

Pima County Department of Transportation

Biological Evaluation

**Sunset Road: Silverbell Road
to I-10 Eastbound Frontage Road–Segment I**

Pima County Project No. 4RTSUN

Prepared for:



**DEPARTMENT OF TRANSPORTATION
201 NORTH STONE AVENUE, FOURTH FLOOR
TUCSON, ARIZONA 85701-1207**

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1. PROJECT LOCATION

This project is between Silverbell Road and the Interstate 10 (I-10) eastbound frontage road just south of the Sunset Road alignment in the northeastern portion of unincorporated Pima County, approximately 6 miles northwest of downtown Tucson, Pima County, Arizona. The project is in Sections 17 and 18 of Township 13 South, Range 13 East on the Jaynes (1992), Arizona, U.S. Geological Survey 7.5-minute quadrangle (Figure 1–Project location and Figure 2–Project vicinity). The project limits include a small segment in the city of Tucson west of I-10 just south of Sunset Road. The remainder of the project is in unincorporated county land. The Town of Marana limits are about 1,500 feet to the northwest, and the Town of Oro Valley limits are approximately 4 miles to the northeast. Some adjacent lands are owned by Pima County; others are owned by private parties.

Throughout this Biological Evaluation (BE), the term “project limits” represents the construction footprint (area of disturbance) and the term “project area” includes surrounding land outside of, but adjacent to, the project limits. The term “project vicinity” denotes a more expansive landscape context.

2. PROJECT DESCRIPTION

The Pima County Department of Transportation (PCDOT) plans to construct Sunset Road: Silverbell Road to I-10 Eastbound Frontage Road–Segment I as an approximately 2,960-foot-long, three-lane roadway (one lane in each direction and a center continuous left-turn lane) from Silverbell Road to the I-10 eastbound frontage road, including a bridge over the Santa Cruz River. Approximately half of the project limits occur within the 100-year floodplain limits of the Santa Cruz River (Figure 3–Federal Emergency Management Agency–designated floodplains). The Santa Cruz River flows southeast to northwest through the project area. There are no culverts, outfalls, or other drainage improvements within the project limits. A prefabricated truss bridge over the river at the existing Sunset Road alignment was destroyed in the Tucson flood of 1983, and no structural components of the crossing remain.

The purpose of the project is to provide a new connection between Silverbell Road and I-10 to replace a previous bridge/connection that washed out during floods in 1983. The connection is critical to meet future travel demand needs and provide relief during reconstruction of I-10 and the traffic interchanges at Ina Road and Ruthrauff Road. A bridge over the Santa Cruz River will be constructed approximately 1,400 feet southeast of the previous bridge location and will provide a new all-weather crossing of the river. The project will take place within a 150-foot-wide roadway right-of-way. The majority of the land needed for right-of-way is owned by the Pima County Regional Flood Control District. One private parcel may be acquired between Silverbell Road and the Santa Cruz River.

The project area will be accessed from Silverbell Road on the west, the I-10 eastbound frontage road on the east, and remaining unimproved segments of the previous Sunset Road alignment to the north. It is anticipated that a traffic control plan will be necessary during construction. Detours are yet to be determined, but it is not anticipated that there will be off-road detours or detours to other roadways for traffic on Silverbell Road or the I-10 eastbound frontage road. Staging areas are to be determined. Construction access may require a temporary free-span bridge over the Santa Cruz River. Project construction is expected to begin in late summer 2015.

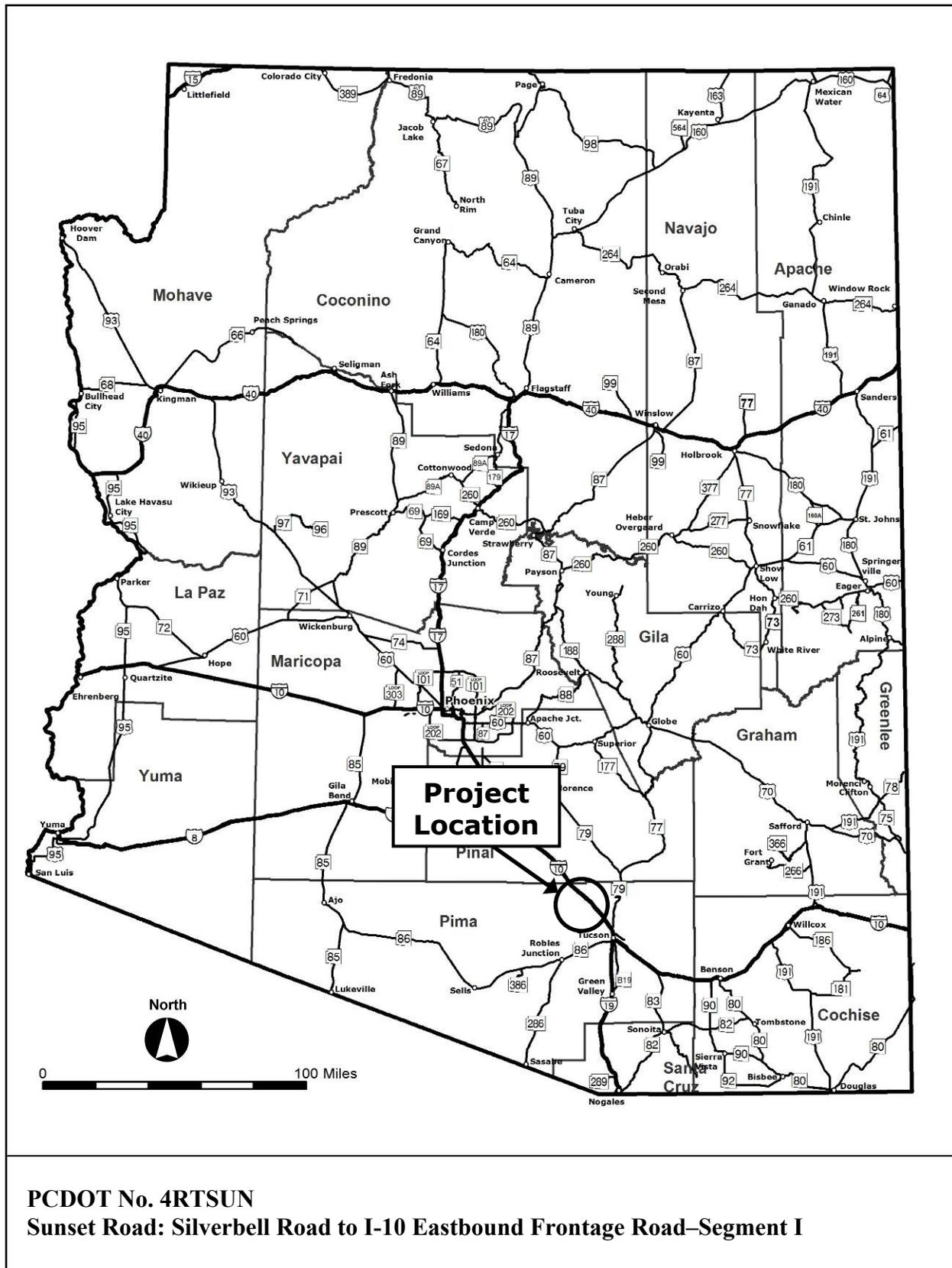
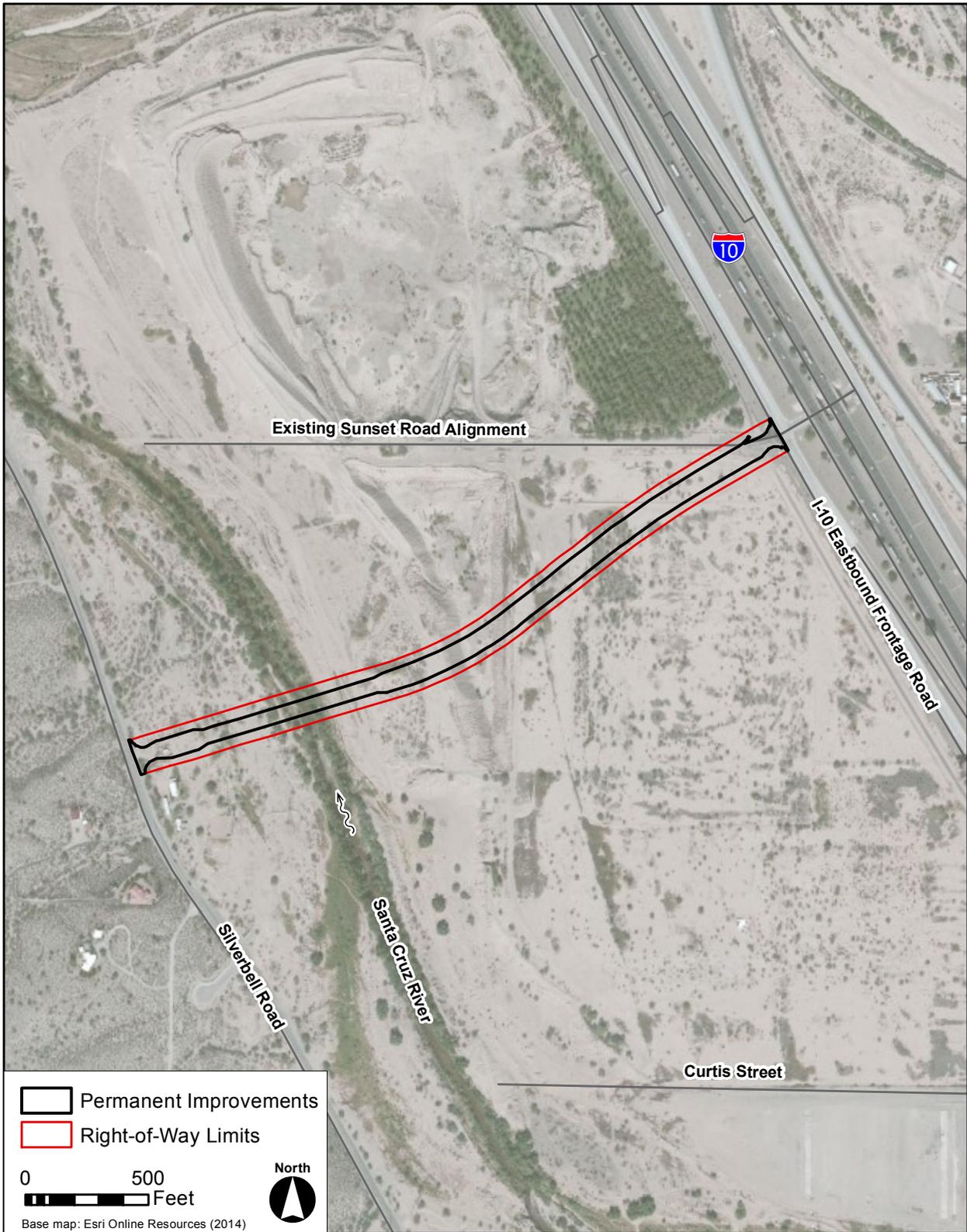


Figure 1. Project location.



**PCDOT No. 4RTSUN
 Sunset Road: Silverbell Road to I-10 Eastbound Frontage Road—Segment I**

Figure 2. Project vicinity

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**PCDOT No. 4RTSUN
 Sunset Road: Silverbell Road to I-10 Eastbound Frontage Road—Segment I**

Figure 3. Federal Emergency Management Agency–designated floodplains

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The project consists of the construction of a roadway and bridge. The preliminary design is for a three-lane roadway consisting of two 11-foot-wide travel lanes separated by a 12-foot-wide center continuous left-turn lane. The project limits will include an additional 25 feet on the north side and 28 feet on the south side to accommodate shoulders, sidewalks, and additional clear zones on both sides of the roadway, resulting in a total 87-foot width. The new six-span bridge over the Santa Cruz River will extend approximately 720 feet; two spans will clear the river. The bridge cross-section will be similar to that of the remainder of the roadway, except that the clear zones between the travel lane shoulders and sidewalks will be reduced, resulting in a total 68-foot width. A drainage channel and/or small detention basins may be constructed to handle off-site sheet flows from the uplands west of I-10 that are intercepted by the new roadway. The drainage feature(s) would be placed within or immediately adjacent to the right-of-way and may include a drainage easement. Permanent improvements will impact an estimated 6.3 to 8.0 acres. The precise acreage of temporary impacts from construction and staging are not known at this time. Assuming that these will encompass the remainder of the 150-foot-wide right-of-way outside the permanent road and bridge footprint, temporary impacts are estimated at 4.9 acres.

Construction staging areas have not been defined at this point in the project development process. Typically they would be 1 to 3 acres and in near proximity to the roadway right-of-way. Virtually all of the project limits, with the exception of the Santa Cruz River crossing, is highly disturbed lands from sand and gravel mining, former agriculture, and off-road vehicle use.

Due to the construction of the bridge, there is conflict with overhead power lines operated by Western Area Power Administration (Western) and Tucson Electric Power (TEP). Preliminary plans call for each power line to be raised about 30 to 40 feet. In the case of TEP, two existing steel lattice towers would be replaced by taller steel monopoles at the current location. Coordination with Western is ongoing. Preliminary discussion indicates two dual wooden pole structures would be replaced with taller poles at the current pole locations.

The project will impact native vegetation, including riparian vegetation along the Santa Cruz River and upland vegetation in floodplain and adjacent upslope areas. Vegetation to be impacted throughout the project limits consists of a mix of native and exotic plant species. Construction of the bridge over the Santa Cruz River will permanently impact an estimated 0.3 acre of riparian vegetation, and construction of the remainder of the roadway will impact approximately 6.0 to 8.0 acres of upland vegetation. Assuming construction will impact the entire 150-foot-wide right-of-way, temporary disturbance to riparian vegetation from bridge construction is estimated at an additional 0.4 acre, and temporary disturbance to upland vegetation from construction of the remainder of the roadway is estimated at an additional 4.5 acres plus the yet-to-be-determined staging area.

Some types of construction equipment, such as earthmovers, graders, and bulldozers, may produce noise in excess of 100 decibels. However, this is unlikely to exceed the noise produced by large vehicles operating at the nearby CalPortland cement plant/sand and gravel mine, or sanitation trucks and semi-tractor trailers, which currently use Silverbell Road and the I-10 eastbound frontage road. The CalPortland cement facility is along the old Sunset Road alignment (which is used for access), about 800 feet west of where it meets the I-10 eastbound frontage road near the east terminus of the proposed new Sunset Road alignment. From this location, the

proposed Sunset Road alignment heads roughly southwest and would come within approximately 500 feet south of the mine entrance.

Impacts to potentially jurisdictional Waters of the United States (Waters) will be determined during project design. Because Waters will be impacted, Clean Water Act Section 404 permitting will be necessary. It is anticipated that the project can be authorized under Nationwide Permit (NWP) 14 (Linear Transportation Projects). Because the bridge will be constructed as a clear-span over the Santa Cruz River, less than 0.5 acre of impact to Waters is anticipated. A temporary construction access free-span bridge will not contribute to impacts to Waters. All wetlands will be avoided, and there are no unique or impaired Waters in the project area. Because construction of the entire project will disturb more than 1 acre, a Section 402 (Arizona Pollutant Discharge Elimination System) permit will be obtained through the Arizona Department of Environmental Quality. Project construction is anticipated to start in August 2015 and be completed within a 12-month period.

3. LOCATION DESCRIPTION

The project area lies between approximately 2,220 and 2,230 feet elevation¹ in the Santa Cruz River Valley that divides the Tucson Mountains to the west from the Santa Catalina Mountains to the northeast. The project limits cross the Santa Cruz River, its floodplain, and adjacent upslope areas. In the project area, the Santa Cruz River is a perennially flowing waterway resulting from effluent that is discharged into the river approximately 1 mile upstream by the Roger Road Wastewater Reclamation Facility. The base flow in the river is augmented seasonally by precipitation. Several small ephemeral tributaries flow into the Santa Cruz River from the west side.

The project area is mapped within the Sonora Desertscrub biome. Upland areas, including the floodplain of the Santa Cruz River, are dominated by velvet mesquite (*Prosopis velutina*) and a sparse groundcover of primarily burroweed (*Isocoma tenuisecta*). Other species that occur occasionally or sporadically in upland areas include Jerusalem thorn (*Parkinsonia aculeata*), creosote bush (*Larrea tridentata*), fourwing saltbush (*Atriplex canescens*), desert broom (*Baccharis sarothroides*), wolfberry (*Lycium berlandieri*), graythorn (*Ziziphus obtusifolia*), and native and exotic annuals and grasses, including buffelgrass (*Pennisetum ciliare*) and Russian thistle (*Salsola iberica*). Riparian vegetation in the bank zone along the Santa Cruz River is dominated by narrow stringers of Goodding's willow (*Salix gooddingii*) with interspersed athel saltcedar (*Tamarix aphylla*), occasional velvet mesquite, and a groundcover of Bermudagrass (*Cynodon dactylon*) and Johnsongrass (*Sorghum halepense*). Wetland vegetation occurs at the upstream edge of the bridge right-of-way within the project limits. The toe zone immediately adjacent to the river in the project vicinity supports a predominance of knotweed (*Polygonum lapathifolium*), with occasional patches of cattail (*Typha domingensis*) and giant reed (*Arundo donax*). The smaller ephemeral tributaries that flow into the Santa Cruz River from the west also support catclaw acacia (*Acacia greggii*).

The project area is in a somewhat disturbed and relatively developed part of Pima County. Upland portions of the project limits east of the Santa Cruz River have been disturbed

¹ Elevations in this document are referenced to mean sea level.

historically by earthmoving equipment for agriculture, sand-and-gravel mining, and vehicular traffic. An overhead electrical transmission line and easement has resulted in ground disturbance on the west side of the river. Silverbell Road abuts the west end of the project limits, and areas west of Silverbell Road support relatively low-density residential development on larger lots. I-10 abuts the east end of the project limits, and land use east of I-10 is characterized as urban and includes commercial, industrial, and relatively high-density residential development.

Soils in the project area are mapped as Torrifluvents Association. These soils are characterized as deep, moderately coarse to moderately fine-textured, nearly level to gently sloping soils on floodplains and alluvial fans (Hendricks 1985).

4. SPECIES IDENTIFICATION

The U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) System website was accessed on June 17, 2014, to obtain an official species list for the project area (attached). This list was reviewed by a qualified biologist (Ron van Ommeren, EcoPlan Associates, Inc. [EcoPlan]) to determine which species may occur in the project area. The following species were identified from this review for detailed analysis in this BE:

<u>Common Name</u>	<u>Scientific Name</u>	<u>Status</u>
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	Endangered with critical habitat
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Proposed threatened*
Tucson shovel-nosed snake	<i>Chionactis occipitalis klauberi</i>	Candidate**

* Subsequently, the yellow-billed cuckoo was listed as threatened by the USFWS (USFWS 2014a)

**Subsequently, the Tucson shovel-nosed snake was removed from the candidate list by the USFWS (USFWS 2014b)

Species included in the USFWS list but excluded from further evaluation are addressed in Table 1. This project will have no effect on these species.

Table 1. USFWS listed and candidate species not analyzed in detail, their habitat requirements, and justification for exclusion from detailed analysis.

Name	Status	Habitat Requirements	Exclusion Justification
California least tern <i>Sterna antillarum browni</i>	E	Found in 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. Elevation: varies.	Physical habitat characteristics are present, but this species is not expected to nest in the project area. The only documented breeding in Arizona is in Maricopa County. Records from other areas, including Pima County, are of transient individuals. The species may occur as a transient but is not expected to remain in the project area.

Table 1. USFWS listed and candidate species not analyzed in detail, their habitat requirements, and justification for exclusion from detailed analysis.

Name	Status	Habitat Requirements	Exclusion Justification
Jaguar <i>Panthera onca</i>	E	Prefers areas near water in warm tropical savannah and forest habitats; rarely in extensively arid areas. Elevation: 1,600 to 9,800 feet.	No breeding populations are in Arizona. Occasional individuals cross into the state from Mexico. Jaguars have been photographed in various mountain ranges in southeastern Arizona since 1996, including three records of the same male jaguar from the Santa Rita Mountains (about 40 miles southeast of the project area) in 2011 and 2012. There are no records of jaguars from the project area. Migrant jaguars would not be expected to remain in the project vicinity due to the presence of humans, noise, traffic, and activity in the area. The project area is outside designated critical habitat for this species.
Lesser long-nosed bat <i>Leptonycteris curasoae yerbabuena</i>	E	Found seasonally in desertscrub habitat with agave and columnar cacti present as food plants. Elevation: 1,600 to 11,500 feet.	No suitable habitat is in the project area. No columnar cacti or agaves and no potential roosting sites are within the project limits.
Northern Mexican gartersnake <i>Thamnophis eques megalops</i>	T	Found in cienegas and stock tanks and river habitat that includes pools and backwaters. Elevation: 3,000 to 8,500 feet.	Suitable physical habitat is present, but this species is not anticipated to occur in the project area. The project area occurs about 800 feet below the known elevational range of this species. Northern Mexican gartersnakes occur in the upper Santa Cruz River in the San Rafael Valley (about 65 miles southeast of the project area) but are thought to be extirpated from the lower Santa Cruz River. There are no records of this species from the project area, and the project area is outside designated critical habitat.
Sonoran Desert tortoise <i>Gopherus morafkai</i>	C	Primarily rocky (often steep) hillsides and bajadas of Mohave and Sonoran desertscrub but may encroach into desert grassland, juniper woodland, interior chaparral habitats, and even pine communities. Washes and valley bottoms may be used in dispersal. Elevation: <7,800 feet.	No suitable habitat is in the project area. The project area is characterized primarily as floodplain area with sandy and gravelly unconsolidated soils that are not suitable for den sites. Use of the project area for dispersal is unlikely due to the presence of I-10 and urbanized land uses directly east of the project limits.
Sonoran pronghorn <i>Antilocapra americana sonoriensis</i>	E	Restricted to Lower Colorado River Valley and Central Gulf Coast subdivision of Sonoran desertscrub habitat. Elevation: 2,000 and 4,000 feet.	No suitable habitat is in the project area. The project area is outside the subspecies' known range. Known Arizona populations of the Sonoran pronghorn are restricted to southwestern Arizona, approximately 100 miles west of the project area.

Table 1. USFWS listed and candidate species not analyzed in detail, their habitat requirements, and justification for exclusion from detailed analysis.

Name	Status	Habitat Requirements	Exclusion Justification
Sonoyta mud turtle <i>Kinosternon sonoriense longifemorale</i>	C	Restricted to pond and stream habitat at Quitobaquito Springs in Organ Pipe Cactus National Monument, Arizona, and in nearby Rio Sonoyta, Sonora, Mexico. Elevation: 1,000 to 1,100 feet.	No suitable habitat is in the project area. The project does not lie in the known distribution of this subspecies. Nearest known populations lie approximately 110 miles west-southwest of the project area.

E = Endangered, C = Candidate, T= Threatened (USFWS 2014c)

5. SPECIES EVALUATION

Southwestern Willow Flycatcher

Status

The Southwestern willow flycatcher (WIFL) was listed by the USFWS as endangered in 1995 (USFWS 1995). Critical habitat was designated in 2005 and revised in 2013 (USFWS 2013).

Range

The summer breeding range of the WIFL includes Arizona, southern California, New Mexico, southern Nevada, southern Utah, southwestern Colorado, western Texas, and extreme northwestern Mexico, and nesting has been documented at sites from 260 feet to 3,700 feet and from 7,800 feet to 8,300 feet elevation (Sferra et al. 1997). The historic range in Arizona included portions of all major river systems (i.e., Colorado, Salt, Verde, Gila, Santa Cruz, and San Pedro rivers) and probably their major tributaries (USFWS 1995). The winter range of this species is primarily in southern Mexico and Central America (Sogge et al. 2010).

Habitat

WIFLs live and nest in dense willow and tamarisk thickets and riparian woodlands. Primary habitat elements necessary for this species are dense, closed-canopy riparian woodlands with a large volume of cover within 16 feet of the ground. These sites are usually near or over surface water or saturated soils (Tibbitts et al. 1994). WIFLs have been documented to nest in patches as small as 2 acres and as large as 500 acres or more. They have only rarely been found nesting in isolated, narrow, linear riparian habitats that are less than 33 feet wide, though they will use such linear habitats during migration (Sogge et al. 2010).

Biology

The WIFL is a neotropical migrant arriving in Arizona during its breeding season (May to August). In Arizona, much of the species' historical habitat has been altered (Graf et al. 2002) and is currently unsuitable and unoccupied (Phillips et al. 1964). Recent and historic grazing practices in Arizona have resulted in increased populations of the brown-headed cowbird, a brood parasite that may have contributed to the decline of the WIFL in Arizona (Sferra et al. 1997).

Site Survey

The project area has not been surveyed for WIFLs, and there are no records of this species from the project vicinity. The nearest known surveys are from the Ina Road crossing of the Santa Cruz River, approximately 3 miles downstream (northwest) of the project area. This site was surveyed by the Arizona Game and Fish Department (AGFD) from 2002 through 2004, but no resident or migrant WIFLs were recorded. The AGFD also reports surveys from effluent-dominated reaches of the Santa Cruz River farther downstream in the Avra Valley, specifically a reach south of the Avra Valley Bridge from 1993 through 1996 and a reach upstream of the Trico Road Bridge in 2006. No resident or migrant WIFLs were recorded during these surveys (Ellis et al. 2008). Annual spring and summer bird surveys conducted by the Tucson Audubon Society along the Santa Cruz River in the Avra Valley also have not recorded any WIFLs (Kendall Kroesen, Tucson Audubon Society, personal communication, May 4, 2004).

Habitat Evaluation and Suitability

The reach of the Santa Cruz River in the project area does not support suitable nesting habitat for WIFLs but may be used by this species during migration. Riparian vegetation along this reach of the river is characterized by a relatively narrow stringer of Goodding's willow with interspersed athel saltcedar and mesquite along each bank. The width of this band of vegetation is generally only one to several trees wide and in most places is narrower than the minimum 33-foot width documented for nesting by this species. In places where the width of the riparian vegetation exceeds this, patch size is generally less than 2 acres. WIFLs have not been documented along effluent-dominated reaches of the Santa Cruz River in or near Tucson, either as migrant or potentially nesting individuals. Survey efforts have been limited, however, totaling about 67 survey hours over seven years (Ellis et al. 2008). It remains possible that these reaches of the Santa Cruz River are used as stopover habitat by individual WIFLs migrating from wintering habitat in Central and South America to suitable habitat in other parts of the state or the Southwest. The project area occurs outside designated critical habitat for the WIFL. The nearest critical habitat lies along the San Pedro River approximately 35 miles northeast and the Santa Cruz River approximately 50 miles south of the project area.

Analysis of Effects

The project will not affect potential nesting habitat but will remove riparian vegetation that may be used by WIFLs during migration (stopover habitat). Construction of a bridge over the Santa Cruz River is expected to overlap the spring migration period and summer breeding season of WIFLs and result in the permanent removal of about 0.3 acre and temporary construction impacts to an additional 0.4 acre of riparian habitat. This will reduce the amount of riparian vegetation available for migrating WIFLs to forage or rest but will not substantially reduce the total amount of stopover habitat that occurs along this reach of the Santa Cruz River. Noise during construction and traffic noise and activity once the roadway is built may cause migrating WIFLs to avoid the immediate vicinity of the bridge or the roadway but is not expected to impede their ability to migrate between wintering and breeding areas. The project area does not overlap and, therefore, will not affect critical habitat designated for the WIFL.

Cumulative effects include the effects of future tribal, state, local, or private actions that are reasonably certain to occur within the project limits considered in this BE. Future federal actions are subject to the consultation requirements established under Section 7 of the Endangered

Species Act and, therefore, are not considered cumulative in the proposed action. The project will result in increased vehicle traffic in the project area that may cause WIFLs to avoid the immediate vicinity of the bridge or roadway during migration, as discussed previously. No indirect or cumulative effects or interrelated and interdependent actions are expected to occur with this project.

Yellow-billed Cuckoo

Status

The yellow-billed cuckoo (YBCU) is listed as a threatened species (USFWS 2014a). Critical habitat has been proposed but not designated at this time (USFWS 2014d).

Range

The YBCU cuckoo ranges from southern Canada to Mexico in the summer and winters in South America (Peterson 1990). The current breeding range of the yellow-billed cuckoo in the western United States includes riparian woodland habitat in portions of Arizona, California, and New Mexico (Halterman 1991, Laymon and Halterman 1987).

Habitat

YBCU nesting habitat for this species is described as dense lowland riparian woodland consisting of cottonwood, willow, velvet ash, Arizona walnut, mesquite, and tamarisk (Corman 2005) but also hackberry, alder, soapberry, and fruit trees/orchards (Mikesic 2008). Characteristics of suitable nesting habitat are further described as mature riparian woodlands with dense understories that are preferably at least 42 acres, with a minimum of about 7 acres of closed-canopy broad-leaved forest (Mikesic 2008). Similarly, Laymon and Halterman (1989) describe cottonwood-willow habitat that is less than 37 acres in size and less than 328 feet wide as unsuitable for nesting by this species.

Biology

This species historically bred along forested riparian corridors in western North America from southern British Columbia to Mexico and much of the eastern United States (Hughes 1999). Habitat alteration in the past century has significantly reduced the amount of suitable habitat, resulting in extirpation from much of its previous range, and pesticide accumulation in its wintering areas may also contribute to population declines (Laymon and Halterman 1987). Habitat loss and population decline of the yellow-billed cuckoo in the western United States has led to its current status as a threatened species (USFWS 2014a).

Site Survey

The project area has not been surveyed for YBCUs. There is no documented breeding in the northwest part of Tucson. The closest documented breeding was along Cienega Creek near I-10 (approximately 35 miles southeast of the project area). A number of YBCUs have been reported in the Tucson area, including birds that have struck windows and have been brought to wildlife rehabilitation facilities. Also, several singing males have been reported along the Santa Cruz and Rillito rivers. This includes detections as recently as 2002 along the Santa Cruz River near the Roger Road Wastewater Reclamation Facility about a mile south of the project area. More recent

surveys of this site are not known (Sabra Tonn, AGFD Heritage Data Management System program supervisor, personal communication, May 5, 2014).

Habitat Evaluation and Suitability

The reach of the Santa Cruz River in the project area does not support suitable nesting habitat for the YBCU but is likely used by this species during migration. This reach of the Santa Cruz River is not included as proposed critical habitat for this species. Riparian vegetation along this reach of the river is characterized by relatively narrow stringers of willow with interspersed saltcedar and mesquite that is generally only one to several trees wide. The width of riparian vegetation along this reach of the Santa Cruz is substantially narrower than the 328 minimum width documented for nesting by YBCUs, and continuous patches of habitat are generally less than 2 acres in size. The nearest known breeding habitat occurs about 35 miles southeast of the project area. Based on the recorded occurrence of the YBCU about 1 mile south of the project area and in other locations along the Santa Cruz and Rillito rivers, the occasional presence of this species in the project area during the migration period is considered likely. Habitat along the reach of the Santa Cruz River downstream of the Roger Road Wastewater Reclamation Facility, where YBCUs were recorded previously, was described as a “dense stand of Goodding willow within a channelized reach” (Sabra Tonn, AGFD Heritage Data Management System program supervisor, personal communication, May 5, 2014). Dense stands of Goodding’s willow also occur in the project area, though they are relatively narrow or occur as relatively small patches.

Analysis of Effects

The project will not affect potential nesting habitat but will remove riparian vegetation that may be used by YBCUs during migration (stopover habitat). Permanent removal of 0.3 acre and temporary impacts to 0.4 acre of riparian vegetation from bridge construction will reduce stopover habitat for migrating YBCUs but will not substantially reduce the total amount of stopover habitat that occurs along this reach of the Santa Cruz River. Construction of the bridge over the Santa Cruz River is expected to overlap the spring migration period and the summer breeding season of YBCU. Noise during construction and traffic noise and activity resulting from the completed roadway may cause migrating YBCUs to avoid the immediate vicinity of the bridge or the roadway but is not expected to impede their ability to migrate between wintering and breeding areas.

Cumulative effects include the effects of future tribal, state, local, or private actions that are reasonably certain to occur within the project limits considered in this BE. Future federal actions are subject to the consultation requirements established under Section 7 of the Endangered Species Act and, therefore, are not considered cumulative in the proposed action. The project will result in increased vehicle traffic in the project area that may cause YBCUs to avoid the immediate vicinity of the bridge or roadway during migration, as discussed previously. No indirect or cumulative effects or interrelated and interdependent actions are expected to occur with this project.

6. MITIGATION MEASURES

The following mitigation measures will be implemented during project construction:

- Impacted areas along the right-of-way and construction staging areas will be revegetated, where necessary, in compliance with *Pima County Environmentally Sensitive Roadway Design Guidelines*. Significant riparian tree species within the project limits will be protected in place, salvaged and transplanted, or replaced.
- An invasive species management plan will be completed to address treatment of the project area for invasive species infestations.
- To comply with the Arizona Native Plant Law, Pima County will file a Notice of Intent with the Arizona Department of Agriculture for the removal of applicable native plants. The Notice of Intent will be filed 60 days prior to the removal of native plants.
- Impacts to washes and riparian vegetation shall be kept to the minimum necessary to construct the project in accordance with *Pima County Environmentally Sensitive Roadway Design Guidelines*. Specific mitigation for permanent and temporary impacts to Waters of the United States will be addressed at a later date during communications with the U.S. Army Corps of Engineers.
- A Stormwater Pollution Prevention Plan will be required because the project will disturb more than 1 acre of terrain.
- Pima County will arrange for a qualified biologist to conduct a bird nest search of the grasses, shrubs, trees, and/or tree limbs to determine the presence/absence of active bird nests if vegetation removal activities will occur between February 15 and August 31. The survey will be conducted within 10 calendar days prior to vegetation removal.
- If active bird nests are found during the survey, Pima County will arrange for a licensed wildlife rehabilitator to relocate any eggs or nestlings from active nests within 3 to 5 calendar days of construction to comply with provisions of the Migratory Bird Treaty Act.
- The contractor shall not remove any trees or large tree limbs or conduct vegetation removal activities such as grubbing or shrub clearing between February 15 and August 31 until a biologist has conducted a bird nest search of the grasses, shrubs, trees, and/or tree limbs and has determined that no active bird nests are present. Vegetation may be mowed or removed if it has been surveyed within 10 calendar days prior to removal as long as only inactive bird nests, if any, are present. Between September 1 and February 14, grubbing, shrub clearing, and tree/limb removal activities are not subject to restriction.
- If active bird nests are found during the preconstruction survey, the contractor shall not commence with any vegetation removal or pruning until Pima County has confirmed that all eggs or nestlings have been relocated from the work area by a licensed wildlife rehabilitator and that contractor is cleared to proceed.
- Pima County will employ a biologist to complete a preconstruction survey for burrowing owls 90 days and 30 days prior to construction in all suitable habitat that will be disturbed. The biologist shall possess a burrowing owl survey protocol training certificate issued by the Arizona Game and Fish Department.

- If any burrowing owls are located during the preconstruction survey and are unable to be relocated on-site, Pima County will employ a biologist holding a permit from the U.S. Fish and Wildlife Service to relocate burrowing owls from the project area.
- If burrowing owls are located during construction, the contractor shall employ a biologist holding a permit from the U.S. Fish and Wildlife Service to relocate owls from the project area, as appropriate.
- If burrowing owls or active burrows are identified during the preconstruction survey or during construction, no construction activities shall take place within 100 feet of any active burrow until the owls are relocated.

7. COORDINATION

Sabra Tonn, AGFD Heritage Data Management System program supervisor, provided survey information on the yellow-billed cuckoo, a bat colony in the project vicinity, and records of the cave myotis, fulvous whistling duck, Western narrow-mouthed toad, and Tumamoc globeberry from the project vicinity.

Steven Spangle, USFWS Arizona Ecological Services Office field supervisor, provided a technical assistance letter dated September 11, 2014, that recommended conservation measures for the project.

8. LITERATURE CITED

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9. ADDITIONAL INFORMATION

EcoPlan biologist Patrick Dockens conducted a general biological survey of the project area on April 29, 2014. Field notes and photos for the survey are available at EcoPlan Associates, Inc., Mesa, Arizona.

10. SIGNATURES

I prepared this Biological Evaluation:

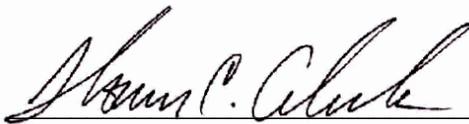


Ron van Ommeren, EcoPlan Associates, Inc.
Senior Environmental Planner

October 20, 2014

Date

I am submitting this Biological Evaluation:



Thomas C. Ashbeck, EcoPlan Associates, Inc.
Senior Project Scientist

October 20, 2014

Date

APPENDICES

I. State Sensitive Species

State-listed species, referred to by the AGFD as Wildlife of Special Concern in Arizona, are defined as species whose occurrence in Arizona is or may be in jeopardy, or with known or perceived threats or population declines (AGFD 1988, 1996).

As part of the environmental review process, the AGFD On-line Environmental Review Tool was accessed on January 3, 2014, to determine any special status species known to occur in the project vicinity (Appendix VII). The AGFD review tool indicated a record of the yellow-billed cuckoo (*Coccyzus americanus*), a species listed as threatened by the USFWS, within 3 miles of the project area. The yellow-billed cuckoo is analyzed in detail in Section 5 of this BE.

The AGFD review tool receipt also identified records of a bat colony and the following sensitive species within 3 miles of the project area: cave myotis (*Myotis velifer*), fulvous whistling duck (*Dendrocygna bicolor*), Western narrow-mouthed toad (*Gastrophryne olivacea*), and Tumamoc globeberry (*Tumamoca mcdougallii*).

The record of a bat colony stems from an urban bridge bat colony study conducted in 1999. There are three bridges within a 3-mile radius of the project area that were all maternity colonies for Mexican free-tailed bats (*Tadarida brasiliensis*): a railroad bridge at Cañada del Oro, a bridge over the Rillito River, and a bridge at Ina Road where cave myotis were also recorded (Sabra Tonn, AGFD Heritage Data Management System program supervisor, personal communication, April 25, 2014). The project will not affect bat habitat at these locations, and construction of a new bridge over the Santa Cruz River may provide additional habitat for bat roosting or maternity colonies.

Fulvous whistling ducks were recorded in the Santa Cruz River near Ina Road in 1994 and 1995. There have also been sightings of this species near the Roger Road Wastewater Reclamation Facility about a mile upstream of the project limits (Sabra Tonn, AGFD Heritage Data Management System program supervisor, personal communication, April 25, 2014). There are no nesting records of this species from the project vicinity. This species may have nested historically along the Lower Colorado River near Yuma. Nesting habitat is described as freshwater wetlands (e.g., shallow impoundments managed for rice production) and temporally flooded grasslands and pastures (AGFD 2001). The project area does not support nesting habitat for this species. Fulvous whistling ducks that may occur sporadically in the project area may be displaced during construction but would not be otherwise affected by the project.

Western narrow-mouthed toads were recorded in 2004 near the Roger Road Wastewater Reclamation Facility as an adult calling and several juveniles found dead on the road (Sabra Tonn, AGFD Heritage Data Management System program supervisor, personal communication, April 25, 2014). This species is found in the vicinity of streams, springs, and rain pools, is more terrestrial than aquatic in habitats, and can be found in deep, moist crevices or burrows, often with various rodents, and under large flat rocks, dead wood, and other debris near water. Western narrow-mouthed toads migrate variable distances between breeding pools and adjacent nonbreeding terrestrial habitats (AGFD 2013). Suitable habitat for the Western narrow-mouthed toad occurs in the project area and will be impacted by construction. Traffic on the roadway once

it is constructed has the potential to result in direct mortality of individuals of this species migrating between breeding and terrestrial habitats.

The Tumamoc globeberry was recorded approximately 1.5 miles southwest of the project limits during surveys in the late 1980s. This plant is known to go underground for long periods, is difficult to survey for, and has been known to come up in vacant lots within the city of Tucson (Sabra Tonn, AGFD Heritage Data Management System program supervisor, personal communication, April 25, 2014). This species may occur in the mesquite-dominated upland portions of the project area and may be impacted by construction of the roadway.

II. Migratory Bird Treaty Act

The Migratory Bird Treaty Act makes it unlawful to pursue, hunt, take, capture, kill, or sell birds listed therein. The statute does not discriminate between live or dead birds and grants full protection to feathers, eggs, and nests. A take does not include habitat destruction or alteration, as long as there is not a direct taking of birds, nests, eggs, or parts thereof.

Birds protected under the act include all common songbirds, waterfowl, shorebirds, hawks, owls, eagles, ravens, crows, native doves and pigeons, swifts, martins, and swallows; feathers, plumes, nests, and eggs are also protected. A complete list of protected species is found in Code of Federal Regulations Title 50, Part 10.13.

The riparian and upland portions of the project area support vegetation that is likely used by migratory birds for nesting during the breeding season. Removal of vegetation as a part of roadway and bridge construction has the potential to impact nesting birds protected under the Migratory Bird Treaty Act if this occurs during the bird breeding season (February 15 to August 31). Also, a red-tailed hawk (*Buteo jamaicensis*) nest occurs in a TEP steel tower to be replaced just upstream of the bridge. This species is also protected under the Migratory Bird Treaty Act. Two special status migratory birds, fulvous whistling duck and yellow-billed cuckoo, have been documented within 3 miles of the project area in the AGFD review tool. The project area doesn't support nesting habitat for these species. See Section 5 (Species Evaluation) and Appendix I (State Sensitive Species) for details.

III. Pima County Protected Native Plants

Protected Native Plants

A survey for native plants in the project area was completed in accordance with *Pima County Environmentally Sensitive Roadway Design Guidelines* (Pima County 2010).

The following protected native plant was observed in the project area during the field survey:

Common Name	Scientific Name
Velvet mesquite	<i>Prosopis velutina</i>

To comply with the Arizona Native Plant Law and as described in Section 6 of this BE, Pima County will file a Notice of Intent with the Arizona Department of Agriculture for the removal of applicable native plants. The Notice of Intent will be filed 60 days prior to the removal of native plants.

Invasive Plant Species

Invasive plant species that occur in the project area include buffelgrass (*Pennisetum ciliare*), Bermudagrass (*Cynodon dactylon*), giant reed (*Arundo donax*), and saltcedar (*Tamarix aphylla*). These and other invasive species could be disturbed during construction. As described in Section 6 of this Biological Evaluation, an invasive species management plan will be completed to address treatment of the project area for invasive species infestations.

IV. Pima County Multi-species Conservation Plan Covered Species

The following table of covered species was developed from the Pima County Multi-species Conservation Plan (MSCP). In addition to listing the species covered in the MSCP, Table 2 summarizes the habitat requirements and observed occurrences within the project limits by species. The table also describes the presence of potential modeled habitat and Pima County's Priority Conservation Areas within the project limits. The 44 species in Table 2 consist of seven mammals, eight birds, two amphibians, six reptiles, five fish, 12 invertebrates, and four plants.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Abert's towhee <i>Pipilo aberti</i>	Sonoran Riparian Deciduous Woodlands and Riparian Scrubland with a dense understory of shrubs.	Medium and high	Yes, Priority 1	The project limits support suitable habitat, and this species was recorded during the field visit. The project will result in the permanent removal of 0.3 acre and temporary impacts to an additional 0.4 acre of potential nesting habitat.
Allen's big-eared bat <i>Idionycteris phyllotis</i>	White fir; ponderosa pine; pinyon-juniper; Mexican woodland; riparian areas of sycamores, cottonwoods, and willows; and Mohave desertscrub. Associated with boulder piles, cliffs, rocky outcrops, or lava flows, and roosts in caves and abandoned mineshafts.	None	None	This species may forage along the Santa Cruz River, but no suitable roosting habitat occurs within the project limits.
Arkenstone cave pseudoscorpion <i>Albiorix anophthalmus</i>	Known only from cave habitat associated with the Arkenstone Cave.	None	None	The project limits do not support potential habitat for this species.
Bell's vireo <i>Vireo bellii</i>	Prefers dense, low, shrubby vegetation in riparian areas.	Low, medium, and high	None	The project limits support suitable habitat, and this species was recorded during the field visit. The project will result in the permanent removal of 0.3 acre and temporary impacts to an additional 0.4 acre of potential nesting habitat.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Cactus ferruginous pygmy-owl <i>Glaucidium brasilianum cactorum</i>	The pygmy-owl has been found in river bottom woodlands and paloverde cacti–mixed scrub associations of the Sonoran Desert.	Low, medium, and high	Yes, Priority 1	Floodplain areas dominated by scattered mesquites and riparian habitat characterized by narrow stringers of Goodding’s willow within the project limits. The project limits are unlikely to support this species.
California leaf-nosed bat <i>Macrotus californicus</i>	Mostly found in the Sonoran desertscrub; primary summer and winter range essentially the same; primarily roost in mines, caves, and rock shelters.	Medium and high	None	The project limits do not contain roosting habitat, and desertscrub areas within the project limits are unlikely to be used by this species.
Chiricahua leopard frog <i>Lithobates (Rana) chiricahuensis</i>	Streams, rivers, backwaters, ponds, and stock tanks that are mostly free from introduced fish, crayfish, and bullfrogs. Requires permanent or nearly permanent water sources.	None	None	The perennial reach of the Santa Cruz River in the project area is more than 1,000 feet below the elevation range of this species, and there are no records from the project vicinity. The project limits do not support suitable habitat for the Chiricahua leopard frog.
Desert box turtle <i>Terrapene ornata luteola</i>	Occurs in grasslands and desert grasslands and inhabits arid and semi-arid treeless plains and rolling grass and shrub land where soils are sandy.	None and medium	Yes, Priority 4	The project limits do not contain grassland habitat known to support the desert box turtle.
Desert pupfish <i>Cyprinodon macularius</i>	Shallow waters of springs, small streams, and marshes below 1,500 feet in elevation.	High	None	The effluent-dominated reach of the Santa Cruz River within the project limits does not provide suitable habitat for any protected native fish species, including the desert pupfish.
Desert sucker <i>Catostomus clarki</i>	Desert suckers prefer ripply waters, rapids, and flowing streams with gravelly bottoms.	High	None	The effluent-dominated reach of the Santa Cruz River within the project limits does not provide suitable habitat for any protected native fish species, including the desert sucker.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Giant spotted whiptail <i>Aspidoscelis (Cnemidophorus) burti stictogrammus</i>	This species occurs in lower Sonoran (chiefly riparian areas) and upper Sonoran life zones in dense, shrubby vegetation, often near streams. Occurs in riparian habitat dominated by sycamore, cottonwood, ash, and various grasses and forbs	Low, medium, and high	Yes, Priority 34	The project limits are outside the known range of this species and do not support suitable riparian habitat.
Gila chub <i>Gila intermedia</i>	Pools, springs, cienegas, and streams between 2,000 and 3,500 feet.	Medium	None	The effluent-dominated reach of the Santa Cruz River within the project limits does not provide suitable habitat for any protected native fish species, including the Gila chub.
Gila topminnow <i>Poeciliopsis occidentalis occidentalis</i>	Small streams, springs, cienegas, and vegetated shallows below 4,500 feet.	High	None	The effluent-dominated reach of the Santa Cruz River within the project limits does not provide suitable habitat for any protected native fish species, including the Gila topminnow.
Ground snake <i>Sonora semiannulata</i>	Desert grassland and mesquite thicket valley floors and in grassland to encinal slopes.	None	None	The project limits support potentially suitable habitat for this species. The project will result in the permanent removal of 6.3 to 8.0 acres and temporary impacts to an additional 4.9 acres (plus an additional 1-3 acres for staging) of potential habitat for the ground snake.
Huachuca water umbel <i>Lilaeopsis schaffneriana</i> ssp. <i>recurva</i>	Cienegas and associated vegetation within Sonoran desertscrub, grassland, or oak woodland, and conifer forest between 4,000 and 6,500 feet above mean sea level.	Medium and high	Yes, Priority 4	The project limits are well outside the known geographic range, about 2,000 feet below the recorded elevation range, and do not support suitable habitat for the Huachuca water umbel.
Invertebrates (13 species) <i>Sonorella</i> spp.	<i>Sonorella</i> spp. live in deep, limestone rockslides in isolated locations in Pima County. Their habitat is protected from the drying effects of the sun by outcrops of limestone and decomposed granite.	None	None	The project limits do not contain limestone rockslides known to support <i>Sonorella</i> spp.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Lesser long-nosed bat <i>Leptonycteris curasoae yerbabuena</i>	Desertscrub habitat with agave and columnar cacti present as food plants. Day roosts in caves and abandoned tunnels. Forages at night on nectar, pollen, and fruit of paniculate agaves and columnar cacti. This species is migratory and is present in Arizona usually from April to September and is in Mexico the remainder of the year.	Low, medium, and high	None	The project limits do not contain agaves or columnar cacti used as food plants. The project limits do not contain caves or abandoned tunnels used for day roosts. Forage plants in the project vicinity would not be impacted.
Longfin dace <i>Agosia chrysogaster</i>	Wide-ranging, from intermittent low-desert streams to clear and cool brooks at higher elevations. Tend to occupy relatively small streams.	Medium	None	The effluent-dominated reach of the Santa Cruz River within the project limits does not provide suitable habitat for any protected native fish species, including the longfin dace.
Lowland leopard frog <i>Lithobates (Rana) yavapaiensis</i>	Inhabit aquatic systems from desert grasslands to pinyon-juniper. They are habitat generalists and breed in a variety of natural and man-made aquatic systems. Natural systems include rivers, permanent streams, permanent pools in intermittent streams, beaver ponds, cienegas, and springs, while man-made systems include earthen cattle tanks, livestock drinkers, canals, irrigation sloughs, wells, mine adits, abandoned swimming pools, and ornamental backyard ponds.	High	Yes, Priority 4	The project limits occur below the elevation range of this species. There are no records of lowland leopard frogs from the project vicinity.
Merriam's mouse <i>Peromyscus merriami</i>	Found primarily in mesquite bosques. Also found in thick stands of cholla, pricklypear, paloverde, and grasses.	Medium and high	None	The project limits support potentially suitable habitat for this species. The project will result in the permanent removal of 6.3 to 8.0 acres and temporary impacts to an additional 4.9 acres (plus 1-3 acres for staging) of potential habitat for the Merriam's mouse.
Mexican long-tongued bat <i>Choeronycteris mexicana</i>	Canyons of mixed oak-conifer forests in mountains rising from the desert. Caves and abandoned mines are favored daytime roosts. Often found in shallow caves or rock shelters. A few are found in paloverde-saguaro areas.	None	None	No canyon habitat occurs, and the project limits do not contain agave or columnar cacti used as food plants. Forage plants in the project vicinity would not be impacted.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Northern Mexican gartersnake <i>Thamnophis eques megalops</i>	Most abundant in densely vegetated habitat surrounding cienegas, cienega streams, and stock tanks, and in or near water along streams in valley floors and generally open areas, but not in steep mountain canyon stream habitat.	High	Yes, Priority 4	Suitable physical habitat is present, but the project limits occur about 800 feet below the known elevation range and outside the extant geographic range of the Northern Mexican gartersnake. There are no records of this species from the project vicinity.
Needle-spined pineapple cactus <i>Echinomastus erectocentrus</i> var. <i>erectocentrus</i>	Found in light-colored gravel on gentle slopes, hills, and alluvial fans in upland desert or semi-desert grassland. Found in light-colored gravel of felsic volcanics, granite, or limestone. Alluvial soils with rock and gravel cover over sandstone conglomerate; also limestone. Occurs mainly in southeast Pima and west Cochise counties.	None	None	The project limits are outside the range of the needle-spined pineapple cactus and do not contain gentle slopes, hills, and alluvial fans in upland desert or semi-desert grasslands that are known to support this species.
Pale Townsend's big-eared bat <i>Plecotus townsendii pallescens</i>	Summer day roosts are in caves and mines from deserts scrub up to woodlands and coniferous forests. Night roosts may often be in abandoned buildings. In winter, they hibernate in cold caves, lava tubes, and mines, mostly in uplands and mountains from the vicinity of the Grand Canyon to the southeast part of the state.	Low, medium, and high	None	The project limits do not support potential roosting habitat for the Pale Townsend's big-eared bat.
Pima pineapple cactus <i>Coryphantha scheeri</i> var. <i>robustispina</i>	Alluvial basins or on hillsides in semidesert grassland and Sonoran deserts scrub in south Arizona and north Sonora, Mexico. The species range does not extend north of Tucson.	None	None	The project limits do not provide suitable habitat and are outside the known distribution of the Pima pineapple cactus.
Red-backed whiptail <i>Aspidoscelis xanthonata</i>	Canyons and hills in juniper-oak woodlands down to Sonoran upland desert habitats, 2,000 to 4,300 feet elevation. Found among dense shrubby vegetation near and on the banks of semiarid permanent streams and arroyos. Known from Organ Pipe Cactus National Monument and the Tohono O'odham Nation.	None	None	The project limits are outside the known range of this species.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Rufous-winged sparrow <i>Aimophila carpalis</i>	Flat or gently hilly Sonoran desertscrub and Sinaloan thornscrub, characterized by scattered spiny trees and shrubs.	Low, medium, and high	None	The project limits support potentially suitable habitat for this species. The project will result in the permanent removal of 6.0 to 7.7 acres and temporary impacts to an additional 4.5 acres (plus an additional 1-3 acres for staging) of potential habitat for the rufous-winged sparrow.
Sonora sucker <i>Catostomus insignis</i>	Requires lentic and pool habitats with gravel-rubble bottoms.	High	None	The effluent-dominated reach of the Santa Cruz River within the project limits does not provide suitable habitat for any protected native fish species, including the Sonora sucker.
Sonoran Desert tortoise <i>Gopherus agassizii</i>	Occurs primarily on rocky slopes and bajadas of Mojave and Sonoran desertscrub. Caliche caves in incised, cut banks of washes (arroyos) are also used for shelter sites, especially in the Lower Colorado River Valley subdivision. Shelter sites are rarely found in shallow soils.	None	None	The project limits do not contain habitat suitable for the Sonoran Desert tortoise. The project limits are characterized primarily as a floodplain area with sandy and gravelly, unconsolidated soils that are not suitable for den sites. Use of the project area for dispersal is unlikely due to the presence of I-10 and adjacent development.
Southwestern willow flycatcher <i>Empidonax traillii extimus</i>	Cottonwood/willow and tamarisk vegetation communities along rivers and streams below 8,500 feet.	Low, medium, and high	None	The project limits and the project vicinity do not contain riparian vegetation that is suitable for nesting by the Southwestern willow flycatcher. The project will result in the permanent removal of 0.3 acre and temporary impacts to an additional 0.4 acre of riparian vegetation that may be used as stopover habitat by this species during migration.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Swainson's hawk <i>Buteo swainsoni</i>	Grasslands, Semidesert grasslands, and Savanna grassland, apart or intermixed with open desertscrub habitats of the Sonoran, Mojave, Chihuahuan, and Great Basin deserts. Forage in open stands of grass-dominated vegetation, sparse shrub-lands, and small open woodlands.	Low	None	The project limits do not contain vegetation known to support the Swainson's hawk.
Tucson shovel-nosed snake <i>Chionactis occipitalis klauberi</i>	Found in flat and sparsely vegetated areas with fine, wind-blown sand, such as dunes, washes, sandy flats, and loose soil. Not found in rocky desert terrain.	Low, medium, and high	None	The project limits support potentially suitable habitat for this species. The project will result in the permanent removal of 6.0 to 7.7 acres and temporary impacts to an additional 4.5 acres (plus an additional 1-3 acres for staging) of potential habitat for the Tucson shovel-nosed snake.
Tumamoc globeberry <i>Tumamoca macdougallii</i>	Found in the Arizona Upland subdivision of Sonoran desertscrub. Associated with a variety of nurse plants and in settings ranging from sandy valley bottoms to rocky bajada slopes.	Low and medium	None	The project limits support potentially suitable habitat for this species. The project will result in the permanent removal of 6.0 to 7.7 acres and temporary impacts to an additional 4.5 acres (plus an additional 1-3 acres for staging) of potential habitat
Western burrowing owl <i>Athene cunicularia hypugaea</i>	Variable in open, well-drained grasslands, steppes, deserts, prairies, and agricultural lands, often associated with burrowing mammals. Sometimes in open areas such as vacant lots near human habitation, golf courses, or airports.	Low	Yes, Priority 1	The project limits support potential habitat for the Western burrowing owl. No Western burrowing owl or burrow sites were observed during the field visit though a comprehensive survey was not conducted.
Western red bat <i>Lasiurus blossevillii</i>	Riparian and other wooded areas. Roosts by day in trees. Summer roosts usually in tree foliage, sometimes in leafy shrubs or herbs. Often found in trees of fruit orchards. May also roost in saguaro boots and occasionally in cavelike situations, though they generally avoid caves and buildings during summer and winter.	High	None	Riparian vegetation along the Santa Cruz River within the project limits may be used by the Western red bat. The project will result in the permanent removal of 0.3 acre and temporary impacts to an additional 0.4 acre of riparian vegetation that may be used by this species.

Table 2. Pima County Multi-species Conservation Plan covered species.

Species	Habitat Requirements	Modeled Potential Habitat	Priority Conservation Area	Occurrence in Project Limits
Western yellow bat <i>Lasiurus xanthinus</i>	Found primarily in association with planted fan palms in residential and park areas. Also found in riparian deciduous forests and woodlands.	None	None	Riparian vegetation along the Santa Cruz River within the project limits may be used by the Western yellow bat. The project will result in the permanent removal of 0.3 acre and temporary impacts to an additional 0.4 acre of riparian vegetation that may be used by this species.
Yellow-billed cuckoo <i>Coccyzus americanus</i>	Large blocks of riparian woodlands (cottonwood, willow, or tamarisk) at elevations less than 6,600 feet.	Low, medium, and high	None	The project limits do not contain riparian vegetation that is suitable for nesting. The project will result in the permanent removal of 0.3 acre and temporary impacts to an additional 0.4 acre of riparian vegetation that may be used as stopover habitat during migration.

All ground photos were taken April 29, 2014.

V. Photo Log



Photo 1. View near the east end of the Sunset Road proposed alignment west of the I-10 eastbound frontage road, facing south.



Photo 2. View near the east end of the Sunset Road proposed alignment west of the I-10 eastbound frontage road and just south of the old Sunset Road alignment, facing west.

All ground photos were taken April 29, 2014.



Photo 3. View along the Sunset Road proposed alignment about midway between the I-10 eastbound frontage road and Silverbell Road, facing east.



Photo 4. View along the Sunset Road proposed alignment about midway between the I-10 eastbound frontage road and Silverbell Road, facing west. This photo shows a historical sand/gravel excavation pit.

All ground photos were taken April 29, 2014.



Photo 5. View along the Sunset Road proposed alignment east of the Santa Cruz River, facing east.



Photo 6. View along the Sunset Road proposed alignment just east of the Santa Cruz River, facing east.

All ground photos were taken April 29, 2014.



Photo 7. View along the Sunset Road proposed alignment just east of the Santa Cruz River, facing west toward Silverbell Road.



Photo 8. View of the Santa Cruz along the Sunset Road proposed alignment, facing southeast (upstream).

All ground photos were taken April 29, 2014.



Photo 9. View of the Santa Cruz along the Sunset Road proposed alignment, facing northwest (downstream).



Photo 10. View along the Sunset Road proposed alignment just west of the Santa Cruz River, facing east.

All ground photos were taken April 29, 2014.



Photo 11. View along the Sunset Road proposed alignment about halfway between the Santa Cruz River and Silverbell Road, facing east.

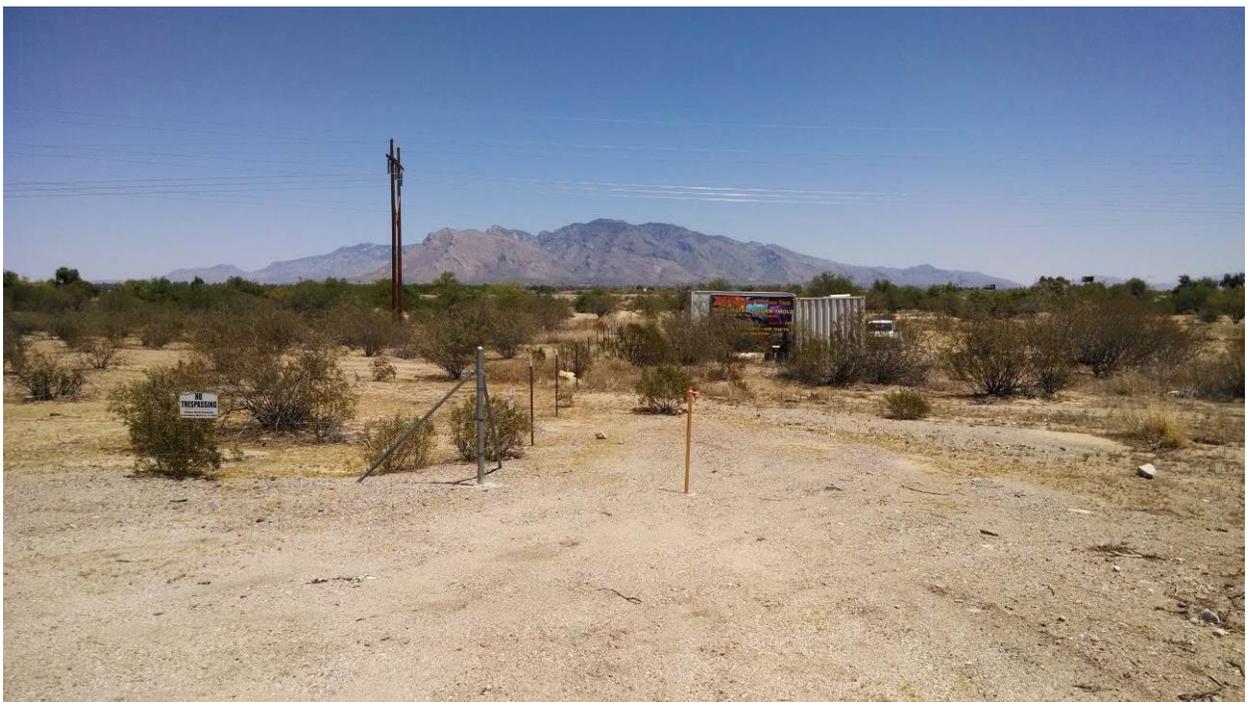


Photo 12. View along the Sunset Road proposed alignment at Silverbell Road, facing east.

VI. USFWS IPaC Species List



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Arizona Ecological Services Field Office
2321 WEST ROYAL PALM ROAD, SUITE 103
PHOENIX, AZ 85021
PHONE: (602)242-0210 FAX: (602)242-2513
URL: www.fws.gov/southwest/es/arizona/;
www.fws.gov/southwest/es/EndangeredSpecies/lists/

Consultation Tracking Number: 02EAAZ00-2014-SLI-0320

June 17, 2014

Project Name: Sunset Rd: Silverbell Rd to I-10 E-bound Frontage

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. Please refer to the species information links found at http://www.fws.gov/southwest/es/arizona/Docs_Species.htm or <http://www.fws.gov/southwest/es/arizona/Documents/MiscDocs/AZSpeciesReference.pdf> for a quick reference, to determine if suitable habitat for the species on your list occurs in your project area.

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 determine whether 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, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared 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. An effect exists 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" (e.g., downstream). 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 that they be considered 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>.

In addition to species listed under the Act, we 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 (BGEPA) (16 U.S.C. 668 *et seq.*). Both laws prohibit the take of covered species. The list of MBTA-protected birds is in 50 CFR 10.13 (for an alphabetical list see <http://www.fws.gov/migratorybirds/RegulationsPolicies/mbta/MBTANDX.HTML>). The Service's Division of Migratory Birds is the lead for consultations under these laws (Southwest Regional Office phone number: 505/248-7882). For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following web site: <http://www.fws.gov/migratorybirds/mbpermits.html>. Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g. cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/southwest/es/arizona/CellTower.htm>

Although bald eagles (*Haliaeetus leucocephalus*) are no longer listed under the Act, they are protected under both the BGEPA and the MBTA. If a bald eagle nest occurs in or near the proposed project area, our office should be contacted. An evaluation must be performed to determine whether the project is likely to disturb nesting bald eagles (see <http://www.fws.gov/southeast/es/baldeagle/>) and the Division of Migratory Birds consulted if necessary. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles (see <http://www.fws.gov/midwest/eagle/pdf/NationalBaldEagleManagementGuidelines.pdf>).

Activities that involve 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 Indian 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. For more information, please contact our tribal coordinator, John Nystedt, at (928) 556-2160 or John_Nystedt@fws.gov.

The State of Arizona protects some species not protected by Federal law. We recommend you contact the Arizona Game and Fish Department (AGFD) for animals and Arizona Department of Agriculture for plants to determine if species protected by or of concern to the State may occur in your action area. The AGFD has an Environmental Review On-Line Tool that can be accessed at <http://www.azgfd.gov/hgis/>. We also recommend that you coordinate with the AGFD regarding your project.

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 Brenda Smith at 928/556-2157 for projects in Northern Arizona, our general Phoenix number (602/242-0210) for central Arizona, or Jean Calhoun at 520/670-6150 (x223) for projects in southern Arizona.

Sincerely,

/s/

Steven L. Spangle

Field Supervisor

Attachment



United States Department of Interior
Fish and Wildlife Service

Project name: Sunset Rd: Silverbell Rd to I-10 E-bound Frontage

Official Species List

Provided by:

Arizona Ecological Services Field Office
2321 WEST ROYAL PALM ROAD, SUITE 103
PHOENIX, AZ 85021
(602) 242-0210
<http://www.fws.gov/southwest/es/arizona/>
<http://www.fws.gov/southwest/es/EndangeredSpecies/lists/>

Consultation Tracking Number: 02EAAZ00-2014-SLI-0320

Project Type: Transportation

Project Description: This project will construct Segment I of Sunset Road from Silverbell Road to the I-10 Eastbound Frontage Road as a three-lane roadway that will include a bridge over the Santa Cruz River. Pima County Department of Transportation is the proponent and there is no federal funding. The project will impact native vegetation, including riparian vegetation along the Santa Cruz River and upland vegetation in floodplain and adjacent upslope areas. Construction is expected to begin in late summer 2015.



United States Department of Interior
Fish and Wildlife Service

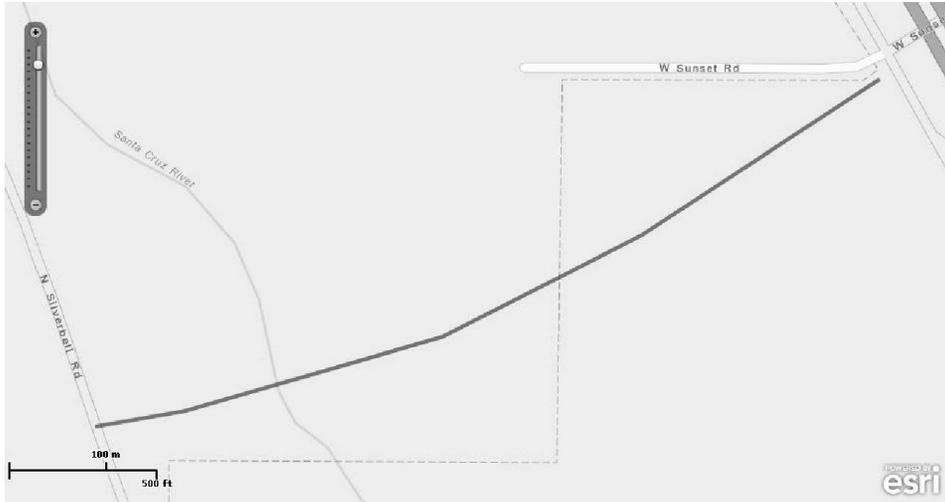
Project name: Sunset Rd: Silverbell Rd to I-10 E-bound Frontage



United States Department of Interior
Fish and Wildlife Service

Project name: Sunset Rd: Silverbell Rd to I-10 E-bound Frontage

Project Location Map:



Project Coordinates: MULTIPOLYGON (((-111.0451096 32.3070922, -111.0451114 32.3070913, -111.0473001 32.3061482, -111.0473033 32.3061472, -111.0501357 32.3054581, -111.0501375 32.3054577, -111.0511246 32.3053126, -111.0511324 32.305313, -111.0511394 32.3053164, -111.0511447 32.3053221, -111.0511473 32.3053295, -111.0511469 32.3053373, -111.0511435 32.3053443, -111.0511378 32.3053496, -111.0511304 32.3053522, -111.0501442 32.3054972, -111.0473144 32.3061856, -111.0451281 32.3071277, -111.0425112 32.3085781, -111.0425038 32.3085805, -111.042496 32.3085798, -111.042489 32.3085763, -111.042484 32.3085703, -111.0424816 32.3085629, -111.0424823 32.3085551, -111.0424858 32.3085481, -111.0424918 32.3085431, -111.0451096 32.3070922)))

Project Counties: Pima, AZ

Endangered Species Act Species List

There are a total of 10 threatened, endangered, or candidate species on your 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. Critical habitats listed on the **Has Critical Habitat** lines may or may not lie within your project area. See the **Critical habitats within your project area** section further below for critical habitat that lies within your project. Please contact the designated FWS office if you have questions.

California Least tern (*Sterna antillarum brownii*)
Listing Status: Endangered

jaguar (*Panthera onca*)
Population: U.S.A.(AZ,CA,LA,NM,TX),Mexico,Central and South America
Listing Status: Endangered
Has Critical Habitat: Final designated

Lesser Long-Nosed bat (*Leptonycteris curasoae yerbabuena*)
Population: Entire
Listing Status: Endangered

Northern Mexican gartersnake (*Thamnophis eques megalops*)
Listing Status: Proposed Threatened
Has Critical Habitat: Proposed

Sonoran desert tortoise (*Gopherus morafkai*)
Listing Status: Candidate

Sonoran pronghorn (*Antilocapra americana sonoriensis*)
Population: Entire
Listing Status: Endangered

Sonoyta Mud turtle (*Kinosternon sonoriense longifemorale*)
Listing Status: Candidate



United States Department of Interior
Fish and Wildlife Service

Project name: Sunset Rd: Silverbell Rd to I-10 E-bound Frontage

Southwestern Willow flycatcher (*Empidonax traillii extimus*)

Population: Entire

Listing Status: Endangered

Has Critical Habitat: Final designated

Tucson Shovel-Nosed Snake (*Chionactis occipitalis klauberi*)

Listing Status: Candidate

Yellow-Billed Cuckoo (*Coccyzus americanus*)

Population: Western U.S. DPS

Listing Status: Proposed Threatened



United States Department of Interior
Fish and Wildlife Service

Project name: Sunset Rd: Silverbell Rd to I-10 E-bound Frontage

Critical habitats that lie within your project area

There are no critical habitats within your project area.

VII. AGFD On-line Environmental Review Tool Receipt

Arizona's On-line Environmental Review Tool

Search ID: 20140103022148

Project Name: Sunset Rd: I-10 to Silverbell

Date: 1/3/2014 9:57:19 AM

Please review the entire receipt for project type recommendations and/or species or location information and retain a copy for future reference. If any of the information you provided did not accurately reflect this project, or if project plans change, another review should be conducted, as this determination may not be valid.

Arizona's On-line Environmental Review Tool:

1. This On-line Environmental Review Tool inquiry has generated recommendations regarding the potential impacts of your project on Special Status Species (SSS) and other wildlife of Arizona. SSS include all U.S. Fish and Wildlife Service federally listed, U.S. Bureau of Land Management sensitive, U.S. Forest Service sensitive, and Arizona Game and Fish Department (Department) recognized species of concern.
2. These 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). These recommendations are preliminary in scope, designed to provide early considerations for all species of wildlife, pertinent to the project type you entered.
3. This receipt, generated by the automated On-line Environmental Review Tool does not constitute an official project review by Department biologists and planners. Further coordination may be necessary as appropriate under the National Environmental Policy Act (NEPA) and/or the Endangered Species Act (ESA).

The U.S. Fish and Wildlife Service (USFWS) has regulatory authority over all federally listed species under the ESA. Contact USFWS Ecological Services Offices: <http://arizonaes.fws.gov/>.

Phoenix Main Office
2321 W. Royal Palm Road, Suite 103
Phoenix, AZ 85021
Phone 602-242-0210
Fax 602-242-2513

Tucson Sub-Office
201 North Bonita, Suite 141
Tucson, AZ 85745
Phone 520-670-6144
Fax 520-670-6154

Flagstaff Sub-Office
323 N. Leroux Street, Suite 101
Flagstaff, AZ 86001
Phone 928-226-0614
Fax 928-226-1099

Disclaimer:

1. 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.
2. The Department's 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.
3. 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. HDMS data contains information about species occurrences that have actually been reported to the Department.

Arizona Game and Fish Department Mission

To conserve, enhance, and restore Arizona's diverse wildlife resources and habitats through aggressive protection and

management programs, and to provide wildlife resources and safe watercraft and off-highway vehicle recreation for the enjoyment, appreciation, and use by present and future generations.

Project Category: Transportation & Infrastructure, Road construction (including staging areas), Realignment/ new roads

Project Type Recommendations:

All degraded and disturbed lands should be restored to their natural state. 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.

Based on the project type entered; coordination with Arizona Department of Environmental Quality may be required (<http://www.azdeq.gov/>).

Based on the project type entered; coordination with County Flood Control districts may be required.

Based on the project type entered; coordination with State Historic Preservation Office may be required (<http://azstateparks.com/SHPO/index.html>)

Based on the project type entered; coordination with U.S. Army Corps of Engineers may be required (<http://www.spl.usace.army.mil/regulatory/phonedir.html>)

During planning and construction, 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 and after project activities to reduce the spread of invasive species. 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 <http://www.azda.gov/PSD/quarantine5.htm>. 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: <http://www.usda.gov/wps/portal/usdahome>. The Department regulates the importation, purchasing, and transportation of wildlife and fish (Restricted Live Wildlife), please refer to the hunting regulations for further information http://www.azgfd.gov/h_f/hunting_rules.shtml.

During the planning stages of your project, please consider the local or regional needs of wildlife in regards to movement, connectivity, and access to habitat needs. Loss of this permeability prevents wildlife from accessing resources, finding mates, reduces gene flow, prevents wildlife from re-colonizing areas where local extirpations may have occurred, and ultimately prevents wildlife from contributing to ecosystem functions, such as pollination, seed dispersal, control of prey numbers, and resistance to invasive species. In many cases, streams and washes provide natural movement corridors for wildlife and should be maintained in their natural state. Uplands also support a large diversity of species, and should be contained within important

Arizona's On-line Environmental Review Tool

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wildlife movement corridors. In addition, maintaining biodiversity and ecosystem functions can be facilitated through improving designs of structures, fences, roadways, and culverts to promote passage for a variety of wildlife.

Hydrological considerations: design culverts to minimize impacts to channel geometry, or design channel geometry (low flow, overbank, floodplains) and substrates to carry expected discharge using local drainages of appropriate size as templates. Aquatic wildlife considerations: reduce/minimize barriers to migration of amphibians or fish (e.g. eliminate falls). Terrestrial wildlife: washes and stream corridors often provide important corridors for movement. Overall culvert width, height, and length should be optimized for movement of the greatest number and diversity of species expected to utilize the passage. Culvert designs should consider moisture, light, and noise, while providing clear views at both ends to maximize utilization. For many species, fencing is an important design feature that can be utilized with culverts to funnel wildlife into these areas and minimize the potential for roadway collisions. Guidelines for culvert designs to facilitate wildlife passage can be found at <http://www.azgfd.gov/hgis/guidelines.aspx>.

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 (including 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.

Planning: consider impacts of lighting intensity on mammals and birds and develop measures or alternatives that can be taken to increase

human safety while minimizing potential impacts to wildlife. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use.

Preconstruction - Consider design structures and construction plans that minimize impacts to channel geometry (i.e. width/depth ratio, sinuosity, allow overflow channels) to avoid alteration of hydrological function. Identify whether wildlife species use the structure for roosting or nesting during anticipated construction period. Plan the timing of construction/maintenance to minimize impacts to wildlife species. In addition to the species list generated by the Arizona's On-line Environmental Review Tool, the Department recommends that surveys be conducted at the bridge and in the vicinity of the bridge to identify additional or currently undocumented bat, bird, or aquatic species in the project area. To minimize impacts to birds and bats, as well as aquatic species, consider conducting maintenance and construction activities outside the breeding/maternity season (breeding seasons for birds and bats usually occur spring - summer). Examining the crevices for the presence of bats prior to pouring new paving materials. When bats are present, the top of the crevices should be sealed to prevent material from dripping or falling through the cracks and potentially onto bats. If bats are present, maintenance and construction (including paving and milling) activities should be conducted during nighttime hours, if possible, when the fewest number of bats will be roosting. Consider incorporating roosting habitat for bats into bridge designs. Minimize impacts to the vegetation community. A revegetation plan should be developed to replace impacted communities. Unavoidable impacts to vegetation should be mitigated on-site whenever possible. During construction: Erosion control structures and drainage features should be used to prevent introduction of sediment laden runoff into the waterway. Minimize instream construction activity. If culverts are planned, mitigate impacts to wildlife and fish movement. Guidelines for bridge designs to facilitate wildlife passage can be found at <http://www.azgfd.gov/hgis/guidelines.aspx>.

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Recommendations will be dependant upon goals of the fence project and the wildlife species expected to be impacted by the project. General guidelines for ensuring wildlife-friendly fences include: barbless wire on the top and bottom with the maximum fence height 42", minimum height for bottom 16". Modifications to this design may be considered for fencing anticipated to be routinely encountered by elk, bighorn sheep or pronghorn (e.g., Pronghorn fencing would require 18" minimum height on the bottom). Please refer to the Department's Fencing Guidelines located at <http://www.azgfd.gov/hgis/guidelines.aspx>.

The Department recommends that wildlife surveys are conducted to determine if noise-sensitive species occur within the project area. Avoidance or minimization measures could include conducting project activities outside of breeding seasons.

The Department requests further coordination to provide project/species specific recommendations, please contact Project Evaluation Program directly.

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.

Project Location and/or Species recommendations:

Heritage Data Management System 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 (refer to page 1 of the receipt). Please contact:
Ecological Services Office
US Fish and Wildlife Service
2321 W. Royal Palm Rd.

Phoenix, AZ 85021-4951
Phone: 602-242-0210
Fax: 602-242-2513

Heritage Data Management System 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 (refer to page 1 of the receipt). Please contact:
Arizona Department of Agriculture
1688 W Adams
Phoenix, AZ 85007
Phone: 602-542-4373

Recommendations Disclaimer:

1. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project.
2. These recommendations are proposed actions or guidelines to be considered during **preliminary project development**.
3. Additional site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.
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. The Department is interested in the conservation of all fish and wildlife resources, including those Special Status Species listed on this receipt, and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
6. **Further coordination requires the submittal of this initialed and signed Environmental Review Receipt with a cover letter and project plans or documentation that includes project narrative,**

Arizona's On-line Environmental Review Tool

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acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map).

7. Upon receiving information by AZGFD, please allow 30 days for completion of project reviews. Mail 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**

Terms of Use

By using this site, you acknowledge that you have read and understand the terms of use. Department staff may revise these terms periodically. If you continue to use our website after we post changes to these terms, it will mean that you accept such changes. If at any time you do not wish to accept the Terms, you may choose not to use the website.

1. This Environmental Review and project planning website was developed and intended for the purpose of screening projects for potential impacts on resources of special concern. By indicating your agreement to the terms of use for this website, you warrant that you will not use this website for any other purpose.
2. Unauthorized attempts to upload information or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act .
3. The Department reserves the right at any time, without notice, to enhance, modify, alter, or suspend the website and to terminate or restrict your access to the website.
4. This Environmental Review is based on the project study area that was entered. The review must be redone if the project study area,

location, or the type of project changes. If additional information becomes available, this review may need to be reconsidered.

5. A signed and initialed copy of the Environmental Review Receipt indicates that the entire receipt has been read by the signer of the Environmental Review Receipt.

Security:

The Environmental Review and project planning web application operates on a complex State computer system. This system is monitored to ensure proper operation, to verify the functioning of applicable security features, and for other like purposes. Anyone using this system expressly consents to such monitoring and is advised that if such monitoring reveals possible evidence of criminal activity, system personnel may provide the evidence of such monitoring to law enforcement officials. Unauthorized attempts to upload or change information; to defeat or circumvent security measures; or to utilize this system for other than its intended purposes are prohibited.

This website maintains a record of each environmental review search result as well as all contact information. This information is maintained for internal tracking purposes. Information collected in this application will not be shared outside of the purposes of the Department.

If the Environmental Review Receipt and supporting material are not mailed to the Department or other appropriate agencies within six (6) months of the Project Review Receipt date, the receipt is considered to be null and void, and a new review must be initiated.

Print this Environmental Review Receipt using your Internet browser's print function and keep it for your records. Signature of this receipt indicates the signer has read and understands the information

Arizona's On-line Environmental Review Tool

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provided.

Signature: _____

Date: _____

Proposed Date of Implementation: _____

Please provide point of contact information regarding this Environmental Review.

Application or organization responsible for project implementation

Agency/organization: _____

Contact Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

Person Conducting Search (if not applicant)

Agency/organization: _____

Contact Name: _____

Address: _____

City, State, Zip: _____

Phone: _____

E-mail: _____

VIII. USFWS Technical Assistance Letter



United States Department of the Interior



Fish and Wildlife Service
Arizona Ecological Services Office
2321 West Royal Palm Road, Suite 103
Phoenix, Arizona 85021-4951
Telephone: (602) 242-0210 Fax: (602) 242-2513

AESO/SE
02EAAZ00-2014-TA-0564

September 11, 2014

Ms. Gloria Brown
Pima County Department of Transportation
Environmental Quality
33 North Stone Avenue, Suite 700
Tucson, Arizona 85701-1429

Dear Ms. Brown:

Thank you for your July 24, 2014 request for technical assistance related to the proposed extension and bridge construction along Sunset Road, from Silverbell Road to the eastbound frontage road of Interstate 10, in Pima County, Arizona. We have reviewed the information you provided and have the following comments regarding your request.

As indicated in your attached Biological Evaluation (BE), the project proposal contains habitat for and falls within the range of the southwestern willow flycatcher (*Empidonax traillii extimus*), a species listed as endangered under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1544)(ESA). The project also contains habitat for and falls within the range of the yellow-billed cuckoo (*Coccyzus americanus*), a species proposed for listing under the ESA as a threatened species. Because the project area contains riparian habitat, the project site also likely supports a number of migratory birds, including the western burrowing owl (*Athene cunicularia hypugaea*).

As discussed in your BE, the project area does not support breeding/nesting habitat for either the southwestern willow flycatcher or the yellow-billed cuckoo. However, as correctly stated in the BE, the project area does support habitat elements that likely provide migratory habitat for both of these species. Additionally, the riparian habitat within the project boundaries likely supports breeding and nesting habitat for migratory birds, including raptors. Migratory birds are protected under the Migratory Bird Treaty Act. Much of the project area outside of the riparian corridor has been previously disturbed. However, cut banks, erosion tunnels, and small mammal burrows in these disturbed areas provide potential burrow and nest sites for the western burrowing owl, also a protected migratory bird species. In order to maintain habitat values for the southwestern willow flycatcher, the yellow-billed cuckoo, the burrowing owl, and other migratory birds, and to reduce potential impacts to these species as a result of the proposed project, we recommend the implementation of the following conservation measures for this project, some of which are already included in the BE:

- adhere to the Environmentally Sensitive Roadway Design guidelines; in particular, those guidelines related to the avoidance of significant riparian vegetation and the revegetation of all impacted areas;
- protect in place, salvage and transplant, or replace significant riparian tree species within the project footprint;
- minimize impacts to water quality in the Santa Cruz River. Improved water treatment facilities have increased the water quality within the Santa Cruz River. This improved water quality has improved habitat conditions for aquatic and riparian species and may allow the future occupancy of this river corridor by listed fish, amphibian, and reptile species. Best management practices and erosion control measures, including a Stormwater Pollution Prevention Plan, should be implemented to avoid or reduce sedimentation within the river;
- complete and implement an invasive species management plan;
- conduct preconstruction surveys for burrowing owls as indicated in the BE. If burrowing owls are located within the project area, work with the Arizona Game and Fish Department and the Fish and Wildlife Service as indicated in the BE to avoid or relocate the burrowing owls;
- conduct preconstruction migratory bird surveys to identify any nesting migratory birds, including raptors, within the project area. Avoid and buffer any active nests until the young have fledged. If this is not possible, obtain the appropriate permits from the Fish and Wildlife Service to address the removal of active nests; and
- consider including bat roosts with the new bridge structure.

Implementation of the above conservation measures will likely reduce effects to listed species and migratory birds to insignificant or discountable levels. Thank you for the opportunity to provide input on this project. If you have any questions regarding our comments, or need any additional information, please contact Scott Richardson at (520) 670-6150 (x 242).

Sincerely,



Steven L. Spangle
Field Supervisor

cc (hard copy):

Field Supervisor, Fish and Wildlife Service, Phoenix, AZ (2 copies)
U.S. Army Corps of Engineers, Tucson, AZ (Attn: Kevin Grove)
Jean Calhoun, Assistant Field Supervisor, Fish and Wildlife Service, Tucson, AZ

cc (electronic copy):

pep@azgfd.gov, Arizona Game and Fish Department, Phoenix, AZ
Regional Supervisor, Arizona Game and Fish Department, Tucson, AZ (Attn: John Windes)