

BIOLOGICAL EVALUATION

El Mirage Rd. SR303 – Jomax Rd
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Prepared for:	<i>ADOT Approval Signature</i>
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EXECUTIVE SUMMARY – BIOLOGICAL EVALUATION

Project Type: New segment of roadway

Project Duration and Anticipated Construction Schedule: The Draft DCR and EA are currently scheduled to be available for public review and comment in spring 2025, completed in summer 2025, with a tentative bid date of April 2027.

Project Location: The project area occurs between State Route Loop 303 (SR303L) and Jomax Road within lands owned by the Maricopa County Flood Control District, the Arizona State Land Department, Maricopa Water District, and private entities under the jurisdiction of Maricopa County and the City of Peoria, Maricopa County, Arizona.

ESA Species and Critical Habitat Analyzed in Detail and Determinations Made: No threatened or endangered species would be affected by this project; see Table 1 for further information.

Other Federal Species Analyzed

Common Name	Scientific Name	Status	Determination
Monarch Butterfly	<i>Danaus plexippus</i>	ESA, PT	No Jeopardy

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DEFINITIONS

Action area - all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR §402.02)

ADOT – Arizona Department of Transportation

AGFD – Arizona Game and Fish Department

AWLW - Arizona Wildlife Linkage Workgroup

AZPDES – Arizona Pollutant Discharge Elimination System

BE – Biological Evaluation

BGEPA – Bald and Golden Eagle Protection Act

CCAA –Candidate Conservation Agreement with Assurances

CH – Critical Habitat

Construction footprint – the area where construction-related equipment will operate

dBA – A- weighted decibels

ESA – Endangered Species Act

FHWA – Federal Highway Administration

FWCA – Fish and Wildlife Coordination Act

IPaC – Information for Planning and Consultation (USFWS)

LE – Listed Endangered

LPA – Local Public Agency

LT – Listed Threatened

MBTA – Migratory Bird Treaty Act

MP – Milepost

OAW – Outstanding Arizona Water

OERT – Online Environmental Review Tool (AGFD)

Project – proposed *build* alternative scope of work outlined in the design concept report

PT – Proposed Threatened

ROW – Right-of-Way

SR303L - State Route Loop 303

SWPPP – Storm Water Pollution Prevention Plan

USFWS – US Fish and Wildlife Service

1. Project Overview

1.1 Federal Nexus

The project evaluated in this Biological Evaluation (BE) is funded in part by the Federal Highway Administration (FHWA) and will be constructed by the Arizona Department of Transportation (ADOT). This BE addresses the proposed action in compliance with Section 7 (C) of the Endangered Species Act (ESA) of 1973, as amended. Section 7 of the ESA requires that, through consultation (or conferencing for proposed species) with the U.S. Fish and Wildlife Service (USFWS), federal actions do not jeopardize the continued existence of any threatened, endangered, or proposed species or result in the destruction or adverse modification of critical habitat. This document evaluates the potential effects of the proposed transportation project on species that are federally listed under the ESA. Specific project design elements are identified that avoid or minimize adverse effects of the proposed project on listed species and/or critical habitat.

1.2 Project Description

The project would create a new segment of El Mirage Road between State Route Loop 303 (SR303L) and Jomax Road. This new segment of roadway would accommodate current and projected traffic needs in response to increased development in areas along SR303L, nearby roadways, and traffic interchanges (TI) in the northwest Valley.

An Environmental Assessment (EA) that evaluates two alternatives (i.e., a build and a no-build alternative) is being completed for this project. In order to capture the maximum impact, this BE is analyzing all potential build alternative (project) impacts to biological resources within the EA's study area.

1.3 Project Location

The project occurs between SR303L and Jomax Road within the City of Peoria, and unincorporated Maricopa County lands, in Maricopa County, Arizona (See Figures 1 and 2). The project would occur within and adjacent to existing Maricopa County and City of Peoria right-of-way (ROW) and easement. New ROW is anticipated for this project for portions occurring through private and Arizona State Trust lands.

2. Federally Proposed and Listed Species and Designated Critical Habitat

The USFWS Information for Planning and Consultation (IPaC) system (Project Code: 2023-0094347) and the Arizona Game and Fish Department (AGFD) Online Review Tool (OERT) (Project ID: HGIS-19485) were accessed on June 30, 2025; both are included in Appendix C. The ESA species list from the IPaC receipt was reviewed by a qualified biologist (Anthony Motta, AZTEC Engineering Group, Inc. [AZTEC]); and the species with the potential to occur within the project area are listed in Table 1 below. Neither the IPaC search nor the AGFD OERT identified critical habitat within the search area for the project.

Only the highlighted species in Table 1 are evaluated in detail within this document. Candidate species are addressed in Appendix B. Justifications for excluding the remaining species from further evaluation are included in Table 1. The project and related erosion and sediment control measures will have no effect to species excluded from further evaluation.

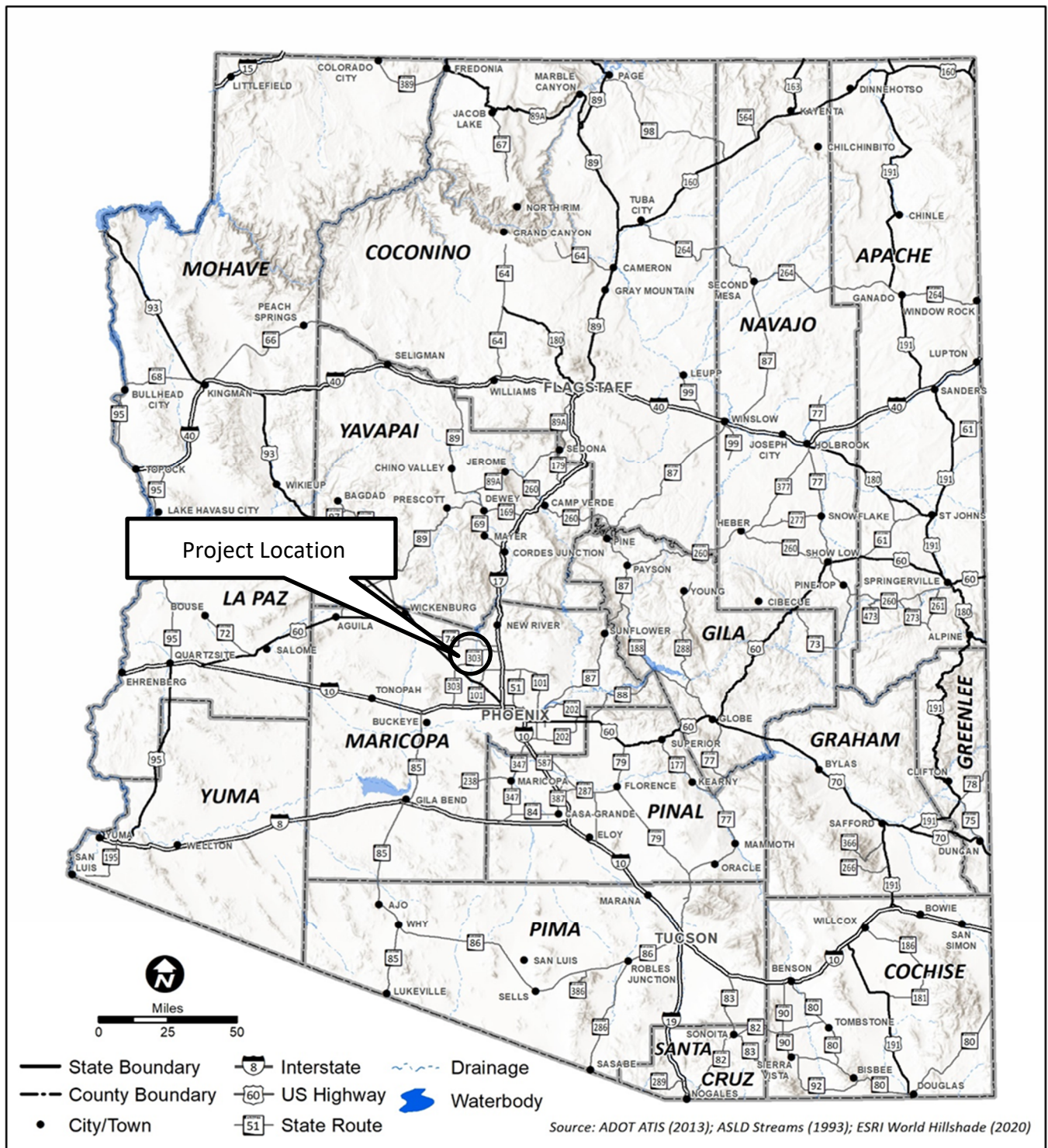


Figure 1. State Location Map

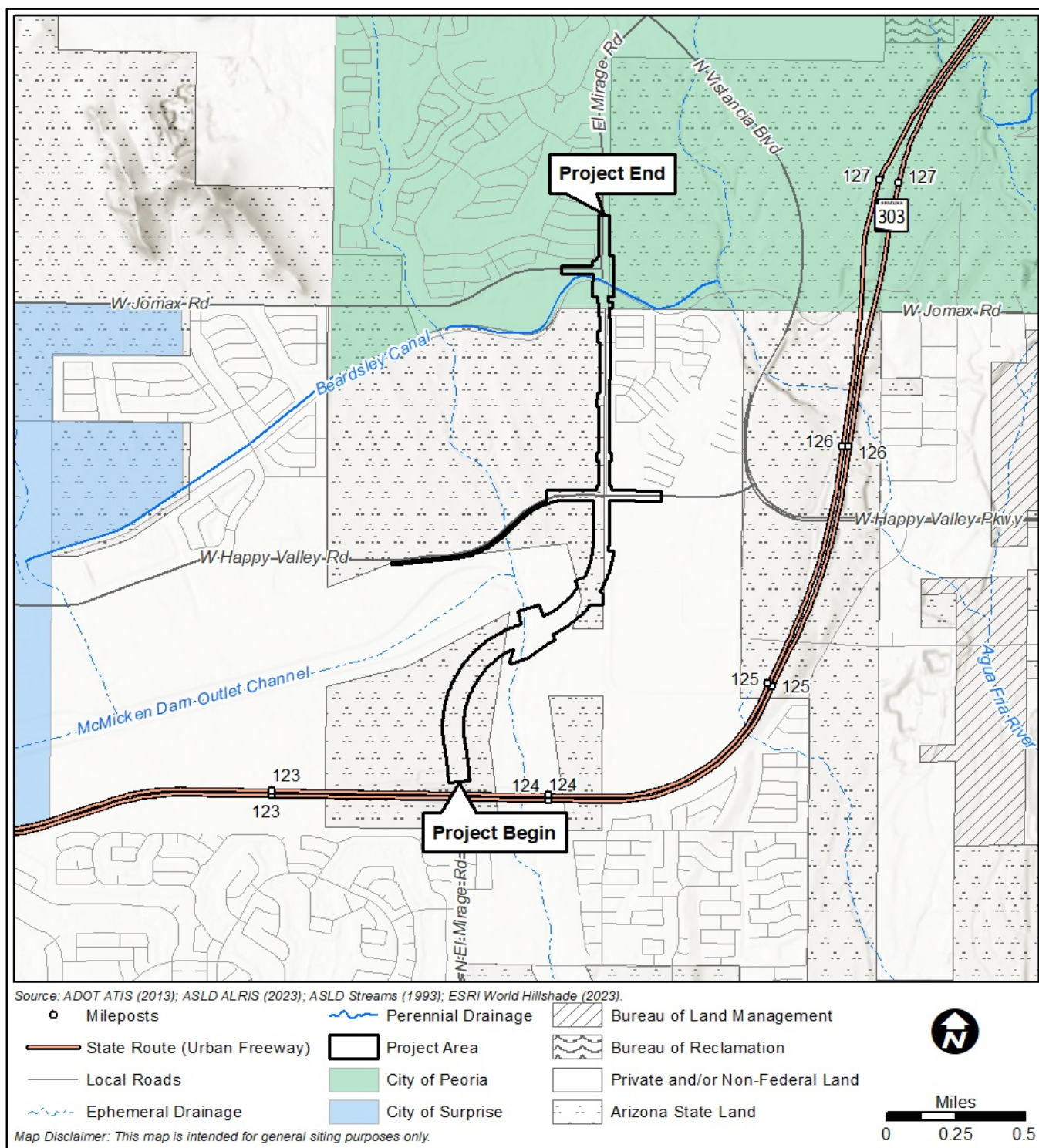


Figure 2. Project Location Map

Table 1 – Project Species List

Species	Status	Habitat Requirements	Exclusion Justification
Birds			
Cactus Ferruginous Pygmy-owl (<i>Glaucidium brasilianum cactorum</i>)	ESA LT	Found in mesquite thickets, desert riverine woods and saguaros in desertscrub and semi-desert grasslands in southern Arizona; historic range continued into central Arizona. Found below 4,000 feet in elevation.	Project is outside of current range. Surveys within Arizona indicate that the range is now restricted to Pima county, more than 100 miles south of the project, with the majority of individuals occurring in the Altar Valley (USFWS 2022).
California Least Tern (<i>Sternula antillarum browni</i>)	ESA LE	Open, bare, or sparsely vegetated sand, sandbars, gravel pits, or exposed flats along shorelines of inland rivers, lakes, reservoirs, or drainage systems below 2,000 feet.	No suitable habitat. Perennial water sources in the project area are limited to a concrete lined channel. No shorelines, vegetated sand, sandbars, or exposed flats are present.
Yellow-Billed Cuckoo (<i>Coccyzus americanus</i>)	ESA LT	Uses large contiguous patches of multi-layered riparian habitat, such as cottonwood-willow gallery forests along rivers and streams below 6,600 feet in elevation.	No suitable habitat. Multi-layered riparian habitat such as cottonwood-willow gallery forests are not present within the project area.
Fishes			
Gila Topminnow (<i>Poeciliopsis occidentalis</i>)	ESA LE	Small, perennial streams, springs, and cienegas in upland desertscrub, semidesert grasslands and interior chaparral communities below 5,000 feet.	No suitable habitat. Perennial water sources in the project area are limited to concrete lined channels with swift flowing water. No small streams, springs, or cienegas, aquatic vegetation, suitable substrates, or suitable aquatic microclimates are present (AGFD 2024)

Table 1 – Project Species List, Continued

Species	Status	Habitat Requirements	Exclusion Justification
<i>Insects</i>			
Monarch butterfly (<i>Danaus plexippus</i>)	ESA PT	Blooming nectar plants during the monarch migration timeframe.	Evaluated in detail. See Section 6.
Status Definitions: ESA = Endangered Species Act; LE = Listed Endangered, LT = Listed Threatened, PT = Proposed Threatened.			

3. Environmental Baseline

The environmental baseline represents the current biological and physical conditions of the action area (defined in Section 5). This baseline describes the current conditions and reflects the following:

- Past and present impacts of all federal, state, or private activities,
- Anticipated impacts of all proposed federal projects that have already undergone Section 7 consultation, and
- Impacts of state or private actions that are contemporaneous with the consultation in process.

A site visit was conducted on November 7, 2024, by Anthony Motta and Sara Scofield, AZTEC. The project is situated between two existing stretches of El Mirage Road in the City of Peoria and in unincorporated Maricopa County lands. The project area is flat and lacking topography with elevations ranging from 1,300 feet to 1,360 feet above mean sea level. The McMicken Dam Outlet Channel, a manmade drainage lined with landscaped boulders, cuts through the southern portion of the project. South of Happy Valley Road, surrounding lands are undeveloped, with the exception of an electrical substation located east of the McMicken Dam Outlet Channel. The area north of Happy Valley Road is characterized by scattered development including master-planned residential communities along El Mirage Road both north and south of the Beardsley Canal. A well site occurs approximately 150 feet south of the Beardsley Canal, with the Jomax Water Reclamation Facility occurring approximately 600 feet to the east. The project area terminates approximately 900 feet south of Vistancia Boulevard.

Geologic formations in the project area consist of the late and middle Pleistocene surficial deposits unit. The late and middle Pleistocene surficial deposits unit consists of unconsolidated to weakly consolidated alluvial fan, terrace, and basin-floor deposits with moderate to strong soil development. Fan and terrace deposits are primarily poorly sorted, moderately bedded gravel and sand, and basin-floor deposits are primarily sand, silt, and clay (Ludington et al. 2005). Soils in the project area are Hyperthermic Arid soils of the Mohall-Vecont-Pimant association, which consists of well-drained soils formed in mixed old alluvium on broad valley plains (Hendricks 1985).

The project is located within the Lower Colorado River Subdivision-Sonoran Desertscrub biotic community (Turner & Brown 1994). Vegetation within and adjacent to the project area is typical of the Lower Colorado River Subdivision-Sonoran Desertscrub biotic community and is characterized by scattered individual tree species including ironwood (*Olneya tesota*), velvet mesquite (*Prosopis velutina*), and foothill palo verde (*Parkinsonia microphylla*). Shrubs and cacti scattered throughout the project area include creosote (*Larrea tridentata*), triangle leaf bursage (*Ambrosia deltoidea*), lotebush (*Ziziphus obtusifolia*), desert broom (*Baccharis sarothroides*), saguaro (*Carnegiea gigantea*), teddy bear cholla (*Cylindropuntia bigelovii*), buckhorn cholla (*Cylindropuntia acanthocarpa*), and barrel cactus (*Ferocactus* spp.) Ground cover is characterized by grasses and forbs such as mediterranean grass (*Schismus arabicus*), and scorpion weed (*Phacelia distans*) interspersed with

bare ground surfaces. During the site visit, noxious and/or invasive plant species were observed and include Sahara mustard (*Brassica tournefortii*), stinknet (*Oncosiphon piluliferum*), and Russian thistle (*Kali tragus*).

Wildlife observed during the site visit include the red-tailed hawk (*Buteo jamaicensis*), Gambel's quail (*Callipepla gambelii*), house finch (*Haemorhous mexicanus*), and great blue heron (*Ardea herodias*). No caves, mines, bridges, or drainage structures that could provide suitable roosting habitat for use by bats are present in the project area. See Appendix B for further discussion on potential project impacts to nesting birds that are protected under the Migratory Bird Treaty Act (MBTA).

Two drainages bisect the project. The Beardsley Canal, a perennial drainage, bisects the project area approximately 220 feet south of Jomax road. The canal is a concrete lined channel with surface waters flowing east to west. The McMicken Dam Outlet Channel, an ephemeral drainage, bisects the southern portion of the project approximately 2,500 feet south of Happy Valley Road. Vegetation is not present along the McMicken Dam Outlet Channel within the project area.

4. Scope of Work

4.1 Construction

The scope of work for the project would include:

- Constructing a new segment of El Mirage Road between SR303L and Jomax Road. The roadway configuration includes three vehicular lanes in each direction with a center median, bicycle lanes in each direction, and sidewalk in each direction. The project may be developed as a four-lane roadway as an interim configuration. This interim configuration would first construct the outside two travel lanes, with the inside lanes to be constructed as a future stage.
- Constructing two proposed structural crossings, one over McMicken Outlet Channel Wash and one over the Beardsley Canal south of Jomax Road.
- Constructing curb and gutter, on site drainage improvements, and off-site drainage improvements.
- Installing traffic signals at Happy Valley Road
- Relocating utilities as needed
- Installing signage and lighting
- If warranted, installing a High Intensity Activated Crosswalk (HAWK) at a trail crossing between SR303L and Happy Valley Road
- Installing irrigation and landscaping
- Performing geotechnical structural crossing borings (two at each crossing)

The primary activity anticipated for the project is the extension of El Mirage Road. Additional activities include the installation of structural crossings with associated geotechnical investigations, the installation of a HAWK structure, drainage improvements, relocation of utilities, as well as the installation of irrigation and landscaping.

The construction of the new segment of El Mirage Road would require the installation of new pavement. The action of pavement installation includes laying down pavement such as asphaltic concrete and its mixed variations (asphaltic concrete friction course, asphaltic concrete asphalt-rubber, asphaltic concrete friction course asphaltic-rubber), and Portland cement concrete pavement. Asphaltic concrete paving materials are hot or cold mixes and require a production plant to produce the pavement. Smaller projects do not require a plant to be constructed, but rather pavement is hauled to the action area. Similar to asphaltic concrete, Portland cement concrete pavement is also typically batched off-site, and stationary mixers or mixing trucks mix the concrete within the action area. Pavement is typically applied over a base or subgrade that has been prepared to the requirements of the pavement material and then compacted and leveled to blend with the adjacent paved surfaces. Asphaltic concrete is applied by loading the material into or in front of a laydown or paving machine;

and Portland cement concrete pavement utilized a slip form or self-propelled fixed form paver to lay down the pavement.

After pavement has been installed, roadway striping would be applied. This striping also delineates the bicycle lanes and HAWK crossing outlined in the scope of work. Striping, paint, tape, and markers are applied to paved areas including new pavement, existing pavement, or temporarily paved areas to provide driver information and guidance to the road user. Striping includes traffic lines such as center lanes, lane lines, no passing stripes, gore stripes, and roadway edge stripes. Striping may be applied as paint by a truck with a pressurized paint spraying system; or as thermoplastic reflectorized material such as extruded methyl methacrylate materials and 3M polymer pavement marking tapes which are extruded or rolled into a shallow groove ground into the pavement surface. Other painted or taped markings may include crosswalks, turn lanes, railroad crossings, pavement messages, construction/maintenance detour markings and parking lots. Pavement markers also called reflectors, may be temporary or permanent, and can be raised or recessed along the roadway. They are typically colored and include a lens or sheeting that enhances their visibility by retroreflecting automotive headlights. Pavement markers are installed by gluing the markers directly onto the pavement, or within the recessed grooves in the pavement.

For the structural crossings, bridges are anticipated, however box culverts may also be considered. The first activity in constructing a bridge is the installation of the substructure. This activity includes installing spread footings, piers, pier caps, abutments, and wingwalls. A foundation such as drilled shafts, driven piles, or spread footings would be installed to support the piers, abutments, and wingwalls. If spread footing foundations are installed, a maximum of 10-feet would be over-excavated to install the foundation. Over-excavated areas surrounding the footing would be backfilled and graded. After the substructure has been installed, the superstructure would be installed. This activity includes installing the girders, bridge deck, expansion joints, downdrains, bridge barriers, and approach slabs. To install a bridge superstructure, the approach slabs, if needed, would be installed atop the abutments on either side of the bridge, and the girders would be set upon the substructure. The bridge deck would then be installed along with the expansion joints and/or downdrains. Finally, barriers would be constructed on the deck. After the substructure is complete, guardrail may be connected to the bridge barriers. Stabilization of the superstructure with temporary shoring may be required to complete this activity. Temporary shoring may result in additional temporary ground disturbance for a maximum of 25-feet beyond the footprint of the superstructure.

The installation of medians, sidewalks, structural crossing barriers, and associated curbs and gutters require the installation of concrete. This action includes installing concrete by using slip form, cast-in-place, or neat line methods. Slip form is a concrete installation method where concrete is poured into a continuously moving, self-propelled machine to construct the desired feature. Rebar or post-tensioning ducts are continuously placed ahead of the form, as it progresses, to provide reinforcement to the final feature. Cast-in-place is a concrete installation method that involves building a form, placing rebar within the form for reinforcement of the final feature, and pouring concrete into the form and around the rebar. Once the concrete has set, the form is typically removed. Neat line concrete forming involves excavating a trench or depression, placing rebar within the excavated area to be flush with the surrounding ground surface (i.e., the neat line). Installing concrete often requires excavation and grading.

For the installation of new sidewalks, pavement, and medians, permeable surfaces would be converted to an impermeable surface. Converting surfaces to impermeable features beyond the roadway prism is a lateral extension of paved areas, including the construction of the fill, base and subgrade, and pavement or concrete. This activity may include adding or extending turnouts, turn lanes, travel lanes, crossover and driveway that are located outside of the existing roadway prism but tie into the existing roadway. This activity may also include the construction of sidewalks that are not adjacent to the existing roadway and are located entirely outside of the existing roadway prism. To extend features along an existing roadway, or add new features beyond the roadway

prism, the action area would be cleared of vegetation, graded, and compacted to the requirements of the base and subgrade of the anticipated material. Once the base and subgrade are prepared, pavement or concrete would be installed and would be tied into the existing roadways, as applicable.

Drainage improvements outlined in the scope of work require grading beyond the roadway prism. This action involves the use of earth moving equipment such as an excavator, bulldozer, front-end loader, grader, scraper, backhoe, or bobcat to grade or shape the ground surface beyond the roadway prism. The boundary of the roadway prism is where the existing natural vegetation meets the edge of the road subgrade or edge of cut/fill activities, and these areas often support naturally occurring vegetation.

The new roadway and HAWK crossing outlined in the scope of work require the installation of signage for traffic signals. For the installation of signage, posts and poles can be installed to a desired depth in the ground manually, through repeated strikes by a post-pounder or mallet or mechanically through the use of a vibratory hammer machine lifted by an excavator or crane, positioned over the post. Post or pole foundations are used to provide a secure and stable base for a vertical feature such as a post or pole. This action involves excavating a hole in the ground to a desired depth using manual equipment, such as a shovel or hand-held auger, or earth moving equipment such as an excavator or backhoe. Once the hole is excavated, an anchor is typically installed and surrounded by concrete, or concrete is poured, and the anchor is embedded into the concrete. Once the concrete has set, the post or pole is then attached to the anchor and the final feature, such as a sign panel or guardrail, is attached to the erected post or pole, as necessary. This action can be utilized when installing temporary and permanent signage.

For the installation of new roadway lighting and traffic signals, features may be affixed directly to a support pole or installed on mast arms atop a support pole. Installation to a support pole involves drilling or excavating a footing to the necessary depth to support the pole, constructing a concrete foundation, and installing the pole atop the foundation. The installation of the underground utility conduit and pull boxes and/or controller cabinets in the ROW may be required with this activity. An underground utility conduit is comprised of non-metallic conduit, pipe, or duct which houses underground utility lines including electrical, fiber optic, and communications. Installation or extension of underground utility conduit can be completed via directional boring or trenching. Once the hole or trench is drilled or dug to the desired diameter and required depth of the conduit, the conduit is slipped into the bored hole or placed into the trench. For directional boring, the initial drill site may be backfilled and compressed, but overall, the surface impacts are limited to the diameter of the drill and depending on the required utility connections, no backfill or surface restoration may be required. Trenching does require backfill after the conduit is installed or extended. Backfilled material is typically compressed as necessary to support the final surface conditions. This activity may require off-road vehicle use.

The act of relocating utilities first requires existing utilities to be excavated. This process involves the use of earth moving equipment such as an excavator or backhoe to remove the soil above the buried feature. After the utilities have been excavated, trenches would be dug at the location they are being relocated to. Trenching is the act of digging a trench to install pipe, conduit, or cables underground. Under this action, trenches would be a minimum of four-feet deep and is typically done using earth moving equipment such as a trencher, excavator, backhoe, or bobcat. Excavated material is typically cast to the side of a trench as it is dug. Once dug, temporary shoring may be required to stabilize the sides of the trench while the work is being completed within the trench, or the slopes of the trench would be laid back to the appropriate extent to avoid temporary shoring. After the work is completed, the shoring would be removed, and native material would be backfilled. Excess excavated material would be disposed of on or off site, as necessary.

The scope of work calls for the installation of irrigation to be utilized for landscaping. This activity includes the installation of irrigation equipment, and mainline and lateral irrigation lines which transport and deliver water to salvaged, or nursery grown vegetation that is planted in a project site. Mainline irrigation lines occur from the

water source to an area where salvaged or nursery grown vegetation is planted. Lateral or sub-lateral irrigation lines extend from the mainline irrigation line to individual plants. Irrigation lines are installed by digging trenches manually with a shovel, or mechanically with a trencher. Trenches dug for mainline irrigation lines are a minimum of 18 -inches deep, whereas lateral irrigation lines are a minimum of 12-inches deep. The maximum depth for both lines is two feet. Once the irrigation lines are installed in the trenches, the trenches are backfilled, and the ground surface is restored to the desired condition. Once irrigation has been installed, the planting of nursery grown landscaped vegetation can be installed.

The installation of landscaping includes planting nursery grown vegetation, such as containerized, bare root plants, tall pots, or pole plantings to stabilize soils, prevent erosion, or to replace dead or severely damaged trees, shrubs, and ground cover plants. Planting nursery grown vegetation is typically associated with landscaped areas along urban roadways however, rural areas may also receive nursery grown vegetation to provide or restore habitat, create a living snow fence, control blowing dust, provide sand abatement, and/or replace damaged plants as a result of repair. Planting nursery grown vegetation involves excavating a hole manually or mechanically to the desired width and depth, placing the plant within the hole, and backfilling the area. Irrigation is typically installed in urban environments or may be temporarily installed in rural areas for a minimum of two years during the landscaping establishment period.

For the geotechnical phase of the project, two boring locations have been identified, one at each proposed structural crossing. Each location would require two borings, which would be conducted via a truck-mounted CME-85 drill rig equipped with a down-hole percussion hammer system including drill casing and an air compressor to a proposed depth of 75 feet. Drilling is used to retrieve subsurface soil and rock samples to be analyzed and tested. The drill method is determined by the type of soil and rock to be penetrated, groundwater conditions, and the type of samples required. Four commonly used methods include hollow-stem augers, rotary drilling, percussive air drilling, and core drilling. To perform drilling, a drill rig is positioned over the boring location, hydraulic rams are used to level the rig, and a derrick is raised. The construction of a drill pad may be required if drilling is occurring on a slope. The size of the drill pad depends on the drill rig being used, but commonly a 30-foot by 30-foot pad is utilized. Drill pads are constructed by adding fill material to the slope or cutting the slope to create a level drill pad. A temporary access road or off-road vehicle use may be required to access the boring locations.

The project would require both vegetation trimming and vegetation removal. Vegetation trimming is necessary to access geotechnical boring locations along access roads and is anticipated to only impact the branches of palo verde and mesquite trees located along access paths to the Beardsley Canal and McMicken Dam Outlet Channel. Vegetation removal would also be required for the proposed roadway. Vegetation that may be impacted by pre-construction clearing include velvet mesquite, foothills palo verde, creosote, barrel cactus, as well as various grasses and forbs. Trimming and removal of vegetation may involve saws and chainsaws to remove limbs and branches or trees or entire individuals blocking the path of the proposed road, when needed.

Permanent impact is defined as ground disturbance that would convert a permeable surface to an impermeable surface. For this project, approximately 54.32 acres of permanent impacts would result from the construction of the new roadway, with associated structural crossings, signage, sidewalks, as well as drainage improvements including curbs, and gutters. Temporary impact is defined as a ground disturbing activity that does not convert a permeable surface to an impermeable surface. Temporary impacts are anticipated from the installation of irrigation, landscaping, general equipment maneuvering, as well as cut and fill earthwork activities. For this project, approximately 60.19 acres of temporary impacts are anticipated. All remaining project activities would occur on existing paved surfaces and would not result in additional ground disturbance.

4.2 Potential Impacts on Water Quality and Clean Water Act Compliance

The project will incorporate stormwater pollution prevention practices per Section 104.09 (Prevention of Stormwater Pollution) in ADOT's Standard Specifications for Road and Bridge Construction. The project would result in disturbance of 1 or more acres of land, a stored specification requiring a Stormwater Pollution Prevention Plan (SWPPP) and an Arizona Pollutant Discharge Elimination System (AZPDES) permit will be included in the contract.

The project would be evaluated to determine if jurisdictional waters of the United States as regulated by the US Army Corps of Engineers would be impacted and a Clean Water Act Section 404 permit is required. The project is not within 1-mile upstream or ½-mile downstream of an impaired, not-attaining or Outstanding Arizona Water (OAW) or on a tributary to an impaired water or OAW and within 1 mile of the impaired water or OAW.

5. Project Action Area

The action area includes all areas to be affected directly or indirectly by the action and not merely the construction footprint (50 CFR §402.02). In delineating the action area, the farthest reaching physical, chemical, and biotic effects of the action on the environment were evaluated. As this document is being completed prior to the release of detailed plans, the entire project area is serving the role as the action area, as it encompasses a larger footprint and captures a fuller range of effects than those outlined in the *build* alternative (see Figure 3).

5.1 Ground Disturbance

Direct impacts to the environment due to proposed project activities would include ground disturbance to natural ground surfaces from the project activities listed in Section 4.1. Permanent impacts from ground disturbing activities are anticipated from the project and would convert permeable ground surfaces to impermeable surfaces. Additionally, vegetation removal is anticipated to be required for said activities. These ground disturbing activities have potential to impact terrestrial wildlife such as small mammals and reptiles seeking shelter amongst vegetation or below ground or avian wildlife nesting in vegetation. Therefore, the project would result in a permanent loss of habitat for terrestrial and avian species. After construction is complete, temporarily impacted areas would be returned to pre-construction contours and elevations to the extent practical and seeded with plant species native to the project area. All proposed project activities that would directly impact the environment have been used to delineate the construction footprint of the project.

5.2 Noise Influence

A noise analysis was completed on November 25, 2024, to ascertain the average noise levels in the project area. Analysis revealed that ambient noise levels of the area range from 54.4 to 77.0 A-weighted decibels (dBA). Construction-related noise would be generated from equipment mentioned in Section 4 of this document. Noise levels generated by construction equipment for the proposed project (i.e., pavers, rollers, excavators, front-end loaders, backhoes, graders, and scrapers) generally would range between 77 dBA and 81 dBA at 50-feet (FHWA 2006). Therefore, noise levels generated by project activities would only be 1 dBA to 4 dBA above the ambient noise levels and are considered to be near ambient noise levels. Because project construction noise would be near ambient noise levels, a noise influence buffer was not included for the action area.

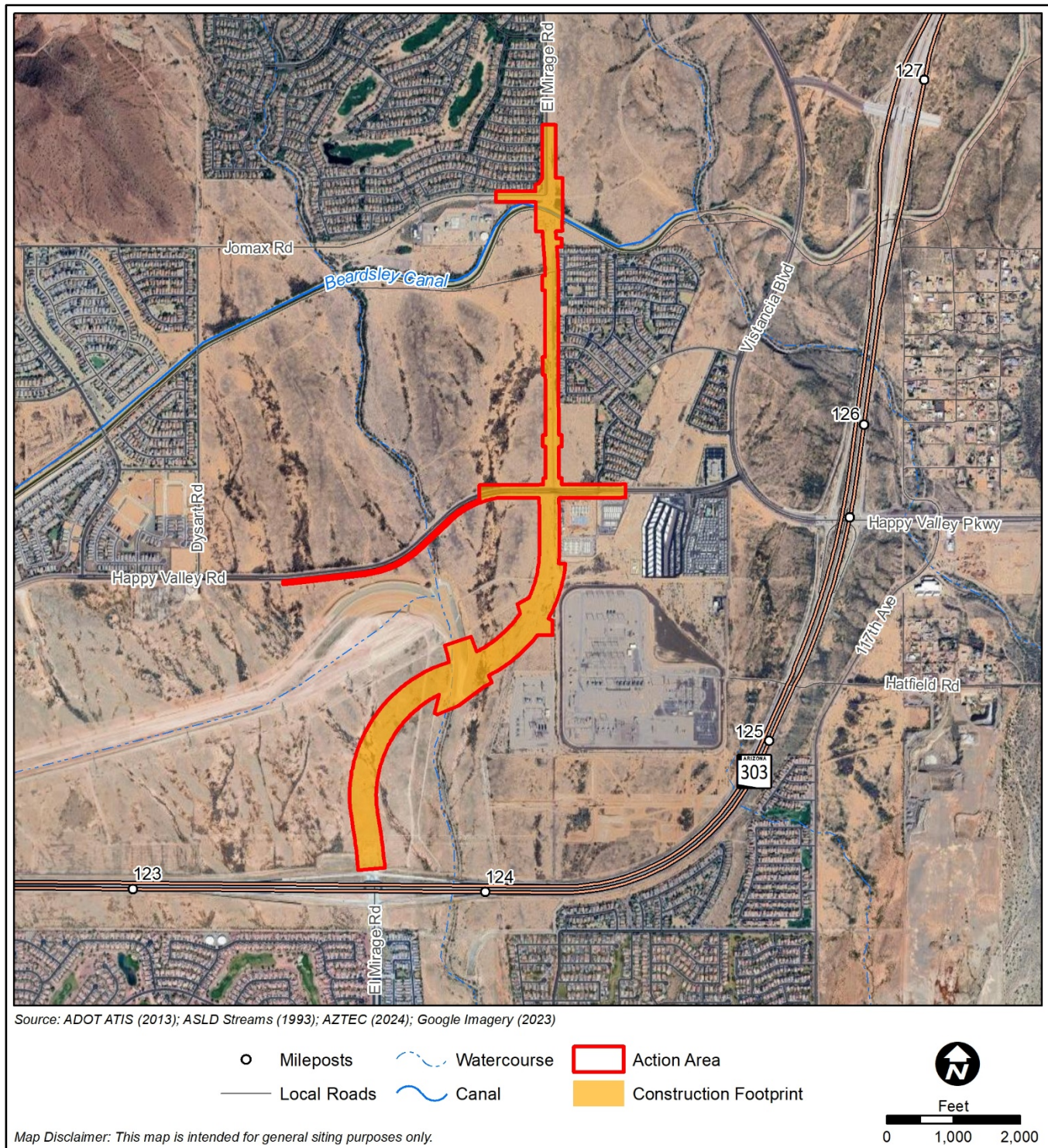


Figure 3. Action Area Map

6. Species Evaluation

6.1 Monarch Butterfly (*Danaus plexippus*)

Status

Proposed to be listed as a threatened species (December 12, 2024) (USFWS, 2024).

Species Summary Table

	Feeding		Breeding	Overwintering
	Egg, larva, pupa	Adult	Adult	Adult
Habitat	Milkweed	Blooming nectar plants	Blooming nectar plants along migration route to higher elevations and cooler temperatures	Roosting trees in groves along the coast of California and Baja California or low-elevation riparian areas in central and southern Arizona
Food Source	Milkweed	Blooming nectar plants	Blooming nectar plants; require milkweed for oviposition	Blooming nectar plants
Cover	N/A	N/A	N/A	Roosting trees provide protection from excessive sunlight and extreme weather
Temperature	Requires temperatures 53°-91° F to develop	Requires temperatures 53°-91° F to develop	Moderate temperatures	Moderate temperatures
Water	N/A	Sources must be present	More commonly found near water sources	Sources must be present
Dispersal	N/A	N/A	Throughout Arizona	Central and southern Arizona and coastline in California and Mexico
Seasonal Activity	Daily and year-round	Daily and year-round	Early Spring to Fall	Winter

Life History

Species Description and Ecology

The adult monarch butterfly is characterized by bright orange wings surrounded by a black border with white spots and covered with black veins (USFWS, 2024). There are two migratory populations in North America, separated by the Rocky Mountains: the Eastern migratory population and the Western migratory population. Monarch butterflies are thought to have four life stages: egg, larva, pupa, and adults. Larvae emerge from eggs after two to five days. The larva pupates into a pupa, which emerges 6 to 14 days later as an adult butterfly. Multiple generations of adult butterflies are produced during the breeding season, typically living two to five weeks, while overwintering migratory adults live six to nine months (USFWS, 2024). Monarch butterflies migrate to Arizona in the spring from overwintering sites in California and Mexico. They follow the blooming of nectar plants to the north and from low to higher elevations and back between spring and fall. While the majority of monarch butterflies return to overwintering sites in the fall, some monarch butterflies remain in sheltered low-elevation riparian areas in central and southern Arizona during the winter months (USFWS, 2024). Adult monarch butterflies eat nectar from blooming nectar plants. Eggs and larval monarch butterflies are milkweed obligates; larvae feed on milkweed to sequester toxic cardenolides as a defense against predators (USFWS, 2024).

Reproduction

Monarch butterfly breeding season in Arizona typically occurs from early spring to early fall. Monarch butterflies migrating to overwintering sites in the fall enter reproductive diapause (suspended reproduction) and break reproductive diapause before migrating away from their overwintering sites in February and March. As they migrate to cooler climates, monarch butterflies breed and their offspring continue to disperse further north until they reenter reproductive diapause in the fall and begin the cycle of generational migration over again (USFWS, 2024).

Suitable Habitat

Monarch butterflies can be found throughout Arizona where blooming nectar plants are available. They also require milkweed to lay eggs and develop as larvae. Nectar and milkweed resources are often associated with riparian corridors but are found throughout Arizona (Western Monarch Milkweed Mapper, 2025). Suitable overwintering sites protect monarch butterflies from the elements and maintain moderate temperatures that are warm enough to prevent freezing yet cool enough to prevent lipid depletion. In Arizona, monarch butterflies may overwinter in low desert washes (USFWS, 2024).

Threats

Primary threats to monarch butterfly include habitat loss, continued exposure to insecticides, and effects of climate change. Urban, agricultural, and industrial development have resulted in significant loss and degradation of the species' habitat. Other factors causing the loss or alteration of monarch butterfly habitat include intensive herbicide usage for weed control which has resulted in widespread milkweed eradication. Additional threats to the species include disease and parasitism: specifically, a protozoan parasite *Ophryocystis elektroscirrha*, which decreases survival and fitness in the monarch (USFWS, 2024).

Range and Survey History

Monarch butterfly populations have been declining at overwintering sites in both the Eastern and Western migratory populations. Non-migratory populations inside and outside of North America are considered extant. Milkweed and monarch have been documented throughout Arizona (Western Monarch Milkweed Mapper, 2025). Based on available data, the current range and distribution for the species is largely the same as was historically documented. No population extirpations or range reductions have been documented in Arizona

(USFWS, 2024). Additionally, no observations have been recorded for the monarch butterfly within the construction footprint. The nearest documented monarch butterfly breeding observation is 12 miles east of the project area (Western Monarch Milkweed Mapper, 2025).

Habitat Suitability Evaluation

Open fields containing milkweed plants are not present within the action area. However, the action area does contain suitable nectar sources that could be utilized by migrating monarchs.

Analysis and Determination of Effects

Effects: Potential effects to monarch butterfly from this project would include temporary effects due to removal of suitable food and stopover habitat. Vegetation trimming and removal are anticipated as a result of this project, including velvet mesquite, a nectar species. While the project removes suitable food and stopover habitat, ample similar habitat is present outside of the action area. As mentioned previously, milkweed plants are not present within the action area. Therefore, no effect is anticipated from the removal of food or stopover habitat.

Interrelated or Interdependent Actions: Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no significant independent utility apart from the action under consideration. There are no interrelated or interdependent actions associated with this proposed project.

Determination: The project will not jeopardize the continued existence of the species.

7. Environmental Commitments

This project will incorporate the following commitments to avoid impacts to the Sonoran Desert tortoise and nesting birds protected under the MBTA including burrowing owls, to implement a Noxious Species Control Plan on noxious and/or invasive plant species, and to comply with the Arizona Native Plant Law. Commitments have also been incorporated to update clearance documentation in the event of a change in species status or scope of work:

Contractor Responsibilities

- If any Sonoran Desert tortoises are encountered during construction, the contractor shall adhere to the attached Arizona Game and Fish Department “Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects.” If any tortoise is encountered during construction the contractor shall notify the Engineer to report the encounter.
- The contractor shall report encounters with any Sonoran Desert tortoise tortoises (live, injured, or dead) during construction to the Engineer using the attached Arizona Department of Transportation Sonoran Desert Tortoise Observation Form. The final form shall be sent to Arizona Department of Transportation Environmental Planning (email: bioteam@azdot.gov) within 24 hours of the encounter. Photographs should be taken of tortoises encountered and included in the report if possible.
- Prior to construction activity the contractor’s field personnel including the Project Manager, Assistant Project Manager, General Superintendent, and Project Superintendent shall review the attached Arizona Department of Transportation Environmental Planning “Sonoran Desert Tortoise Awareness Program Handout” flier, become familiar with the identification and avoidance of the Sonoran Desert tortoise, and follow the notification request, as applicable.
- If clearing, grubbing, or tree/limb removal will occur between March 1 and August 31, the contractor shall employ a qualified biologist to conduct a migratory bird nest search of all vegetation within the 10 (ten) days prior to removal. Vegetation may be removed if it has been surveyed and no active bird nests are present. If active nests cannot be avoided, the contractor shall notify the Engineer to evaluate the

situation. During the non-breeding season (September 1 – February 28) vegetation removal is not subject to this restriction.

- Prior to construction, all personnel who will be on-site, including, but not limited to, contractors, Contractor's employees, supervisors, inspectors, and subcontractors shall review the attached Arizona Department of Transportation Environmental Planning "Western Burrowing Owl Awareness" flyer.
- If any burrowing owls or active burrows are identified the contractor shall notify the Engineer immediately. No construction activities shall take place within 100 feet of any active burrow.
- If the Engineer in cooperation with the Environmental Planning Biologist determines that burrowing owls cannot be avoided, the contractor shall employ a qualified biologist holding a permit from the US Fish & Wildlife Service to relocate burrowing owls from the project area, as appropriate.
- The contractor shall develop a Noxious and Invasive Plant Species Treatment and Control Plan in accordance with the requirements in the contract documents. Plants to be controlled shall include those listed in the state and federal noxious weed and the state invasive species lists in accordance with state and federal laws and executive orders. The plan and associated treatments shall include all areas within the project right-of-way and easements as shown on the project plans. The treatment and control plan shall be submitted to the Engineer for the Arizona Department of Transportation Construction Professional Landscape Architect for review and approval prior to implementation by the contractor.
- Prior to the start of ground-disturbing activities and throughout the duration of construction and any landscape establishment period, the contractor shall arrange for and perform the control of noxious and invasive species in the project area.

Roadside Development Section Responsibilities

- The Arizona Department of Transportation Roadside Development Section will provide special provisions for the control of noxious and invasive plant species during construction that may require treatment and control within the project limits.
- Protected native plants within the project limits will be impacted by this project; therefore, the Arizona Department of Transportation Roadside Development Section will determine if Arizona Department of Agriculture notification is needed. If notification is needed, the Arizona Department of Transportation Roadside Development Section will send the notification at least 60 (sixty) calendar days prior to the start of construction.

Local Government or District Responsibilities

- If active bird nests are identified within the project limits, construction activities will avoid disturbing any active nest. Avoidance areas, if necessary, will be marked in the field with temporary fencing or t-posts with flagging by the approved biologist. The engineer will confer with the approved biologist to determine the appropriate avoidance strategies until the nestlings have fledged from the nest and the nest is no longer active.
- If any active bird nests cannot be avoided by vegetation clearing or construction activities, the Engineer will contact the Environmental Planning Biologist (928.304.0487) to evaluate the situation.

Design Responsibilities

- During final design, the design engineer will coordinate with the ADOT Environmental Planning Biologist (928.304.0487) and reevaluate potential impacts to special status species.

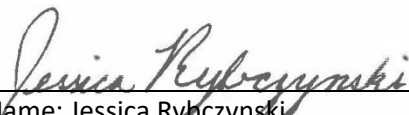
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9. Signatures

Prepared by: 
Name: Anthony Motta
Title: Biologist
Firm Name: AZTEC Engineering Group Inc.

Date: 7/8/2025

Reviewed by: 
Name: Jessica Rybczynski
Title: Senior Biologist
Firm Name: AZTEC Engineering Group, Inc.

Date: 7/8/2025

APPENDIX A

PHOTOS



Photograph 1. Overview of the southern terminus of the project area. Photo was taken north of SR303L at the proposed road alignment, and is facing southeast.



Photograph 2. Overview of habitat in the southern portion of the project area. Photo was taken west of McMicken Dam Outlet Channel and is facing northwest.



Photograph 3. Overview of access road that runs along the western side of the McMicken Dam Outlet Channel. Photo was taken west of McMicken Dam Outlet Channel, and is facing south. Note: vegetation occurring at end of wash is outside of the project area.



Photograph 4. Overview of McMicken Dam Outlet Channel. Photo was taken west of McMicken Dam Outlet Channel and is facing north. Note: lack of surface waters or riparian vegetation.



Photograph 5. Overview of Beardsley Canal. Photo was taken south of Beardsley Canal, looking upstream, and is facing east.



Photograph 6. Overview of northern terminus of the project area. Photo was taken on El Mirage Road and is facing south.

APPENDIX B

OTHER SPECIAL STATUS SPECIES

I. MIGRATORY BIRD TREATY ACT

During the November 2024 site visit, the project area and surrounding lands were inspected by a qualified biologist (Anthony Motta, AZTEC) for viability as nesting bird habitat. The project area contains suitable habitat for nesting migratory birds (e.g., scattered trees and patches of shrubs). An inactive verdin nest was observed within a tree in the proposed construction footprint. Nesting birds have the potential to be impacted by the project if they are utilizing vegetation for nesting during vegetation removal activities. The project has yet to be scheduled at the time of this document's completion. Should construction activities occur during migratory bird breeding season (March 1st – August 31st) the following environmental commitments will be implemented in order to prevent impacts to nesting migratory birds:

Contractor Responsibilities

- If clearing, grubbing, or tree/limb removal will occur between March 1 and August 31, the contractor shall employ a qualified biologist to conduct a migratory bird nest search of all vegetation within the 10 (ten) days prior to removal. Vegetation may be removed if it has been surveyed and no active bird nests are present. If active nests cannot be avoided, the contractor shall notify the Engineer to evaluate the situation. During the non-breeding season (September 1 – February 28) vegetation removal is not subject to this restriction.

Local Government or District Responsibilities

- If active bird nests are identified within the project limits, construction activities will avoid disturbing any active nest. Avoidance areas, if necessary, will be marked in the field with temporary fencing or t-posts with flagging by the approved biologist. The engineer will confer with the approved biologist to determine the appropriate avoidance strategies until the nestlings have fledged from the nest and the nest is no longer active.
- If any active bird nests cannot be avoided by vegetation clearing or construction activities, the Engineer will contact the Environmental Planning Biologist (928.304.0487) to evaluate the situation.

The AGFD OERT identified the western burrowing owl (*Athene cunicularia hypugaea*) as having been documented within 3 miles of the project area. During the November 2024 site visit, no individual burrowing owls or suitably sized burrows were observed within the project area. The species is often found in open areas such as vacant lots near human habitation, and therefore, has the potential to be impacted by the project (AGFD 2022). Therefore, the following environmental commitments will be implemented to prevent impacts to the western burrowing owl:

Contractor Responsibilities

- Prior to construction, all personnel who will be on-site, including, but not limited to, contractors, Contractor's employees, supervisors, inspectors, and subcontractors shall review the attached Arizona Department of Transportation Environmental Planning "Western Burrowing Owl Awareness" flyer.
- If any burrowing owls or active burrows are identified the contractor shall notify the Engineer immediately. No construction activities shall take place within 100 feet of any active burrow.
- If the Engineer in cooperation with the Environmental Planning Biologist determines that burrowing owls cannot be avoided, the contractor shall employ a qualified biologist holding a permit from the US Fish & Wildlife Service to relocate burrowing owls from the project area, as appropriate.

II. BALD AND GOLDEN EAGLE PROTECTION ACT

The project area was evaluated by Anthony Motta (AZTEC) to determine if the project occurs within the range of or within suitable habitat for the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*). Neither the bald nor golden eagle were listed on the AGFD OERT as having been documented occurring within 2 miles of the project area. The project area and surrounding vicinity consists of open areas of scattered creosote with exposed ground surfaces and contains habitat for terrestrial prey species of the bald and golden eagle. In the event that a foraging bald or golden eagle is present within the project area during active construction, the increased human activity may cause a foraging eagle to avoid the project area during work. However, due to ample suitable foraging habitat present in the surrounding vicinity and the large foraging range of these species, avoidance of the project area during construction would not substantially interfere with an eagle's normal breeding, feeding, or sheltering behavior in a way that would result in injury or a decrease in productivity. Therefore, the project would not disturb or result in "take" of bald or golden eagles and would comply with the National Bald and Golden Eagle Management Guidelines of 2007.

III. FISH AND WILDLIFE COORDINATION ACT (FWCA)

This project is a federal action, but it will not impound, divert, deepen the channel, or otherwise control or modify any stream or other body of water; the FWCA does not apply.

IV. NOXIOUS AND INVASIVE PLANT SPECIES

The construction footprint and surrounding ROW were inspected for the presence of noxious and invasive plants on November 7, 2024. During the site visit, Sahara mustard, stinknet, and Russian thistle was observed within the construction footprint and surrounding ROW. Therefore, a Noxious Species Control Plan will be required for the project.

Roadside Development Section Responsibilities

- The Arizona Department of Transportation Roadside Development Section will provide special provisions for the control of noxious and invasive plant species during construction that may require treatment and control within the project limits.

Contractor Responsibilities

- The contractor shall develop a Noxious and Invasive Plant Species Treatment and Control Plan in accordance with the requirements in the contract documents. Plants to be controlled shall include those listed in the state and federal noxious weed and the state invasive species lists in accordance with state and federal laws and executive orders. The plan and associated treatments shall include all areas within the project right-of-way and easements as shown on the project plans. The treatment and control plan shall be submitted to the Engineer for the Arizona Department of Transportation Construction Professional Landscape Architect for review and approval prior to implementation by the contractor.
- Prior to the start of ground-disturbing activities and throughout the duration of construction and any landscape establishment period, the contractor shall arrange for and perform the control of noxious and invasive species in the project area.

V. OTHER FEDERAL SENSITIVE SPECIES

Table B-1. Other Federal Sensitive Species

Common Name	Scientific Name	Status	Occupied Habitat Present?	Suitable Habitat Present?	Suitable Habitat Affected?	Species Potentially Affected?
Reptiles						
Sonoran Desert tortoise	<i>Gopherus morafkai</i>	C, CCA	No	Yes	Yes	Yes

Sonoran Desert tortoise (Gopherus morafkai)

ADOT is a signatory to the *Candidate Conservation Agreement for the Sonoran Desert Tortoises (Gopherus morafkai) in Arizona* (USFWS and AIDTT 2015) and makes accommodations for protection of tortoises on construction projects where tortoises may be present.

Species Summary Table

	Feeding		Breeding	Sheltering	
	Juvenile	Adult	Adult	Juvenile	Adult
Habitat	Rocky habitats, bajadas, and washes within Sonoran or Mohave Desertscrub	Rocky habitats, bajadas, and washes within Sonoran or Mohave Desertscrub	Rocky habitats, bajadas, and washes within Sonoran or Mohave Desertscrub	Below rocks, boulders, vegetation, on semi-open slopes, caliche caves of washes, or rocky crevices	Below rocks, boulders, vegetation, on semi-open slopes, caliche caves of washes, or rocky crevices
Prey	Primarily plants, some bones, and soil	Primarily plants, some bones, and soil	Primarily plants, some bones, and soil	N/A	N/A
Perches	N/A	N/A	N/A	N/A	N/A
Cover	Open areas with cover nearby	Open areas with cover nearby	N/A	Full cover	Full cover
Temperature	Cooler temperatures in spring time and after rainfall events	Cooler temperatures in spring time and after rainfall events	N/A	During extreme temperatures	During extreme temperatures
Lighting	N/A	N/A	N/A	N/A	N/A
Moisture	Emerge in response to precipitation	Emerge in response to precipitation	Highly dependent on summertime monsoon events	During periods of drought	During periods of drought
Sound	N/A	N/A	N/A	N/A	N/A
Water	Drought tolerant, but require periodic free-standing water	Drought tolerant, but require periodic free-standing water	N/A	N/A	N/A

	Feeding		Breeding	Sheltering	
	Juvenile	Adult	Adult	Juvenile	Adult
Dispersal	0.01 to 1.0 square mile	0.01 to 1.0 square mile	0.01 to 1.0 square mile	0.01 to 1.0 square mile	0.01 to 1.0 square mile
Seasonal Activity	Early-mid spring, during monsoon season	Early-mid spring, during monsoon season	July through October	Daily and year-round, but dormant from mid-November to mid-February.	Daily and year-round, but dormant from mid-November to mid-February.

Life History

Species Description and Ecology

The adult desert tortoise is a fairly large (8–15 inches in length) tortoise with a high domed brownish carapace, yellowish unhinged plastron, short tail, and stocky limbs. Both the carapace and plastron exhibit prominent growth lines, and the forelimbs are covered with large conical scales (USFWS 2021).

Sonoran Desert tortoises are long-lived and are thought to have three life stages: young juveniles, older juveniles (sub-adults), and adults. Time within each life stage is dependent on the size of the animal. Young juveniles include hatchlings and very small juveniles up to about 5 years of age or when their shells harden. After their shells completely harden, they are considered to be within the older juvenile life stage until they reach sexual maturity. This can be from age 6-15, but it is largely dependent on precipitation trends. Most tortoises are considered adults from around 16 years of age (USFWS 2021).

Desert tortoises spend much of the winter months dormant within their burrows and tend to only emerge in response to precipitation or other physiological needs. Precipitation is an important factor for the desert tortoise because free-standing water is critical for their survival during long periods of drought. Surface activity for desert tortoises occurs primarily during daylight hours from early – mid spring, and then again during summer monsoons (USFWS 2021).

Desert tortoises eat a variety of plants including fresh winter and summer annuals, perennials, dried annuals, and plant litter. In addition to being herbivores, they also consume bones and soil, especially that of exposed calcium carbonate, to help grind plant matter in their stomachs and supplement their diet with nutrients and minerals not found in plants (USFWS 2021).

Reproduction

The Sonoran Desert tortoise breeding season typically occurs from July to October. Approximately half of adult females reproduce in any given year, though once mated, females are capable of storing sperm for up to two years. This allows them to lay fertile eggs for up to two years after a single mating. Females dig a nest hole in the soil and may lay one clutch of 1 – 12 eggs per year, typically around the onset of the summer monsoon season. After depositing eggs, the female fills in the nest hole and may defend the site for some time against potential predators (USFWS 2021).

Suitable Habitat

Sonoran Desert tortoises typically inhabit the bajadas and rocky, steep slopes of Mojave Desertscrub and both subdivisions of Sonoran Desertscrub but can be found in other habitat within western and central Arizona between 900- and 4,200-foot elevation east and south of the Colorado River. Desert tortoises most often occur in a paloverde-cacti mix with boulders, rocky outcrops, and natural ground cavities nearby. They require loose soils to excavate shelters below rocks, boulders, and vegetation on semi-open slopes, but will also shelter in

caliche caves of washes, or otherwise in rocky crevices. These shelter sites are one of the more important components of desert tortoise habitat since they shelter for long spans of time to avoid temperature extremes and drought conditions (USFWS 2021).

The Sonoran Desert tortoise also utilizes inter-mountain valleys for dispersal at all life stages and these areas are considered part of their home range. Home ranges vary in size based on rainfall levels, with small home ranges in wet years and larger home ranges in dry years. Typically, these tortoises will occupy from 0.01- 1.0 square mile with high fidelity to their home ranges except when dispersing to new areas. Tortoise dispersal into new areas is typically related to physiological needs such as food and shelter availability and suitability (USFWS 2021).

Threats

Primary threats to the Sonoran Desert tortoise include habitat loss and fragmentation. Urban, agricultural, and road development have resulted in significant loss and fragmentation of the species' habitat. Other factors causing the loss or alteration of tortoise habitat include invasion of exotic annual grasses and forbs which have changed fire regimes resulting in more frequent large scale destructive wildfires, climate change and drought. Additional threats to the species include human tortoise interactions such as off-road vehicle use, illegal collection, and illness from the release of captive tortoises into the wild, and handling of wild tortoises (USFWS 2021).

Range and Survey History

Sonoran Desert tortoises within Arizona occupy rocky and boulder strewn mountains and hills east and south of the Colorado River. This includes portions of western and central Arizona between 900-feet and 4,200-feet elevation within the Mohave and Sonoran Desertscrub biotic communities. Based on available data, the current range and distribution for the species is largely the same as was historically documented. No population extirpations or range reductions have been documented in Arizona (USFWS 2021).

No known formal surveys have been conducted for the Sonoran Desert tortoise within the project area. However, the AGFD OERT identified the Sonoran Desert tortoise as having been documented occurring within three miles of the project.

Habitat Suitability Evaluation

The project is located within the Lower Colorado River Subdivision-Sonoran Desertscrub biotic community. The surrounding topography is relatively flat; however, a mountain complex at the intersection of West Jomax Road and North Dysart Road located one mile west of the northern terminus of the project may provide higher quality habitat for the SDT. Tortoises may use drainages within the project area as a travel corridor between areas of suitable habitat. Tortoise shelter sites such as caliche caves were not observed during the November 2024 site visit; however, boulders lining the McMicken Dam Outlet Channel may provide marginal quality shelter sites. Therefore, suitable habitat for SDT is present within the project area.

Analysis and Determination of Impacts

Vegetation removal and ground disturbance (earthwork) are anticipated for this project and would impact suitable foraging and dispersal habitat present within the project area. If traveling or sheltering desert tortoises are present within the project area during vegetation removal or ground disturbing activities, these individuals could be injured or killed by construction vehicles or heavy equipment. Therefore, the project may impact individuals of Sonoran Desert tortoise, but it is not likely to result in a trend toward federal listing or loss of viability. To minimize this potential impact, the environmental commitments listed below and in Section 7 of this document would be implemented.

Contractor Responsibilities

- If any Sonoran Desert tortoises are encountered during construction, the contractor shall adhere to the attached Arizona Game and Fish Department “Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects.” If any tortoise is encountered during construction the contractor shall notify the Engineer to report the encounter.
- The contractor shall report encounters with any Sonoran Desert tortoise (live, injured, or dead) during construction to the Engineer using the attached Arizona Department of Transportation Sonoran Desert Tortoise Observation Form. The final form shall be sent to Arizona Department of Transportation Environmental Planning (email: bioteam@azdot.gov) within 24 hours of the encounter. Photographs should be taken of tortoises encountered and included in the report if possible.
- Prior to construction activity the contractor’s field personnel including the Project Manager, Assistant Project Manager, General Superintendent, and Project Superintendent shall review the attached Arizona Department of Transportation Environmental Planning “Sonoran Desert Tortoise Awareness Program Handout” flier, become familiar with the identification and avoidance of the Sonoran Desert tortoise, and follow the notification request, as applicable.

Monarch Butterfly (Danaus Plexippus)

ADOT is enrolled in the Nationwide Candidate Conservation Agreement with Assurances (CCAA) for Monarch Butterfly on Energy and Transportation Lands and has been issued a Certificate of Inclusion in the CCAA which confers exemption from take prohibitions for certain activities performed in ADOT ROW. ADOT has committed to adoption of conservation areas (‘adopted acres’) and conservation measures under the CCAA which are anticipated to result in a net conservation benefit to the species. This project occurs outside of the ADOT ROW, therefore, coverage under the CCAA is not applicable.

VI. STATE SENSITIVE SPECIES

The AGFD OERT was accessed on June 30, 2025 (Receipt Number: HGIS-19485) to determine whether special status species have been reported to occur in the area surrounding the project. As part of the environmental review process a letter describing the project was sent to the AGFD to inform them of the project and to solicit comments. The letter requested any specific concerns, suggestions, or recommendations the agency may have related to the project. The AGFD OERT identified two special status species: the Sonoran Desert tortoise and the western burrowing owl, as occurring within two miles of the project. As of the time of this document’s completion, a response from the AGFD has not been received. (See Appendix C)

VII. PROTECTED NATIVE PLANTS

The construction footprint and surrounding ROW was inspected for the presence of protected native plants on November 7, 2024. The following protected native plants may be impacted by the project: velvet mesquite, ironwood, palo verde, teddy bear cholla, buckhorn cholla, saguaro, and barrel cactus. Therefore, the following environmental commitments will be implemented in order to comply with the Arizona Native Plant Law:

ADOT Roadside Development Requirement

- Protected native plants within the project limits will be impacted by this project; therefore, the Arizona Department of Transportation Roadside Development Section will determine if Arizona Department of Agriculture notification is needed. If notification is needed, the Arizona Department of Transportation Roadside Development Section will send the notification at least 60 (sixty) calendar days prior to the start of construction.

VIII. WILDLIFE CONNECTIVITY

ADOT, the AGFD, the FHWA, and representatives from other agencies have completed a Wildlife Linkages Assessment to address important wildlife movement corridors in Arizona. The project is not located within any linkage areas identified in the Arizona Wildlife Linkages Assessment (Arizona Wildlife Linkage Workgroup [AWLW] 2006).

The AGFD OERT identified a wildlife linkage area from the 2012 Maricopa County Wildlife Connectivity Assessment (i.e., the White Tank Flood Retainment Structures movement area) as occurring within the project area. This movement area is utilized for connectivity along flood control lands from McMicken Dam south to the Buckeye FRS1 and the Hassayampa River movement blocks. The assessment listed urbanization as a current threat/barrier to the movement area. The creation of a new road contributes to the urbanization of the area and has the potential to create a barrier to connectivity. However, the project area occurs in a semi developed, residential environment, outside of the highly developed Phoenix metropolitan area. As such, there would remain ample undeveloped or semi-developed areas for wildlife to utilize for movement. Further coordination with AGFD to ensure wildlife movement through the project area will be necessary.

APPENDIX C

AGENCY COORDINATION

The USFWS IPaC system and AGFD OERT were utilized to identify special status species potentially occurring in the area surrounding the project. The IPaC and AGFD review tool results are included in this Appendix. As part of the environmental review process, a letter describing the project was also sent to the agencies below on October 4, 2024, to inform them of the project and to solicit comments.

Arizona Game and Fish Department

Cheri Boucher, Transportation Project Evaluation Specialist

As of the time of this document's completion, a response from the AGFD has not been received. All correspondence with these agencies is attached.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Arizona Ecological Services Field Office
9828 North 31st Ave
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In Reply Refer To:
Project Code: 2023-0094347
Project Name: T0428: El Mirage Rd.; L303 to Jomax Rd

06/30/2025 23:22:41 UTC

Subject: List of threatened and endangered species that may occur in your proposed project location 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 the One-Range that has been delineated for the species (candidate, proposed, or listed) and its critical habitat (designated or proposed) with which your project polygon intersects. These range delineations are based on biological metrics, and do not necessarily represent exactly where the species is located. Please refer to the species information found on ECOS 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." For example, projects that involve streams and river systems should consider downstream affects. If the Federal action agency determines that the action may jeopardize a *proposed* species or may 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: <https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf>.

We also advise you to consider species protected under the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712) and the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. 668 *et seq.*). The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when authorized by the Service. The Eagle Act prohibits anyone, without a permit, from taking (including disturbing) eagles, and their parts, nests, or eggs. Currently 1,026 species of birds are protected by the MBTA, including the western burrowing owl (*Athene cunicularia hypugaea*). Protected western burrowing owls can be found in urban areas and may use their nest/burrows year-round; destruction of the burrow may result in the unpermitted take of the owl or their eggs.

If a bald eagle or golden eagle nest occurs in or near the proposed project area, our office should be contacted for Technical Assistance. An evaluation must be performed to determine whether the project is likely to disturb or harm eagles. The National Bald Eagle Management Guidelines provide recommendations to minimize potential project impacts to bald eagles (see <https://www.fws.gov/law/bald-and-golden-eagle-protection-act> and <https://www.fws.gov/program/eagle-management>).

The Division of Migratory Birds (505/248-7882) administers and issues permits under the MBTA and Eagle Act, while our office can provide guidance and Technical Assistance. For more information regarding the MBTA, BGEPA, and permitting processes, please visit the following web site: <https://www.fws.gov/program/migratory-bird-permit>. Guidance for minimizing impacts to migratory birds for communication tower projects (e.g. cellular, digital television, radio, and emergency broadcast) can be found at <https://www.fws.gov/media/recommended-best-practices-communication-tower-design-siting-construction-operation>.

The U.S. Army Corps of Engineers (Corps) may regulate activities that involve streams (including some intermittent streams) and/or wetlands. 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, please visit [this link](#) or visit <https://www.fws.gov/program/national->

[wildlife-refuge-system](#) to locate the refuge you would be working in or around.

If your action is on tribal land or has implications for off-reservation tribal interests, we encourage you to contact the tribe(s) and the Bureau of Indian Affairs (BIA) to discuss potential tribal concerns, and to invite any affected tribe and the BIA to participate in the section 7 consultation. In keeping with our tribal trust responsibility, we will notify tribes that may be affected by proposed actions when section 7 consultation is initiated. For more information, please contact our Tribal Coordinator, John Nystedt, at 928/556-2160 or John.Nystedt@fws.gov.

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

We appreciate your concern for threatened and endangered species. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office. If we may be of further assistance, please contact our Flagstaff office at 928/556-2118 for projects in northern Arizona, our general Phoenix number 602/242-0210 for central Arizona, or 520/670-6144 for projects in southern Arizona.

Sincerely,
/s/

Heather Whitlaw
Field Supervisor
Attachment

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

Arizona Ecological Services Field Office
9828 North 31st Ave
#c3
Phoenix, AZ 85051-2517
(602) 242-0210

PROJECT SUMMARY

Project Code: 2023-0094347

Project Name: T0428: El Mirage Rd.; L303 to Jomax Rd

Project Type: Road/Hwy - New Construction

Project Description: The City of Peoria is requesting the project initiation for the preparation of the Design Concept Report for El Mirage Rd from L303 to Jomax Rd. This will be an Environmental Assessment. The project begins off of the 303 across from El Mirage Road, see map attached. I have added additional information from the establishment letter and feasibility report.

The June 2022 El Mirage Rd; L303 to Jomax Rd Feasibility Study recommends a six-lane urban principal arterial roadway for El Mirage Road and provides a conceptual layout, and the City of Peoria General Plan 2040 (December 2020) identifies El Mirage Road as a future arterial between SR 303L and Jomax Road.

The DCR scope of work for this portion of the project includes:

- inside two lanes in each direction of travel
- a raised median
- curb and gutter
- bicycle lanes
- offset sidewalks set back to the ultimate location

The study area is primarily within unincorporated Maricopa County but is also located within the City of Peoria planning area. As development occurs, this area will be annexed into the City of Peoria.

If funding constraints do not allow for a continuous two-lane facility from SR 303L to Jomax Road, there are other potential options for phased implementation of a continuous facility.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@33.71453495,-112.32508827683776,14z>



Counties: Maricopa County, Arizona

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

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

BIRDS

NAME	STATUS
Cactus Ferruginous Pygmy-owl <i>Glaucidium brasilianum cactorum</i> There is final critical habitat for this species. Species profile: https://ecos.fws.gov/ecp/species/1225	Threatened
California Least Tern <i>Sternula antillarum browni</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/8104	Endangered
Yellow-billed Cuckoo <i>Coccyzus americanus</i> Population: Western U.S. DPS There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

FISHES

NAME	STATUS
Gila Topminnow (incl. Yaqui) <i>Poeciliopsis occidentalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1116	Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

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

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Arizona Department of Transportation

Name: Coby Teal

Address: 205 South 17th Avenue, MD EM02

City: phoenix

State: AZ

Zip: 85007

Email: cteal@azdot.gov

Phone: 9283040487

Arizona Environmental Online Review Tool Report



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

The Department requests further coordination to provide project/species specific recommendations. Please use the [Project Evaluation Form](#) to submit your project to the Project Evaluation Program at PEP@azgfd.gov.

Project Name:

T0428: El Mirage Rd; L303 to Jomax Rd

Project Type:

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

Project ID:

HGIS-19485

User Project Number:

T0428

Project Description:

The City of Peoria is requesting the project initiation for the preparation of the Design Concept Report for El Mirage Rd from L303 to Jomax Rd. This will be an Environmental Assessment. The project begins off of the 303 across from El Mirage Road, see map attached. I have added additional information from the establishment letter and feasibility report. The June 2022 El Mirage Rd; L303 to Jomax Rd Feasibility Study recommends a six-lane urban principal arterial roadway for El Mirage Road and provides a conceptual layout, and the City of Peoria General Plan 2040 (December 2020) identifies El Mirage Road as a future arterial between SR 303L and Jomax Road. The DCR scope of work for this portion of the project includes: ? inside two lanes in each direction of travel ? a raised median ? curb and gutter ? bicycle lanes ? offset sidewalks set back to the ultimate location The study area is primarily within unincorporated Maricopa County but is also located within the City of Peoria planning area. As development occurs, this area will be annexed into the City of Peoria. If funding constraints do not allow for a continuous two-lane facility from SR 303L to Jomax Road, there are other potential options for phased implementation of a continuous facility. The City is recommending that 150' R/W be acquired to accommodate the mainline and acquire additional R/W as needed to accommodate the intersection widening, access management, drainage facilities, pedestrian facilities, etc

Contact Person:

Coby Teal

Organization:

Arizona Department of Transportation

On Behalf Of:

CITY

Disclaimer:

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

Locations Accuracy Disclaimer:

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

1. The Department is interested in the conservation of all fish and wildlife resources, including those species listed in this report and those that may have not been documented within the project vicinity as well as other game and nongame wildlife.
2. Recommendations have been made by the Department, under authority of Arizona Revised Statutes Title 5 (Amusements and Sports), 17 (Game and Fish), and 28 (Transportation).
3. Potential impacts to fish and wildlife resources may be minimized or avoided by the recommendations generated from information submitted for your proposed project. These recommendations are preliminary in scope, designed to provide early considerations on all species of wildlife.
4. Making this information directly available does not substitute for the Department's review of project proposals, and should not decrease our opportunity to review and evaluate additional project information and/or new project proposals.
5. Further coordination with the Department requires the submittal of this Environmental Review Report with a cover letter and project plans or documentation that includes project narrative, acreage to be impacted, how construction or project activity(s) are to be accomplished, and project locality information (including site map). Once AGFD had received the information, please allow 30 days for completion of project reviews. Send requests to:

6. Coordination may also be necessary under the National Environmental Policy Act (NEPA) and/or Endangered Species Act (ESA). Site specific recommendations may be proposed during further NEPA/ESA analysis or through coordination with affected agencies.

T0428: El Mirage Rd; L303 to Jomax Rd
USA Topo Basemap With Locator Map



 Buffered Project Boundary
 Project Boundary

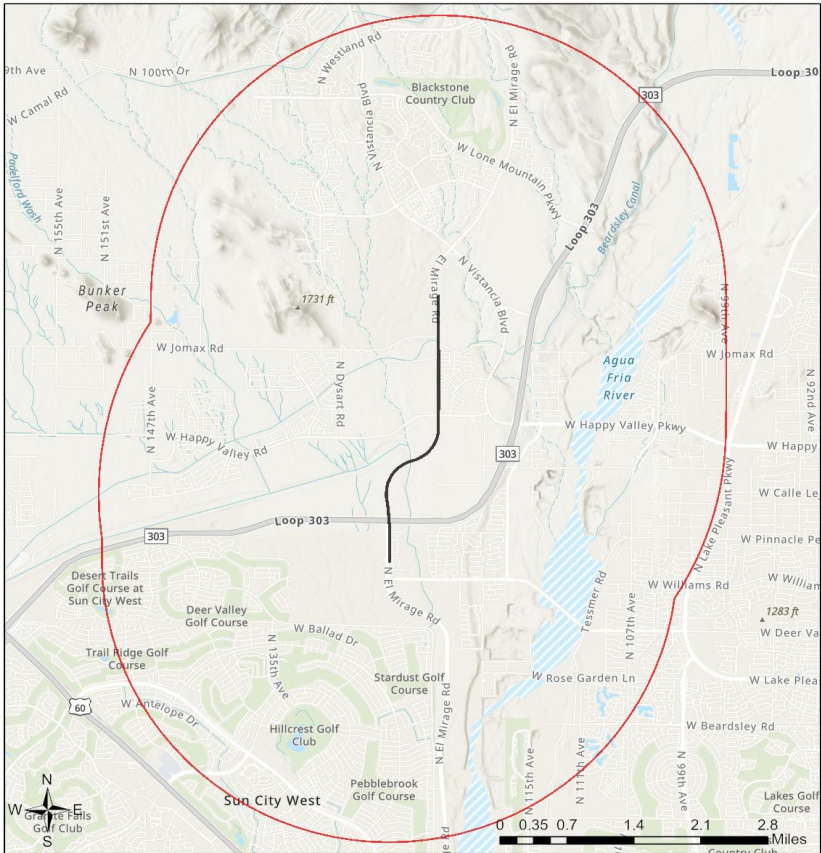
Project Size (acres): 25.69
 Lat/Long (DD): 33.7088 / -112.3273
 County(s): Maricopa
 AGFD Region(s): Mesa
 Township/Range(s): T4N, R1W; T5N, R1W
 USGS Quad(s): CALDERWOOD BUTTE

County of Yavapai, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
Copyright:© 2013 National Geographic Society, i-cubed
Esri, USGS



T0428: El Mirage Rd; L303 to Jomax Rd

Important Areas



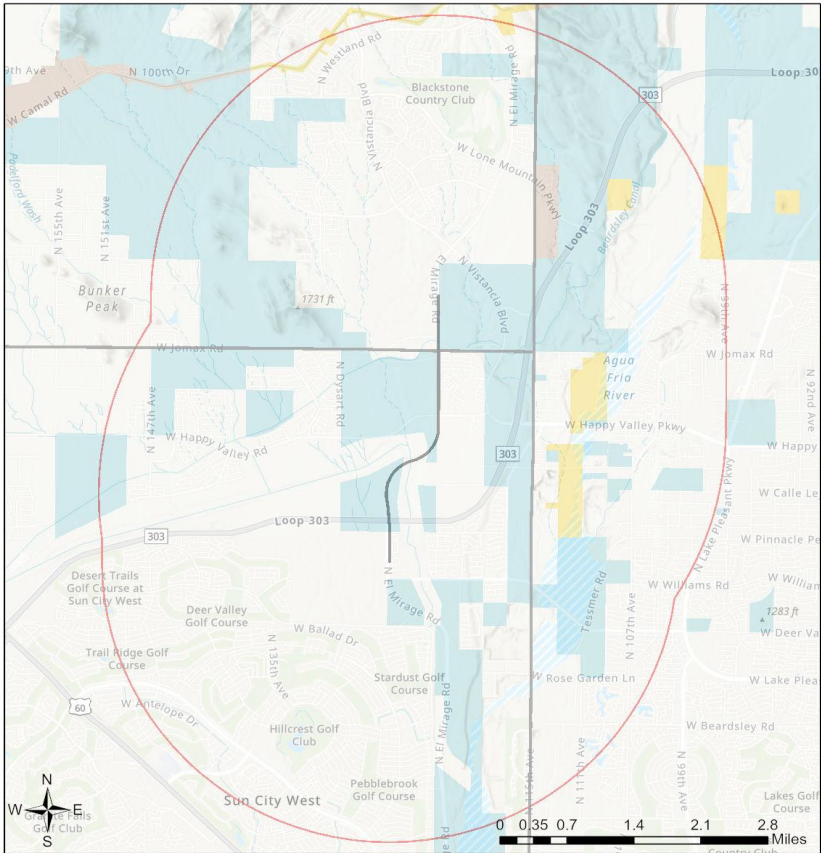
- Buffered Project Boundary
- Project Boundary
- Important Bird Areas
- Critical Habitat
- Pinal County Riparian
- Wildlife Connectivity

Project Size (acres): 25,69
Lat/Long (DD): 33.7088 / -112.3273
County(s): Maricopa
AGFD Region(s): Mesa
Township/Range(s): T4N, R1W; T5N, R1W
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Esri, NASA, NGA, USGS
Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, IFPS, USDA, USFWS

T0428: El Mirage Rd; L303 to Jomax Rd

Township/Ranges and Land Ownership



- Buffered Project Boundary
- Project Boundary
- AZ Game & Fish Dept.
- BLM
- BOR
- Indian Res.
- Military

- Mixed/Other
- National Park/Mon.
- Private
- State & Regional Parks
- State Trust
- US Forest Service
- Wildlife Area/Refuge
- Township/Ranges

Project Size (acres): 25,69
Lat/Long (DD): 33.7088 / -112.3273
County(s): Maricopa
AGFD Region(s): Mesa
Township/Range(s): T4N, R1W; T5N, R1W
USGS Quad(s): CALDERWOOD BUTTE

Esri, NASA, NGA, USGS
Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc., METI/NASA, USGS, Bureau of Land Management, EPA, IFPS, USDA, USFWS

Special Status Species Documented within 3 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Athene cunicularia hypugaea	Western Burrowing Owl		S	S		2
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1
Toxostoma bendirei	Bendire's Thrasher					2

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/>.

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
White Tank Flood Retainment Structures	Maricopa County Wildlife Movement Area - Landscape					

Note: Status code definitions can be found at <https://www.azgfd.com/wildlife-conservation/on-the-ground-conservation/state-wildlife-action-plan/state-wildlife-action-plan-status-definitions/>.

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Ammospermophilus harrisi	Harris' Antelope Squirrel					2
Anthus spragueii	Sprague's Pipit					2
Artemisiospiza nevadensis	Sagebrush Sparrow					3
Asio otus	Long-eared Owl					2
Athene cunicularia hypugaea	Western Burrowing Owl		S	S		2
Auriparus flaviceps	Verdin					2
Buteo regalis	Ferruginous Hawk			S		2
Calcarius ornatus	Chestnut-collared Longspur					2
Calypte costae	Costa's Hummingbird					2
Campylorhynchus brunneicapillus	Cactus Wren					2
Catharus ustulatus	Swainson's Thrush					2
Chaetodipus baileyi	Bailey's Pocket Mouse					2
Chilomeniscus cinctus	Variable Sandsnake					2
Coccyzus americanus	Yellow-billed Cuckoo (Western DPS)	LT	S	S		1
Colaptes chrysoides	Gilded Flicker			S		2
Columbina inca	Inca Dove					2
Empidonax wrightii	Gray Flycatcher					2
Eumops perotis californicus	Greater Western Bonneted Bat			S		2
Falco mexicanus	Prairie Falcon					2
Falco peregrinus anatum	American Peregrine Falcon		S	S		1
Falco sparverius	American Kestrel					2
Gopherus morafkai	Sonoran Desert Tortoise	CCA	S	S		1
Icterus bullockii	Bullock's Oriole					2

Species of Greatest Conservation Need Predicted that Intersect with Project Footprint as Drawn, based on Predicted Range Models

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Icterus cucullatus	Hooded Oriole					2
Incilius alvarius	Sonoran Desert Toad					2
Lanius ludovicianus	Loggerhead Shrike					2
Lasiurus frantzii	Desert Red Bat		S			2
Lasiurus xanthinus	Western Yellow Bat		S			2
Macrotus californicus	California Leaf-nosed Bat			S		2
Megascops kennicottii	Western Screech-owl					2
Melanerpes uropygialis	Gila Woodpecker					2
Melospiza lincolni	Lincoln's Sparrow					2
Melospiza aberti	Abert's Towhee		S			2
Micrathene whitneyi	Elf Owl					3
Myotis velifer	Cave Myotis			S		2
Myotis yumanensis	Yuma Myotis					2
Neotamias cinereicollis	Gray-collared Chipmunk					2
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					2
Parabuteo unicinctus	Harris's Hawk					2
Passerculus sandwichensis	Savannah Sparrow					2
Perognathus amplus	Arizona Pocket Mouse					2
Phrynosoma solare	Regal Horned Lizard					2
Pooecetes gramineus	Vesper Sparrow					2
Rana yavapaiensis	Lowland Leopard Frog		S	S		1
Spizella breweri	Brewer's Sparrow					2
Tadarida brasiliensis	Brazilian Free-tailed Bat					2
Toxostoma bendirei	Bendire's Thrasher					2
Toxostoma lecontei	LeConte's Thrasher			S		2

Species of Economic and Recreation Importance Predicted that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Callipepla gambelii	Gambel's Quail					
Odocoileus hemionus	Mule Deer					
Pecari tajacu	Javelina					
Zenaidura macroura	White-winged Dove					
Zenaidura macroura	Mourning Dove					

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

**Project Type Recommendations:
Bridge Maintenance/Construction**

In addition to the species list generated by the Arizona's On-line Environmental Review Tool, the AZGFD 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, consider conducting maintenance and construction activities outside the bat maternity season (May through September) and typical bird breeding season (March through August). Examine the crevices for the presence of bats prior to pouring new paving materials or sealing the top of those crevices 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 sites for bats into bridge designs.

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. 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. Guidelines for bridge and culvert designs to facilitate wildlife passage can be found on our Wildlife Friendly Guidelines web page under the Planning for Wildlife link, at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

Fence recommendations will be dependent upon the goals of the fence project and the wildlife species expected to be impacted by the project. The AZGFD's Wildlife Compatible Fencing Guidelines provide information on how fencing impacts wildlife, ways to design fencing to prevent wildlife entanglement and impalement, and to ensure wildlife movement is not restricted. Please refer to the AZGFD's Fencing Guidelines located on Wildlife Friendly Guidelines page, which is part of the Wildlife Planning page at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

For wildlife friendly fencing, general guidelines for ensuring wildlife-friendly barbed-wire fences along roadways and other property/allotment boundaries 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). For projects that require chain link or other security/perimeter fence, leaving a 6–8-inch gap between the ground surface and bottom of the fence to allow for smaller wildlife species to move freely through the area and make use of any habitat within the project boundary.

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 it is important to identify and conserve upland 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 species. Guidelines for many of these can be found at: <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

Consider impacts of outdoor lighting on wildlife and develop measures or alternatives that can be taken to increase human safety while minimizing potential impacts to wildlife. Artificial lighting could impair the ability of nocturnal animals to navigate (e.g., owls, migratory birds, bats, and other nocturnal mammals) and may affect wildlife behavior and populations. The AZGFD recommends using only the minimum amount of light needed for safety, especially in areas immediately adjacent to open space or undeveloped lands. The AZGFD encourages the use of motion sensing lighting and narrow spectrum lighting (amber or warm tones typically 2700 Kelvin or lower) wherever possible to lower the range of species affected by lighting. Also, please consider shielding, canting, or cutting all lighting, where possible, to ensure that light reaches only areas needing illumination and to minimize impacts to nocturnal wildlife.

Minimize the potential introduction or spread of exotic invasive species, including aquatic and terrestrial plants, animals, insects and pathogens. Precautions should be taken to wash and/or decontaminate all equipment utilized in the project activities before entering and leaving the site. See the Arizona Department of Agriculture website for a list of prohibited and restricted noxious weeds at <https://www.invasivespeciesinfo.gov/> and the Arizona Native Plant Society <https://aznps.com/invas> for recommendations on how to control these species. To view a list of documented invasive species or to report invasive species in or near your project area visit [iMapInvasives](https://www.invasivespeciesinfo.gov/) - a national cloud-based application for tracking and managing invasive species at <https://imap.natureserve.org/imap/services/page/map.html>.

- To build a list: zoom to your area of interest, use the identify/measure tool to draw a polygon around your area of interest, and select "See What's Here" for a list of reported species. To export the list, you must have an account and be logged in. You can then use the export tool to draw a boundary and export the records in a csv file.

Evaluate potential impacts to wildlife and fish species due to changes in access to water, water quality, quantity, chemistry, temperature, and alteration to flow regimes (timing, magnitude, duration, and frequency of floods). Minimize impacts to springs, in-stream flow, and consider irrigation improvements to decrease water use. If dredging is a project component, consider timing the project to minimize impacts to spawning fish and other aquatic species. Wash, drain, and dry equipment to reduce the spread of exotic invasive species. AZGFD recommends early coordination with the Project Evaluation Program (PEP@azgfd.gov) for projects that could impact water resources, wetlands, streams, springs, and/or riparian habitats.

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

If trenching or digging of large holes is necessary, the AZGFD recommends trenching/digging and backfilling crews be close together to minimize the amount of open holes at any given time. Where trenches or holes cannot be back-filled immediately, the AZGFD recommends escape ramps be constructed in each hole and at least every 90 meters in trenches. Escape ramps can be short lateral trenches or wooden planks sloping to the surface. The AZGFD recommends that slopes be less than 45 degrees (1:1) and trenches and holes that have been left open be inspected to remove animals prior to backfilling.

Washes and stream corridors often provide important corridors for terrestrial and aquatic wildlife 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. Designs should provide clear views at both ends to maximize utilization. Rip-rap is difficult for many species to traverse; if rip-rap is required on the ground under or in front of the culvert, it should be buried, back-filled with topsoil, or at least a portion of it should be covered by another substrate that would allow wildlife to move through. If the concrete floor underneath the culvert creates a steep shelf or step, at least a portion of it, preferably close to one of the edges (i.e. not in the middle of the drainage), should have a sloped ramp that allows wildlife to move along the drainage unobstructed. 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. Determine if the current structures are structurally suitable to provide day and/or night time roosting habitat for bats. An experienced biologist should survey for bats by looking into suitable cracks and/or looking for body or urine stain, physical presence, or guano. Bat surveys should be conducted prior to any work on or immediately adjacent to the culverts; surveys should be scheduled far in advance of proposed work to allow for schedule modification to avoid disruption of maternity roosts during the breeding season, and again immediately prior to construction. Guidelines for culvert designs to facilitate wildlife passage can be found on the home page of this application at <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-wildlife-friendly-guidelines/>.

The AZGFD recommends revegetating disturbed areas with native drought-tolerant species that represent the natural surrounding landscape. Landscaping with native plants can help support wildlife and pollinator species in the area while reducing dust and erosion. In addition, the applicable land management agencies should be consulted regarding guidelines for revegetation efforts. The AZGFD also recommends the development of a short and long-term monitoring plan, including adaptive management guidelines to address invasive species control and maintain native vegetation.

Project Location and/or Species Recommendations:

Analysis indicates that your project is located in the vicinity of an identified **wildlife habitat connectivity feature**. The **County-level Stakeholder Assessments** contain five categories of data (Barrier/Development, Wildlife Crossing Area, Wildlife Movement Area- Diffuse, Wildlife movement Area- Landscape, Wildlife Movement Area- Riparian/Washes) that provide a context of select anthropogenic barriers, and potential connectivity. The reports provide recommendations for opportunities to preserve or enhance permeability. Project planning and implementation efforts should focus on maintaining and improving opportunities for wildlife permeability. For information pertaining to the linkage assessment and wildlife species that may be affected, please refer to: <https://www.azgfd.com/wildlife-conservation/planning-for-wildlife/planning-for-wildlife-identifying-corridors/>. Please contact the Project Evaluation Program (pep@azgfd.gov) for specific project recommendations.

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

Phoenix Main Office 9828 North 31st Avenue #C3 Phoenix, AZ 85051-2517 Phone: 602-242-0210 Fax: 602-242-2513	Tucson Sub-Office 201 N. Bonita Suite 141 Tucson, AZ 85745 Phone: 520-670-6144 Fax: 520-670-6155	Flagstaff Sub-Office SW Forest Science Complex 2500 S. Pine Knoll Dr. Flagstaff, AZ 86001 Phone: 928-556-2157 Fax: 928-556-2121
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HDMS records indicate that **Sonoran Desert Tortoise** have been documented within the vicinity of your project area. Please review the Tortoise Handling Guidelines found at <https://s3.amazonaws.com/azgfd-portal-wordpress/PortalImages/files/wildlife/2014%20Tortoise%20handling%20guidelines.pdf>.

October 4, 2024

Ms. Cheri Bouchér
Transportation Project Evaluation Specialist
Arizona Game and Fish Department, WMHB - Project Evaluation Program
5000 W. Carefree Highway
Phoenix, AZ 85086-5000

Submitted by email to: pep@azgfd.gov

Subject: Scoping Letter T0428 03D
El Mirage Rd. SR303 – Jomax Road
AGFD Online Review: HGIS-22933

Re: PEO-0(231)T 0000 MA PEO T0428 01D El Mirage Rd. SR303 – Jomax Road

Dear Ms. Bouchér:

The City of Peoria and the Arizona Department of Transportation (ADOT), in cooperation with other local and state agencies, are preparing a Design Concept Report (DCR) and an Environmental Assessment (EA) to evaluate a potential new segment of El Mirage Road between State Route Loop 303 (SR303L) and Jomax Road (see study area map below). This new segment of roadway would accommodate current and projected traffic needs in response to increased development in areas along the State SR303L and near roadways and traffic interchange (TI) locations in the northwest Valley.

The DCR and EA will evaluate roadway improvements such as lane configuration, pedestrian and bicycle use, drainage improvements, right of way impacts, traffic impacts, and other considerations. They will also evaluate the potential environmental effects that could result from future implementation of the new roadway segment, as well as potential impacts if no action is taken (that is, no changes are made to El Mirage Road in the study area). Environmental topics to be addressed include but are not limited to biological resources, cultural resources, water resources, hazardous materials, traffic noise, and air quality. The Draft DCR and EA are currently scheduled to be available for public review and comment in spring 2025 and be completed in summer 2025.

A list of species potentially occurring within the project area was obtained using the Arizona Game and Fish Department (AGFD) On-Line Environmental Review Tool. This project was submitted on-line for your review on October 4, 2024 and is recorded under Project ID Number HGIS-19485. If you or others in your agency have any specific concerns, suggestions or recommendations pertaining to this specific project please let us know. This can include information on wildlife movement, habitat issues, or seasonal concerns, to name a few.

If the AGFD would like to have continued involvement with this project please include an expression of interest, individual contact information and a description of specific concerns. If no concerns or requests for future coordination are identified, ADOT will consider our coordination complete for the project.

Please submit your comments or concerns by November 4, 2024, to ADOT c/o Mr. Justin Hoppmann by mail at AZTEC, 501 N. 44th Street, Suite 300, Phoenix, AZ 85008; via email at jhoppmann@aztec.us or by phone at 626.616.4846. Thank you for your time and continued assistance.

Sincerely,



Justin Hoppmann
Senior Environmental Planner
AZTEC Engineering

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried out by ADOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated June 25, 2024 and executed by FHWA and ADOT.

APPENDIX D

ATTACHMENTS

Why does ADOT protect tortoises?

ADOT, along with the Arizona Game and Fish Department (AGFD) and several federal agencies, are signatory members of a Candidate Conservation Agreement (CCA) for the Sonoran Desert Tortoise (SDT). The CCA was developed to help preclude the listing of SDT under the Endangered Species Act. It is a cooperative effort to provide effective conservation for the SDT in Arizona. Under the agreement, ADOT has committed to enact avoidance, minimization, and mitigation measures for projects occurring within and adjacent to suitable habitat for SDT. This includes surveying proactively for tortoise habitat ahead of projects, collecting information on sightings, and training staff and contractors on methods to protect the tortoise during construction and maintenance work.

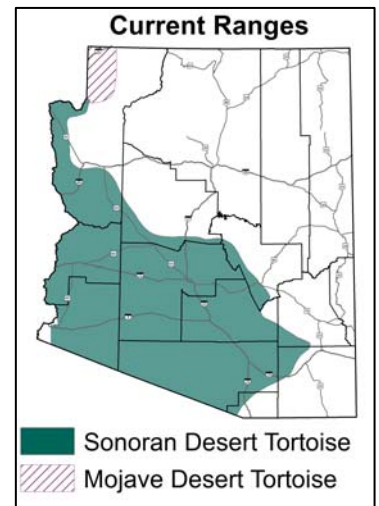


Legal Status

The SDT is protected under a CCA as described above. At the state level, wildlife are protected from collection and sale under Title 17 (ARS 17-309). AGFD classifies the SDT as a Tier 1A Species of Greatest Conservation Need and SDT are specifically restricted from collection under the AGFD Commission Rule R12-4-406.

Where are they found?

Two separate and distinct populations of desert tortoise occur in Arizona. The Mojave Desert Tortoise occurs west and north of the Colorado River within open, flat expanses of desert. The Sonoran Desert Tortoise occurs primarily in rocky and boulder strewn mountains and hills east of the Colorado River throughout western and central Arizona.



This handout applies ONLY to the Sonoran Desert Tortoise. Separate guidelines/measures are required for the Mojave Desert Tortoise due to its listing as Threatened under the Endangered Species Act.



THE GOAL IS TO AVOID NEGATIVE ENCOUNTERS!

How?

1. ALWAYS check under your vehicle and construction equipment **before** operating.
2. Drive slowly, especially on unpaved roads or off-road.
3. Cover any holes/pits/trenches at the end of each construction day.

If you encounter a tortoise:

1. Stop work immediately and turn off all equipment.
2. Notify your superintendent and the Resident Engineer.
3. Is the tortoise in imminent danger?
 - **No:** Stay back at least 10 feet from the animal. Allow the animal to leave. PLEASE BE PATIENT!
 - If the animal is located within your work area and is not leaving in a timely manner, then move your operation to a different location at least 1,000 feet away.
 - **Yes:** Move it out the way by following the attached AGFD "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects" dated September 22, 2014.
 - Tortoises should be moved less than 48 hours in advance of the habitat disturbance so they do not return to the area in the interim.
 - Tortoises should be moved quickly, kept in an upright position parallel to the ground at all times, and placed in the shade.
 - Separate disposable gloves should be worn for each tortoise handled to avoid potential transfer of disease between tortoises.
 - Tortoises must not be moved if the ambient air temperature exceeds 40°C (105°F) unless an alternate burrow is available or the tortoise is in imminent danger.
 - A tortoise may be moved up to one-half mile, but no further than necessary from its original location.



---If you don't know or are unsure of what to do, ASK!---

4. Fill out the attached ADOT Sonoran Desert Tortoise Observation Form and submit to the ADOT Biology Team (bioteam@azdot.gov) within 24 hours of any encounter. Photograph the animal if possible.

If you encounter a **sick, dying, injured, or dead tortoise** or if the ambient air temperature exceeds 105° F, please contact the assigned ADOT Biologist and Coby Teal (928) 304-0487 immediately with the location of the animal. These animals will be collected either by trained ADOT personnel or by AGFD.

If you observe poaching, collecting, selling, or any other illegal activities, contact AGFD's OPERATION GAME THIEF at **1-800-352-0700**, 24 hours a day or on the internet at <http://www.azgfd.gov/ogt.shtml>

Additional information for SDT life history and habitat requirements is available at:

Arizona Game and Fish Department:

<https://www.azgfd.com/wildlife/nongamemanagement/tortoise/>

US Fish and Wildlife Service:

https://www.fws.gov/southwest/es/arizona/Sonoran_Tort.htm

ADOT



GUIDELINES FOR HANDLING SONORAN DESERT TORTOISES
ENCOUNTERED ON DEVELOPMENT PROJECTS

Arizona Game and Fish Department
Revised September 22, 2014

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

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

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

Please keep in mind the following points:

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

Arizona Department of Transportation
Sonoran Desert Tortoise Observation Form



Date of Observation

Time

Observed By

Location- Route

Location- Milepost

ADOT District

Description of Encounter

Photo(s)

GPS (if available)

Email completed form
to: ADOT Biology Team
bioteam@azdot.gov



Western Burrowing Owl Awareness

ADOT Environmental Planning

1611 W. Jackson St- Mail Drop EM02

Phoenix, AZ 85007

The purpose of this flyer is to provide ADOT employees and contractors, working on roadside projects, with basic knowledge to reduce the risk of incidental take of Western Burrowing Owls.

Legal Status:

Western Burrowing Owls (*Athene cunicularia*) are protected under the Federal Migratory Bird Treaty Act of 1918. All migratory birds and their parts are fully protected. They are also protected under Arizona State Law in Title 17-101, Title 17-235, and Title 17-236.

What to look for:

- Description— small, ground-dwelling owl.
- Length— 19.5-25.0 cm (7.68-9.85 inches)
- Wingspan— 58.42 cm (23.0 inches)
- Mass— about 150 grams
- Males are typically slightly larger than females.
- Round head, lacks ear tufts.
- Distinct oval facial ruff, framed by a broad, puffy white eyebrow.
- Eyes contain a bright yellow iris.

Where are owls found?

- Dry, open, short grass, treeless plains.
- Dependent on fossorial mammals. (ground squirrels, prairie dogs, badgers, etc.) to construct burrows.
- Human dominated landscapes: golf courses, airports, agricultural fields.

Identifying an active burrow:

- Owls use burrows constructed by ground squirrels, badgers, coyotes and tortoises. They can also use pipes, culverts, and ditches.
- Presence of excrement (whitewash) near entrance to burrow.
- Burrowing owls frequently decorate entrance of burrows with cow or horse manure, feathers, vegetation and trash items.

How to avoid them:

- Scan ahead prior to arriving at a sign location.
- If burrowing owls are observed within the project area, stop and move at least 100 feet beyond the owl or occupied burrow before resuming work.

If you think your work may potentially impact a Burrowing Owl or active burrow, please stop.

Move at least 100 feet from the animal or burrow before resuming work.

If you have any questions or think you have a borrowing owl or active burrow on your work site please

contact: the project biologist or Coby Teal, Biology Team Lead

cell: (928) 304-0487 email: cteal@azdot.gov

Source: Arizona Game and Fish Department Animal Abstract: Western Burrowing Owl. Heritage Data Management System

(revised April 24, 2024)