ega xanthinus</i>
Mexican long-nosed bat	<i>leptonycteris nivalis</i>
Black-tailed jackrabbit	<i>Lepus californicus</i>
Hooded skunk	<i>Mephitis macroura</i>
Striped skunk	<i>Mephitis mephitis</i>
California myotis	<i>Myotis californicus</i>
Fringed myotis	<i>Myotis thysanodes</i>
Cave myotis	<i>Myotis velifer</i>
Yuma myotis	<i>Myotis yumanensis</i>
White-throated woodrat	<i>Neotoma albigula</i>
Desert wood rat	<i>Neotoma lepida</i>
Desert shrew	<i>Notiosorex crawfordi</i>
Desert Mule deer	<i>Odocoileus hemionus crooki</i>
Muskrat	<i>Ondatra zibethicus</i>
Southern grasshopper mouse	<i>Onychomys torridus</i>
Collared peccary	<i>Pecari tajacu</i>
Arizona pocket mouse	<i>Perognathus amp/us</i>
Bailey's pocket mouse	<i>Perognathus bai/eyi</i>
Long-tailed pocket mouse	<i>Perognathus formosus</i>
Rock pocket mouse	<i>Perognathus intermedius</i>
Little pocket gopher	<i>Perognathus longimembris</i>
Desert pocket mouse	<i>Perognathus penicillatus</i>
Brush mouse	<i>Peromyscus boy/ii</i>
Cactus mouse	<i>Peromyscus eremicus</i>
Deer mouse	<i>Peromyscus manicu/atus</i>

Table D-2
Mammal Species
Potential Occurrence in the Vicinity of the Project Area¹

Common Name	Scientific Name
Western pipistrelle	<i>Pipistrellus Hesperus</i>
Townsend's big-eared bat	<i>Plecotus townsendii</i>
Raccoon	<i>Procyon lotor</i>
Western harvest mouse	<i>Reithrodontomys megalotis</i>
Arizona gray squirrel	<i>Sciurus arizonensis</i>
Arizona cotton rat	<i>Sigmodon arizonae</i>
Rock squirrel	<i>Spermophilus variegatus</i>
Western spotted skunk	<i>Spilogale gracilis</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
American free-tailed bat	<i>Tadarida brasiliensis</i>
Pocketed free-tailed bat	<i>Tadarida femorosacca</i>
Big free-tailed bat	<i>Tadarida macrotis</i>
Badger	<i>Taxidae taxus</i>
Botta's pocket gopher	<i>Thomomys bottae</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Kit fox	<i>Vulpes macrotis</i>
Round-tailed ground squirrel	<i>Xerospermophilus tereticaudus</i>
¹ Hoffmeister, 1986	

**Table D-3
Bird Species
Potential Occurrence in the Vicinity of the Project Area¹**

Common Name	Scientific Name
Cooper's hawk	<i>Accipiter cooperii</i>
Sharp-shinned hawk	<i>Accipiter striatus</i>
Western Grebe	<i>Aechmophorus occidentalis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Sage sparrow	<i>Amphispiza belli</i>
Black-throated sparrow	<i>Amphispiza bilineata</i>
Cinnamon teal	<i>Anas cyanoptera</i>
Mallard	<i>Anas platyrhynchos</i>
Black-chinned hummingbird	<i>Archilochus alexandri</i>
Great egret	<i>Ardea alba</i>
Great blue heron	<i>Ardea herodias</i>
Verdin	<i>Auriparus flaviceps</i>
Cedar waxwing	<i>Bombycilla cedrorum</i>
Great homed owl	<i>Bubo virginianus</i>
Cattle egret	<i>Bubulcus ibis</i>
Zone-tailed hawk	<i>Buteo albonotatus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Ferruginous hawk	<i>Buteo regalis</i>
Swainson's hawk	<i>Buteo swainsoni</i>
Green heron	<i>Butorides virescens</i>
Lark bunting	<i>Calamospiza melanocorys</i>
Gambel's quail	<i>Callipepla gambelii</i>
Anna's hummingbird	<i>Calypte anna</i>
Costa's hummingbird	<i>Calypte costae</i>
Cactus wren	<i>Campylorhynchus brunneicapillus</i>
Northern cardinal	<i>Cardinalis cardinalis</i>
Pyrrhuloxia	<i>Cardinalis sinuatus</i>
Lesser goldfinch	<i>Carduelis psaltria</i>
House finch	<i>Carpodacus mexicanus</i>
Turkey vulture	<i>Cathartes aura</i>
Killdeer	<i>Charadrius vociferus</i>
Lark sparrow	<i>Chondestes grammacus</i>
Lesser nighthawk	<i>Chordeiles acutipennis</i>
Northern harrier	<i>Circus cyaneus</i>
Red-shafted northern flicker	<i>Colaptes cafer</i>
Gilded flicker	<i>Colaptes chrysoides</i>
Rock dove	<i>Columba livia</i>
Inca dove	<i>Columbina inca</i>
Common ground-dove	<i>Columbina passerine</i>

**Table D-3
Bird Species
Potential Occurrence in the Vicinity of the Project Area 1**

Common Name	Scientific Name
Western wood-pewee	<i>Contopus sordidulus</i>
Common raven	<i>Corvus corax:</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>
Black-throated gray warbler	<i>Dendroica nigrescens</i>
Yellow warbler	<i>Dendroica petechia</i>
Snowy egret	<i>Egretta thula</i>
Pacific-slope flycatcher	<i>Empidonax difficilis</i>
Dusky flycatcher	<i>Empidonax oberholster</i>
Cordilleran flycatcher	<i>Empidonax occidentalis</i>
Gray flycatcher	<i>Empidonax wrightii</i>
Horned lark	<i>Eremophila alpestris</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
American kestrel	<i>Fa/co sparverius</i>
American coot	<i>Fulica americana</i>
Common moorhen	<i>Gallinula chloropus</i>
Greater roadrunner	<i>Geococcyx californianus</i>
Blue grosbeak	<i>Guiraca carulea</i>
Cliff swallow	<i>Hirundo pyrrhonota</i>
Barn swallow	<i>Hirundo rustica</i>
Northern oriole	<i>Icterus bullockii</i>
Hooded oriole	<i>Icterus cucullatus</i>
Bullock's oriole	<i>Icterus galbula</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Gila woodpecker	<i>Melanerpes uropygialis</i>
Lincoln's sparrow	<i>Melospiza lincolni</i>
Song sparrow	<i>Melospiza melodia</i>
Elf owl	<i>Micrathene whitneyi</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Bronzed cowbird	<i>Molothrus aeneus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Brown-crested flycatcher	<i>Myiarchus tyrannulus</i>
Black-crowned night-heron	<i>Nycticorax nycticorax</i>
MacGillivray's warbler	<i>Oporornis tolmiei</i>
Sage thrasher	<i>Oreoscoptes montanus</i>
Western screech owl	<i>Otus kennicottii</i>
Harris' hawk	<i>Parabuteo unicinctus</i>
House sparrow	<i>Passer domesticus</i>

**Table D-3
Bird Species
Potential Occurrence in the Vicinity of the Project Area¹**

Common Name	Scientific Name
Phainopepla	<i>Phainopepla nitens</i>
Double-crested cormorant	<i>Phalacrocorax auritus</i>
Common poorwill	<i>Phalaenoptilus nuttallii</i>
Black-headed grosbeak	<i>Pheucticus melanocephalus</i>
Ladder-backed woodpecker	<i>Picoides scalaris</i>
Abert's towhee	<i>Pipilo aberti</i>
Green-tailed towhee	<i>Pipilo chlorurus</i>
Spotted towhee	<i>Pipilo erythrophthalmus</i>
Canyon towhee	<i>Pipilo fuscus</i>
Western tanager	<i>Piranga ludoviciana</i>
Pied-billed grebe	<i>Podilymbus podiceps</i>
Blue-gray gnatcatcher	<i>Poliophtila caerulea</i>
Black-tailed gnatcatcher	<i>Poliophtila melanura</i>
Vesper sparrow	<i>Pooecetes gramineus</i>
Vermillion flycatcher	<i>Pyrocephalus rubinus</i>
Great-tailed grackle	<i>Quiscalus mexicanus</i>
Ruby-crowned kinglet	<i>Regulus calendula</i>
Rock wren	<i>Salpinctes obsoletus</i>
Black phoebe	<i>Sayornis nigricans</i>
Say's phoebe	<i>Sayornis saya</i>
Rufus hummingbird	<i>Selasphorus rufus</i>
Western bluebird	<i>Sialia mexicana</i>
Brewer's sparrow	<i>Spizella breweri</i>
Chipping sparrow	<i>Spizella passerine</i>
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Western meadowlark	<i>Sturnella neglecta</i>
European starling	<i>Sturnus vulgaris</i>
Tree swallow	<i>Tachycineta bicolor</i>
Violet-green swallow	<i>Tachycineta thalassina</i>
Bewick's wren	<i>Thryomanes bewickii</i>
Bendire's thrasher	<i>Toxostoma bendirei</i>
Curve-billed thrasher	<i>Toxostoma curvirostre</i>
House wren	<i>Troglodytes aedon</i>
American robin	<i>Turdus migratorius</i>
Western kingbird	<i>Tyrannus verticalis</i>
Barn owl	<i>Tyto alba</i>
Orange-crowned warbler	<i>Vermivora celata</i>
Lucy's warbler	<i>Vermivora luciae</i>
Nashville warbler	<i>Vermivora ruficapilla</i>

Table D-3 Bird Species Potential Occurrence in the Vicinity of the Project Area¹	
Common Name	Scientific Name
Virginia's warbler	<i>Vermivora virginiae</i>
Bell's vireo	<i>Vireo be/ii</i>
Warbling vireo	<i>Vireo gilvus</i>
Wilson's warbler	<i>Wilsonia pusilia</i>
White-winged dove	<i>Zenaida asiatica</i>
Mourning dove	<i>Zenaida macroura</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
¹ Corman and Wise-Gervais, 2005	

Table D-4
Reptile and Amphibian Species
Potential Occurrence in the Vicinity of the Project Area¹

Common Name	Scientific Name
Arizona glossy snake	<i>Arizona elegans nactivaga</i>
Sonoran desert toad	<i>Bufo alvarius</i>
Great plains toad	<i>Bufo cagnatus</i>
Red-spotted toad	<i>Bufo punctatus</i>
Zebra tail lizard	<i>Callisaurus draconoides</i>
Banded sand snake	<i>Chilomeniscus cinctus</i>
Western shovel-nosed snake	<i>Chionactis occipitalis</i>
Gila spotted whiptail	<i>Cnemidophorus flagellicaudus</i>
Western whiptail	<i>Cnemidophorus tigris</i>
Desert banded gecko	<i>Coleonyx variegatus variegatus</i>
Western diamondback rattlesnake	<i>Crotalus atrox</i>
Sonoran sidewinder	<i>Crotalus cerastes cercobombus</i>
Speckled rattlesnake	<i>Cratalus mitchellii pyrrhus</i>
Black-tailed rattlesnake	<i>Crotalus molossus</i>
Mojave rattlesnake	<i>Cratalus scutulatus</i>
Arizona black rattlesnake	<i>Cratalus viridis cerberus</i>
Common collared lizard	<i>Crotaphytus collaris</i>
Western collared lizard	<i>Crotaphytus collaris baileyi</i>
Desert iguana	<i>Dipsosaurus dorsalis</i>
Large spotted leopard lizard	<i>Gambelia wislizenii wislizenii</i>
Desert tortoise	<i>Gopherus agassizii</i>
Gila monster	<i>Heloderma suspectum</i>
Canyon tree frog	<i>Hyla arenicolor</i>
Night snake	<i>Hypsiglena tarquata</i>
Sonoran mud turtle	<i>Kinosternon sonoriense</i>
Common kingsnake	<i>Lampropeltis getula</i>
Western blind snake	<i>Leptotyphlops humilis</i>
Rosy boa	<i>Lichanura trivirgata</i>
Red coachwhip	<i>Masticophis flagellum piceus</i>
Arizona coral snake	<i>Micruraides euryxanthus</i>
Desert homed lizard	<i>Phrynosoma platyrhinos</i>
Desert homed lizard	<i>Phrynosoma platyrhinos calidiarum</i>
Regal homed lizard	<i>Phrynosoma so/are</i>
Saddled leaf-nosed snake	<i>Phyllorhynchus browni</i>
Western leaf-nosed snake	<i>Phyllorhynchus decurtatus perkinsi</i>
Sonoran gopher snake	<i>Pituophis melanoleucus affinis</i>
Bullfrog	<i>Rana catesbeiana</i>
Western long-nosed snake	<i>Rhinacheilus lecontei lecontei</i>
Western patch-nosed snake	<i>Salvadora hexalepis</i>

Table D-4
Reptile and Amphibian Species
Potential Occurrence in the Vicinity of the Project Area¹

Common Name	Scientific Name
Western chuckwalla	<i>Sauromalus obesus obesus</i>
Couch spadefoot	<i>Scaphiopus couchi</i>
Western spadefoot	<i>Scaphiopus hammondii</i>
Southern spadefoot	<i>Scaphiopus multiplicatus</i>
Sonoran spiny lizard	<i>Sceloporus magister magister</i>
Yellow-backed spiny lizard	<i>Sceloporus magister uniformis</i>
Ground snake	<i>Sonora semiannulata</i>
SW black-headed snake	<i>Tantilla hobartsmithi</i>
Lyre snake	<i>Trimorphodon biscutatus</i>
Spiny softshell	<i>Trionyx spiniferus</i>
Arizona brush lizard	<i>Urosaurus graciosus shannoni</i>
Tree lizard	<i>Urosaurus ornatus</i>
Side-blotched lizard	<i>Uta stansburiana</i>
¹ Stebbins, 1985	