

EXHIBIT C – AREAS OF BIOLOGICAL WEALTH

As stated in the Arizona Corporation Commission Rules of Practice and Procedure R14-3-219:

Describe any areas in the vicinity of the proposed site or route which are unique because of biological wealth or because they are habitats for rare and endangered species. Describe the biological wealth or species involved and state effects, if any, the proposed facilities will have thereon.

Introduction

Areas of biological wealth and the rare and endangered species that may occur at or in the vicinity of the Project were identified through a biotic resource review conducted by SWCA Environmental Consultants (SWCA). The data sources consulted for the review include:

- Topographical and aerial maps and land use, land cover, and elevation data
- The U.S. Fish and Wildlife Service (USFWS) species list for Project obtained from the USFWS online Information for Planning and Consultation (IPaC) system (Exhibit C-1)
- Species information obtained from the USFWS Environmental Conservation Online System, the USFWS Arizona Ecological Services document library, and the Arizona Game and Fish Department (AGFD) Online Environmental Review Tool (Exhibit C-2)
- AGFD review of the SRP Coolidge Generating Station-Coolidge Expansion Project (Exhibit C-3)

The AGFD Online Environmental Review Tool database query establishes a buffer beyond the Project Area to search for occurrence records and the presence of modeled habitat. The size of the buffer depends on the type of project being considered. For this Project, the buffer is 5 miles beyond the Project Area as defined by the AGFD Online Environmental Review Tool. This buffer fully encompasses the Study Area.

In addition, an SWCA biologist with expertise in the biology of flora and fauna of the region completed a survey of the Project Area, though the fenced in portion comprising the existing generating station was not entered. All plant and wildlife species observed in the Project Area during surveys on May 25, 2021, were recorded (see Exhibit D for a complete list), and the site was assessed to determine if habitat features for species protected under the federal, state, or local regulations were present in the Project Area and vicinity.

Laws and Policies

Applicable laws and policies regarding special-status species in Arizona include the following:

- The USFWS administers the Endangered Species Act of 1973 (ESA), as amended. The ESA protects wildlife species listed as threatened or endangered from "take" (generally, directly, or indirectly harming or disturbing listed species). However, the ESA does not provide the same take protections for listed plant species, except on federal land. The ESA also allows for the designation of critical habitat for listed species, although designation of critical habitat is not required. Critical habitat is an administrative designation of a defined area with specific characteristics important to the survival and recovery of a listed species. Designation of critical habitat can affect federal actions but not state or private actions without a federal nexus.

- The Migratory Bird Treaty Act (MBTA) provides for the protection of migratory birds and prohibits their unlawful take or possession. The act bans “taking” any native birds; “taking” can mean killing a wild bird or possessing parts of a wild bird, including feathers, nests, or eggs. Exceptions are allowed for hunting game birds and for research purposes, both of which require permits.
- The Bald and Golden Eagle Protection Act (BGEPA) prohibits any form of possession or taking of bald eagles (*Haliaeetus leucocephalus*) or golden eagles (*Aquila chrysaetos*). The act prohibits the “take” of bald and golden eagles; “taking” includes disturbing eagles, which means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.

The AGFD manages and conserves wildlife in Arizona. Nearly all take of wildlife is regulated in some manner through the hunting and fishing license system. Arizona does not have a counterpart to the federal ESA, but a list of rare species (Wildlife Species of Concern [WSC]) was created in 1996, based on ESA candidate species, without creating any specific statutory protections for those species (AGFD 1996). However, hunting regulations are used to provide some protection. The WSC status is no longer a valid category because they were former but no longer candidate species under the ESA; however, the AGFD continues to track these species due to an existing memorandum of understanding between the USFWS and AGFD. Generally, no hunting or capture of those species is allowed, with some exceptions for managed recreational fisheries of native fish (AGFD 2017) and recreational capture of certain reptiles (AGFD 2015).

Arizona prepared a Comprehensive Wildlife Conservation Strategy in 2006 (AGFD 2006), later renamed the State Wildlife Action Plan (SWAP), through a state–federal partnership and grant program. The SWAP was updated in 2012 (AGFD 2012). The SWAP identifies Species of Greatest Conservation Need (SGCN) in several tiers. Tier 1A includes ESA-listed species and other rare species. Tier 1B includes species that are not listed but are regionally rare or declining, species with a U.S. range primarily in Arizona that are dependent on conservation efforts within the state, and other species with identified conservation issues that may warrant management action. Tier 1C includes species with substantial data gaps and unknown conservation status, but for which conservation concern may be warranted. Other tiers include species that are common, widespread, or in stable populations. Exhibit C addresses Tier 1A, 1B, and 1C SGCNs. Species identified as WSC in 1996 are included as SGCNs in the SWAP and are addressed as SGCNs in Table C-1 and the discussion in Exhibit C.

Native plants in Arizona are managed by the Arizona Department of Agriculture (ADA), which regulates harvest, salvage, and transport of plants. Harvest or salvage of most plant species may be permitted or required, and fees may be assessed on state land. Plants listed in the Highly Safeguarded category may only be taken or salvaged for scientific or conservation purposes. No Highly Safeguarded plant species, or any other rare plant species, are likely to be present in the Study Area.

The ADA administers the state noxious weed law under Arizona Administrative Code R3-4-245.

Inventory

An SWCA biologist surveyed the Project Area on May 25, 2021. The biologist documented existing conditions and noted any habitat features that may be important to special-status species or related to areas of biological wealth in the Project Area and vicinity. The larger Study Area outside of the Project Area was not surveyed.

On November 9, 2021, the USFWS IPaC database was queried to generate an unofficial list of ESA-listed species that have the potential to occur in the Study Area (USFWS 2021a) (Exhibit C-1). In addition, the AGFD Online Environmental Review Tool was queried on November 8, 2021, to generate a list of special-status species with records within 5 miles of the Project Area and a list of SGCN with modeled suitable habitat within 5 miles of the Project Area (AGFD 2021a) (Exhibit C-2).

Summary of Occurrence

The USFWS and AGFD identified several rare, endangered, threatened, and other special-status species that are known to occur or could occur in the region (i.e., within the Study Area for USFWS and within Project Area plus a 5-mile buffer for AGFD). These protected areas, special-status species, and their likelihood of being present in the vicinity of the proposed Project are addressed below in four sections: 1) Areas of Biological Wealth 2) Federally Listed Threatened and Endangered Species, 3) Other Special-Status Species, and 4) Protected Native Plants (AGFD 2021a; USFWS 2021a).

Areas of Biological Wealth

No designated or proposed critical habitat occurs within the Study Area (USFWS 2021a).

Several areas of biological wealth occur in the vicinity of the Project but outside of the Study Area, including Picacho Reservoir and the Gila River Riparian Movement Area wildlife corridor (AGFD 2013), 3.3 miles southeast and 4.25 miles north of the Project, respectively. The Central Arizona Project (CAP) canal, a barrier to wildlife movement, also occurs in the vicinity of the Project, approximately 1.3 miles east of the Study Area.

Pinal County Riparian Areas are mapped within the Study Area (AGFD 2021a; AGFD and Pinal County 2019). Within the online review tool GIS layer, riparian areas include hydriparian, mesoriparian, and xeroriparian areas, but the online review tool does not indicate which type occurs within the mapped area. This riparian category was developed to provide planners and other project proponents the information to identify opportunities to protect riparian areas, open spaces, and other natural resources throughout Pinal County (AGFD and Pinal County 2019). No riparian areas were observed within the Project Area during field surveys (see Exhibit D). Xeroriparian areas occurred in the Study Area as stringers of vegetation within ephemeral drainages or along canals.

No Important Bird Areas (IBAs) occur within the Study Area or vicinity. The closest IBA, the Boyce Thompson Arboretum and Arnett-Queen Creeks IBA, is approximately 30 miles northeast of the Study Area (Audubon 2021).

Federally Listed Threatened and Endangered Species

Three species listed under the ESA and three candidate species were identified in the USFWS species list as occurring in the vicinity of the Study Area vicinity (USFWS 2021a): northern Mexican gartersnake (*Thamnophis eques megalops*), yellow-billed cuckoo (*Coccyzus americanus*), and Yuma Ridgway's (clapper) rail (*Rallus obsoletus*). The candidate species are Sonoran desert tortoise (*Gopherus morafkai*), roundtail chub (*Gila robusta*) and monarch butterfly (*Danaus plexippus*). The species' federal status and potential for occurrence in the vicinity of the Project are presented in Table C-1. While the jaguar (*Panthera onca*) is included as having modeled habitat within the Study Area (AGFD 2021a), no individuals have occurred in Pinal County since 1902 (Wildlife Conservation Society [WCS] 2021), and no suitable rugged, isolated habitat occurs for this species within the Study Area.

Table C-1. Evaluation of Federally Listed Species with Occurrences in the Vicinity of the Study Area

Common Name (Scientific Name)	Status ¹	Range or Habitat Requirements	Occurrence Status
Birds			
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	T	Typically found in riparian woodland vegetation (cottonwood [<i>Populus</i> sp.], willow [<i>Salix</i> sp.], or saltcedar [<i>Tamarix</i> sp.]) at elevations below 6,600 feet above mean sea level (amsl). Dense understory foliage appears to be an important factor in nest site selection. The highest concentrations in Arizona are along the Agua Fria, San Pedro, upper Santa Cruz, and Verde River drainages and Cienega and Sonoita Creeks.	<p>Unlikely to occur. Suitable riparian habitat for this species is not present in the Project Area. The Study Area is unlikely to be used for breeding, migration, or dispersal due to the scarcity of riparian trees, native or nonnative, in the Study Area. This species has occurrence records within 5 miles of the Project (AGFD 2021a), but these records are mapped from Picacho Reservoir, 3.3 miles southeast of the Project.</p> <p>The existing and planned new evaporation ponds are unlikely to attract this species in the absence of suitable riparian trees. No yellow-billed cuckoos were observed at the two nearest eBird hotspots (Goree's Pond, within the Study Area approximately 1.5 miles south of the Project Area, and Goldman Dairy Sludge Ponds, 0.3 mile south of the Study Area), both associated with constructed industrial ponds (eBird 2021).</p>
Yuma Ridgway's (clapper) rail (<i>Rallus obsoletus</i>)	E	Found in freshwater and brackish marshes below 4,500 feet amsl.	<p>Unlikely to occur. There is no suitable marsh habitat for this species in or adjacent to the Study Area. Evaporation ponds lack vegetation, and the Study Area does not contain any marshes. This species has occurrence records within 5 miles of the Project (AGFD 2021a), but these records are mapped from Picacho Reservoir, 3.3 miles southeast of the Project.</p> <p>No Yuma Ridgway's (clapper) rails were observed at the two nearest eBird hotspots (Goree's Pond, within Study Area approximately 1.5 miles south of the Project Area, and Goldman Dairy Sludge Ponds, 0.3 mile south of the Study Area), both associated with constructed industrial ponds (eBird 2021).</p>

Common Name (Scientific Name)	Status ¹	Range or Habitat Requirements	Occurrence Status
Reptiles			
Northern Mexican gartersnake (<i>Thamnophis eques megalops</i>)	T	Riparian obligate species found in lotic and lentic habitats that include cienegas and stock tanks (earthen impoundments) and rivers containing pools and backwaters. Most frequently found between 3,000 and 5,000 feet amsl but may occur up to approximately 8,500 feet amsl. This species uses adjacent terrestrial habitats for foraging, thermoregulation, gestation, shelter, immigration, emigration, and brumation. Found in areas of high native prey (fish and leopard frogs) concentration. Core population areas in Arizona include mid/upper Verde River drainage, mid/lower Tonto Creek, and the San Rafael Valley.	Unlikely to occur. There are no streams, rivers, springs, or livestock tanks suitable for this species in the Project Area. Because the concrete-lined canals lack native frog and fish species, northern Mexican gartersnakes are unlikely to hunt in the vicinity. In addition, there are no occurrence records for this species within 5 miles of the Project Area (AGFD 2021a). The Heritage Data Management System shows no occurrence records in Pinal County. The nearest designated critical habitat for this species is 65 miles northeast at Tonto Creek (USFWS 2021b).
Sonoran desert tortoise (<i>Gopherus morafkai</i>)	C	Occurs on primarily rocky, and often steep, hillsides and bajadas of Mohave and Sonoran desertscrub, typically at elevations below 7,800 feet amsl. May occur, but is less likely to occur, in desert grassland, juniper woodland, and interior chaparral habitats and even pine communities.	Unlikely to occur. There are no occurrence records within 5 miles of the Project Area (AGFD 2021a), and no suitable rocky or steep land features occur in the Project Area. Because the Study Area is surrounded by development and agriculture, this species would be unlikely to disperse through the Study Area.
Fish			
Roundtail chub (<i>Gila robusta</i>)	C	Species prefers cool to warm water in mid-elevation streams and rivers with pools up to 6.6 feet deep near flowing water. Cover consists of boulders, tree roots, deep water, and submerged vegetation. Elevational range of 1,210 to 7,220 feet amsl.	Unlikely to occur. There is no suitable aquatic habitat for this species in the Project Area. The Study Area is distant from known populations of this species. In addition, there are no occurrence records for this species within 5 miles of the Project Area (AGFD 2021a).
Insects			
Monarch butterfly (<i>Danaus plexippus</i>)	C	Habitat is complex. Generally, breeding areas are virtually all patches of milkweed (<i>Asclepias</i> sp.). The species occurs throughout Arizona during the summer and migrates to winter in Mexico and California, though small numbers do overwinter in the low deserts of southwestern Arizona.	May occur. This species may be present as transients during migration or as occasional individuals passing through the Study Area enroute to larval food plants or nectar resources. No <i>Asclepias</i> species were observed within the Project Area for larval use, but nectar sources are available for foraging and migration.

Note: Table lists the species named in USFWS official species list (USFWS 2021a) and in the Arizona Online Environmental Review Tool (AGFD 2021a).

¹Status abbreviations: E = Endangered. T = Threatened. C = Candidate.

Other Special-Status Species

Other special-status species include the following:

- Eagles protected by the BGEPA.
- Birds of Conservation Concern (BCC), which are bird species, beyond those designated as federally threatened or endangered, that represent the USFWS's highest conservation priorities.

The relevant BCC for this analysis are those identified by the USFWS (2021c) as occurring in Bird Conservation Region (BCR) 33.

- SGCN in Arizona, which are species identified by the AGFD as warranting heightened attention because of low and declining populations. SGCN are prioritized into tiers. Tier 1A species are those for which the AGFD has entered into an agreement or has legal or other contractual obligations or warrants the protection of a closed season. This tier includes all federally threatened and endangered species. Tier 1B represents the remainder of the species meeting the AGFD's vulnerability criteria. Tier 1C species are those for which existing data were insufficient to score one or more vulnerability criteria.

The species in these categories (other than those also designated as federally threatened or endangered, which are addressed above) have occurrence records or predicted habitat modeled within 5 miles of the Project Area (AGFD 2021a) and are discussed and listed below in Table C-2, where they are evaluated for potential occurrence based on the results of Project Area surveys, familiarity with the vicinity, and freely available information sources, including the AGFD's Heritage Data Management System (AGFD 2021b); the online field guide *Reptiles and Amphibians of Arizona* (Brennan 2021); the *Breeding Bird Atlas* (Corman and Wise-Gervais 2005); the online field guide *All About Birds* (Cornell Lab of Ornithology 2021); eBird (2021); Google Earth (2021); and the Arizona Ecological Services website and document library (USFWS 2021d).

BALD AND GOLDEN EAGLES

The Study Area is within the year-round range for the golden eagle and the non-breeding/limited breeding range for the bald eagle. Bald and golden eagles favor nest sites in tall trees, mountain cliffs, or human-made structures (e.g., observation or transmission towers) that are distant from human disturbance (Cornell Lab of Ornithology 2021). The Study Area and vicinity include mostly agricultural land with isolated areas of open desert and residential communities, local and state roads, and a UPRR freight line within the Study Area. The Study Area and vicinity provide no nesting habitat for bald eagle, and it is unlikely that the bald eagle would utilize these areas for foraging or other activities (see Table C-2). Impacts to the bald eagle would be unlikely to occur. No suitable golden eagle nesting sites (e.g., cliffs) are present in or near the Study Area, and no impact to individuals or nests would occur. Individuals could fly over the Study Area while foraging. However, because the area of impact is localized and represents an extremely small portion of an individual eagle's territory, impacts to a foraging individual from Project activities would be unlikely to occur. These eagle species were not documented by SWCA during Project-specific surveys in May 2021.

Table C-2. Other Special-Status Species that May Occur or are Known to Occur in the Vicinity of the Study Area

Common Name (Scientific Name)	Habitat and Notes	Status*		Occurrence Status
		Federal	State	
Amphibians				
Sonoran Desert toad (<i>Incilius alvarius</i>)	Occurs in desert, cropland, grassland, shrubland, woodland, and suburban areas. Can occur near permanent or temporary water and can be found relatively far from water.	--	SGCN (1B)	May occur. Portions of the Study Area include suitable habitat.
Birds				
Abert's towhee (<i>Melozone aberti</i>)	Common in riparian woodlands or mesquite (<i>Prosopis</i> sp.) bosques near water and in agricultural settings.	MBTA	SGCN (1B)	May occur. Mesquite trees and agricultural land are within the Study Area.
American bittern (<i>Botaurus lentiginosus</i>)	Occurs in marshlands and very wet meadows. Also found along rivers, lakes, and ponds with developed wetland habitat.	MBTA	SGCN (1B)	Unlikely to occur. No habitat present in Study Area or vicinity.
Arizona Bell's vireo (<i>Vireo bellii arizonae</i>)	A summer resident to Arizona that resides near riparian habitat of willow and mesquite trees.	MBTA	SGCN (1B)	Unlikely to occur. No habitat present in Study Area or vicinity.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Prefers large bodies of water with fish for prey. Nesting sites in the Sonoran Desert are primarily in large trees in riparian areas.	MBTA BGEPA	SGCN (1A)	Unlikely to occur. No habitat present in Study Area or vicinity.
Bendire's thrasher (<i>Toxostoma bendirei</i>)	Occurs in desert grasslands, shrublands, and agricultural areas.	MBTA BCC	--	May occur. Suitable habitat present.
Black-chinned sparrow (<i>Spizella atrogularis</i>)	Dry brushlands, typically breed on rocky hillsides and winter downslope in desertscrub.	MBTA BCC	--	May occur. Suitable habitat present.
Brewer's sparrow (<i>Spizella breweri</i>)	Wintering habitat in the Desert Southwest and Mexico.	MBTA	SGCN (1C)	May occur. Overwinters in the vicinity.
Brown-crested flycatcher (<i>Myiarchus tyrannulus</i>)	Found in open woodland, shrubby habitat, or riparian areas.	MBTA	SGCN (1C)	Unlikely to occur. No woodland or riparian habitat present in Study Area or vicinity.
Costa's hummingbird (<i>Calypte costae</i>)	Found in Sonoran and Mojave desertscrub near washes of native desert vegetation or rocky slopes of saguaro (<i>Carnegiea gigantea</i>) and creosote bush (<i>Larrea tridentata</i>) lowlands.	MBTA BCC	SGCN (1C)	May occur. Suitable habitat present.
Curve-billed thrasher** (Palmer's) (<i>Toxostoma curvirostre palmeri</i>)	Favors open country with creosote bush, saguaro, paloverde (<i>Parkinsonia</i> sp.), and cholla (<i>Cylindropuntia</i> sp.).	MBTA BCC	--	Known to occur. Suitable habitat present. This species was observed in the Project Area during May 2021 surveys.
Eastern meadowlark (<i>Sturnella magna</i>)	Found in grasslands, pastures, hayfields, old or abandoned fields, and native prairies and savannahs. Primarily a winter species in central Arizona but can be found year-round.	MBTA BCC [†]	SGCN (1C)	May occur. Suitable habitat present.
Elf owl (<i>Micrathene whitneyi</i>)	Occurs in wooded canyons in Sonoran desertscrub with saguaros.	MBTA	SGCN (1C)	Unlikely to occur. No wooded canyons occur in the Study Area.

Common Name (Scientific Name)	Habitat and Notes	Status*		Occurrence Status
		Federal	State	
Ferruginous hawk (<i>Buteo regalis</i>)	Found in open scrublands and woodlands, grasslands, and semidesert grasslands.	MBTA BCC [†]	SGCN (1B)	Unlikely to occur. Suitable habitat does not occur.
Gila woodpecker (<i>Melanerpes uropygialis</i>)	Found in Sonoran desertscrub with saguaros present, or riparian woodlands with mature trees.	MBTA BCC	SGCN (1B)	May occur. Saguaros or suitable mature trees may occur within Study Area but outside of the Project Area.
Gilded flicker (<i>Colaptes chrysoides</i>)	Occurs in Sonoran desertscrub with saguaros present, or riparian woodlands with mature trees.	MBTA BCC	SGCN (1B)	May occur. Saguaros or suitable mature trees may occur within Study Area but outside of the Project Area.
Lawrence's goldfinch (<i>Spinus lawrencei</i>)	In Arizona, winters in desert arroyos, floodplains, mesquite bosques, weedy fields, cultivated fields, or roadsides.	MBTA BCC	--	May occur in the winter.
LeConte's thrasher (<i>Toxostoma lecontei</i>)	Occurs in Sonoran desertscrub dominated by creosote bush, with scattered trees used for nesting.	MBTA BCC	SGCN (1B)	Unlikely to occur. The Study Area is outside the known species' range, and there are no records within 5 miles of the Project Area.
Lincoln's sparrow (<i>Melospiza lincolni</i>)	Winters in central Arizona; prefers dense, brushy areas, often near water.	MBTA	SGCN (1B)	May occur. Overwinters in the vicinity.
Lucy's warbler (<i>Oreothlypis luciae</i>)	Found in mesquite bosques and xeroriparian washes.	MBTA BCC	SGCN (1C)	May occur. Suitable habitat may occur within the Study Area outside of the Project Area.
Marsh wren (<i>Cistothorus palustris</i>)	Occurs in marshes or wetlands with cattails (<i>Typha</i> sp.), bulrushes (<i>Family Cyperaceae</i>), and cordgrass (<i>Spartina</i> sp.) present.	MBTA BCC [†]	SGCN (1C)	Not likely to occur. No habitat present in Study Area or vicinity.
Pacific wren (<i>Troglodytes pacificus</i>)	Found in coniferous forests, especially those of spruce (<i>Picea</i> sp.) and fir (<i>Abies</i> sp.).	MBTA	SGCN (1B)	Unlikely to occur. There are no coniferous forests or rivers and streams in or near the vicinity of the Study Area.
Pyrrhuloxia (<i>Cardinalis sinuatus</i>)	Found in upland deserts, riparian woodlands, desert scrublands, farm fields, and residential areas.	MBTA BCC	--	May occur. Suitable habitat occurs in the Study Area.
Red-naped sapsucker (<i>Sphyrapicus nuchalis</i>)	Wintering habitat includes pine oak woodlands, deciduous trees, and orchards.	MBTA	SGCN (1C)	Unlikely to occur. There are no woodlands, deciduous trees, or orchards in or near the Study Area.
Sage thrasher (<i>Oreoscoptes montanus</i>)	A winter species in Central Arizona that favors grasslands to open desert.	MBTA BCC [†]	SGCN (1C)	May occur; species overwinters in the vicinity.
Savannah sparrow (<i>Passerculus sandwichensis</i>)	Found in open grasslands, meadows, pastures, grassy roadsides and cultivated fields planted with cover crops.	MBTA	SGCN (1B)	May occur. Suitable habitat occurs in the Study Area, and the species overwinters in the vicinity.
Verdin (southwest) (<i>Auriparus flaviceps acaciarius</i>)	Occurs in arid habitats in the Desert Southwest as a year-round resident. Often occurs along washes. The southwest subspecies is associated with the Sonoran Desert from southern California to Mexico.	MBTA BCC	--	May occur. Suitable habitat occurs in the Study Area.

Common Name (Scientific Name)	Habitat and Notes	Status*		Occurrence Status
		Federal	State	
Waterfowl and occasional-use birds	Waterfowl and other birds may use the existing and planned new evaporation ponds within the Project Area as loafing ponds—midday stops where birds rest before feeding or heading back to the roost. Other birds may be attracted to the water in the evaporation ponds but not use the area for nesting, roosting, foraging, or reproduction.	MBTA		May occur. Waterfowl and other birds have been found to occur at eBird industrial pond habitats within the Study Area (Goree's Pond) and in the vicinity of the Study Area (Goldman Dairy Sludge Ponds, 0.3 mile south of the Study Area) (eBird 2021).
Western burrowing owl** (<i>Athene cunicularia hypugaea</i>)	Open areas with low brush cover, including grasslands, agricultural margins, and desertscrub. Year-round resident or migratory.	MBTA BCC	SGCN (1B)	Known to occur. This species was observed within the Project Area during May 2021 survey, and suitable habitat (e.g., concrete canals) occurs within the Project Area.
Wood duck (<i>Aix sponsa</i>)	Prefers streams and ponds with trees and other dense vegetation.	MBTA	SGCN (1B)	Unlikely to occur. No freshwater habitats are present in the Study Area.
Yellow warbler (<i>Setophaga petechia</i> ssp. <i>sonorana</i>)	Migrates through central Arizona utilizing riparian areas and landscaping, often near water.	MBTA BCC	SGCN (1B)	May occur. The species may pass through the Study Area and vicinity during migration.
Fish				
Desert sucker (<i>Catostomus clarkii</i>)	In Arizona, occurs throughout the Gila River basin, and in the Bill Williams tributaries. Prefers rapids and flowing pools of streams and rivers.	--	SGCN (1B)	Unlikely to occur. The Study Area does not contain suitable habitat. Records for this species occur within 5 miles of the Project Area (AGFD 2021a), likely from the Gila River.
Reptiles				
Desert mud turtle (<i>Kinostemon sonorense sonorense</i>)	Inhabits rivers, streams, or aquatic impoundments in desertscrub, semi-desert grasslands, or oak/pine-oak woodlands.	--	SGCN (1B)	Unlikely to occur. The Study Area does not contain suitable habitat for the species.
Gila monster (<i>Heloderma suspectum</i>), includes Banded Gila monster (<i>Heloderma suspectum cinctum</i>)	Occurs in Sonoran desertscrub, typically absent from disturbed and developed areas.	--	SGCN (1A)	Unlikely to occur. The Study Area is isolated from other desert areas by development. There are no records of the species within 5 miles of the Project Area (AGFD 2021a).
Goode's horned lizard (<i>Phrynosoma goodei</i>)	Occurs in valley bottoms and bajadas in Sonoran desertscrub.	--	SGCN (1B)	Unlikely to occur. The Study Area is on the eastern periphery of the species range and does not contain suitable habitat for the species.
Regal horned lizard (<i>Phrynosoma solare</i>)	Found in valley bottoms in Sonoran desertscrub and desert grasslands; avoids the lowest elevations.	--	SGCN (1B)	May occur. Portions of the Study Area 2-mile buffer may include suitable habitat.

Common Name (Scientific Name)	Habitat and Notes	Status*		Occurrence Status
		Federal	State	
Resplendent shovel-nosed snake (<i>Chionactis annulata</i>)	Found in intermontane valleys and lower bajadas in Sonoran desertscrub. Prefers sandy washes and loose soil.	--	SGCN (1C)	May occur. Portions of the Study Area 2-mile buffer may include suitable habitat.
Sonoran coralsnake (<i>Micruroides euryxanthus</i>)	Common in rocky terrain with drainages, vegetated washes, and canyons.	--	SGCN (1B)	Unlikely to occur. Suitable habitat is not present in or near the Study Area.
Tiger rattlesnake (<i>Crotalus tigris</i>)	Occurs in rocky slopes in Sonoran desertscrub.	--	SGCN (1B)	Unlikely to occur. The Study Area does not contain rocky slopes.
Variable sandsnake (<i>Chilomeniscus stramineus</i>)	Occurs in sandy valleys in Sonoran desertscrub.	--	SGCN (1B)	May occur. Portions of the Study Area outside of the Project Area contain suitable habitat.
Mammals				
Antelope jackrabbit (<i>Lepus alleni</i>)	Occurs in arid grasslands with scattered shrubs and deserts, foothills, mesas, and bajadas.	--	SGCN (1B)	May occur. The Study Area and surrounding vicinity is open and contains creosote bush. There are occurrence records for this species within 5 miles of the Project Area (AGFD 2021a).
Arizona myotis (<i>Myotis occultus</i>)	Found in ponderosa pine and oak-pine woodlands near water, and along the lower Colorado and Verde Rivers.	--	SGCN (1B)	Unlikely to occur. There are no woodlands or riparian features in the Study Area.
Brazilian free-tailed bat (<i>Tadarida brasiliensis</i>)	A migratory species that may spend the entire year in southern Arizona. Roosts in caves, tunnels, and buildings. Forages widely, often over farmlands.	--	SGCN (1B)	May occur. Suitable building roosting habitat has the potential to occur within the Study Area outside of the Project Area, and the species could utilize the Study Area for foraging.
Cave myotis (<i>Myotis velifer</i>)	Occurs in desertscrub containing creosote bush, paloverde, and cacti. A migratory species that roosts in caves, mines, and bridges. Forages in desertscrub, often near water.	--	SGCN (1B)	May occur. Suitable bridge roosting habitat has the potential to occur in the Study Area outside of the Project Area, and the species could utilize the Study Area for foraging.
Greater Western bonneted bat (<i>Eumops perotis californicus</i>)	Favors desert habitat near cliffs where the species uses rock crevices for roosting. Forages widely for insects.	--	SGCN (1B)	May occur. No roosting habitat is present, but the species could utilize the Study Area for foraging.
Harris' antelope squirrel (<i>Ammospermophilus harisii</i>)	Found in creosote bush-bursage (<i>Ambrosia</i> sp.) or saltbush-creosote bush deserts, usually in areas with rocky soil and slopes.	--	SGCN (1B)	Unlikely to occur. No rocky slopes are present in the Study Area.

Common Name (Scientific Name)	Habitat and Notes	Status*		Occurrence Status
		Federal	State	
Kit fox (<i>Vulpes macrotis</i>)	Prefers open, flat desert, with soft or sandy soils for ease to excavate burrows.	--	SGCN (1B)	May occur. The Study Area is within the species predicted range. Soft soils are present in the Study Area.
Lesser long-nosed bat (<i>Leptonycteris yerbabuenae</i>)	Occurs in Sonoran desertscrub, grasslands, and forests with saguaros and agaves. Roosts in caves, abandoned mines, and unoccupied buildings near foraging resources.	--	SGCN (1A)	May occur. No roosting habitat occurs in the Project Area; however, saguaros may occur within the Study Area outside of the Project Area.
Pocketed free-tailed bat (<i>Nyctinomops femorosaccus</i>)	Roosts in rock crevices in high cliffs and occasionally in buildings. Forages near any water source from lakes, rivers, irrigation canals, and cattle water tanks.	--	SGCN (1B)	May occur. Suitable building habitat has the potential to occur in the Study Area outside of the Project Area, and the species could utilize the Study Area for foraging.
Spotted bat (<i>Euderma maculatum</i>)	Roosts in high cliffs and canyons, prefer to forage high above water and is common in lower desert valleys.	--	SGCN (1B)	Unlikely to occur. No roosting or foraging habitat is present in the Study Area.
Pale Townsend's big-eared bat (<i>Corynorhinus townsendii pallascens</i>)	Found in desertscrub up to coniferous forests. Roosts in caves, mines, lava tubes and occasionally abandoned buildings.	--	SGCN (1B)	May occur. Suitable abandoned building roosting habitat has the potential to occur within the Study Area outside of the Project Area, and the species could utilize the Study Area for foraging.
Western red bat (<i>Lasiurus blossevillei</i>)	Found in riparian and wooded areas. Roosts in trees, particularly cottonwoods. May roost in saguaro cavities.	--	SGCN (1B)	May occur. The species could utilize the Study Area for foraging. Trees suitable for roosting or saguaros may occur within the Study Area outside of the Project Area.
Western yellow bat (<i>Lasiurus xanthinus</i>)	Associated with palm trees and riparian tree species in urban and riparian locations; likely a year-round resident in Arizona.	--	SGCN (1B)	May occur. The species could utilize the Project Area and vicinity for foraging. Palms trees or riparian trees suitable for roosting may occur in the Study Area outside of the Project Area.

Common Name (Scientific Name)	Habitat and Notes	Status*		Occurrence Status
		Federal	State	
Yuma myotis (<i>Myotis yumanensis</i>)	Occurs in a wide variety of habitats, including riparian, desert scrub, woodlands and forests. Roosts in buildings, cliffs, cave, and mines. Forages over or near water.	--	SGCN (1B)	May occur. Suitable building roosting habitat has the potential to occur within the Study Area outside of the Project Area, and the species could utilize the Study Area for foraging.

Source: Range or habitat information is from AGFD (2021a; 2021b); Brennan (2021); Corman and Wise-Gervais (2005); Cornell Lab of Ornithology (2021); eBird (2021); USFWS (2021a; 2021b).

Note: Notes regarding documented occurrence, other than observations made during SWCA's Project-specific surveys, are from AGFD (2021a, 2021b).

* Federal Status Definitions

BCC = Bird of Conservation Concern.

BCC[†] = Bird of Conservation Concern for regions other than BCR 33. Included in table because they are also Arizona SGCN.

BCR = Bird Conservation Region.

BGEPA = Bald and Golden Eagle Protection Act

CCA = Candidate Conservation Agreement

MBTA = Migratory Bird Treaty Act

State Status Definitions

SGCN = Species of Greatest Conservation Need; species identified by AGFD (2012) as having conservation priority. Tier 1B species are those categorized as "vulnerable" but not fitting the Tier 1A criteria for highest priority. Tier 1C species are those for which existing data were insufficient to score one or more vulnerability criteria.

**Species that were observed in the Project Area during the May 2021 field survey

BIRDS OF CONSERVATION CONCERN

The Study Area is within BCR 33 (USFWS 2021d), for which 27 BCC species are listed. Of these, 12 species may occur or are known to occur in the Study Area or vicinity (see Table C-2): Bendire's thrasher (*Toxostoma bendirei*), black-chinned sparrow (*Spizella atrogularis*), Costa's hummingbird (*Calypte costae*), Palmer's curve-billed thrasher (*Toxostoma curvirostre palmeri*), Gila woodpecker (*Melanerpes uropygialis*), gilded flicker (*Colaptes chrysoides*), Lawrence's goldfinch (*Spinus lawrencei*), Lucy's warbler (*Oreothlypis luciae*), pyrrhuloxia (*Cardinalis sinuatus*), verdin (southwest) (*Auriparus flaviceps acaciarius*), western burrowing owl (*Athene cunicularia hypugaea*), and yellow warbler (*Setophaga petechia* ssp. *sonorana*). Birds that are BCC for regions other than BCR 33 but that are classified as SGCN in Arizona will be considered in the following section. A western burrowing owl and a curve-billed thrasher were observed in the Project Area during the May 2021 survey. Waterfowl and other birds may use the existing and planned new evaporation ponds within the Project Area as loafing ponds, which are midday stops where birds rest before feeding or heading back to the roost. Other birds may be attracted to the water in the evaporation ponds but not use the area for nesting, roosting, foraging, or reproduction.

SPECIES OF GREATEST CONSERVATION NEED

Twenty-one species categorized as SGCN 1A or 1B may occur within 5 miles of the proposed Project Area (see Table C-2). Eleven mammals may occur: antelope jackrabbit (*Lepus alleni*), Brazilian free-tailed bat (*Tadarida brasiliensis*), cave myotis (*Myotis velifer*), greater western bonneted bat (*Eumops perotis californicus*), kit fox (*Vulpes macrotis*), lesser long-nosed bat (*Leptonycteris yerbabuenae*), pocketed free-tailed bat (*Nyctinomops femorosaccus*), pale Townsend's big-eared bat (*Corynorhinus townsendii pallascens*), western red bat (*Lasiurus blossevillei*), western yellow bat (*Lasiurus xanthinus*), and Yuma myotis (*Myotis yumanensis*). Seven birds may occur or are known to occur: Abert's towhee (*Melospiza aberti*), Gila woodpecker, gilded flicker, Lincoln's sparrow (*Melospiza lincolnii*), Savannah sparrow (*Passerculus sandwichensis*), western burrowing owl, and yellow warbler. The western

burrowing owl was the only of these species to be observed in the Project Area. Two reptile species may occur: regal horned lizard (*Phrynosoma solare*) and variable sandsnake (*Chilomeniscus stramineus*). One amphibian species may occur: the Sonoran Desert toad (*Incilius alvarius*). No fish species are likely to occur.

Six species listed as SGCN 1C may occur within 5 miles of the Project Area (see Table C-2), including five birds and one reptile: Brewer's sparrow (*Spizella breweri*), Costa's hummingbird, eastern meadowlark (*Sturnella magna*), Lucy's warbler, sage thrasher (*Oreoscoptes montanus*), and resplendent shovel-nosed snake (*Chionactis annulata*).

Waterfowl and other birds may use the existing and planned new evaporation ponds within the Project Area as loafing ponds (midday stops where birds rest before feeding or heading back to the roost). Other birds may be attracted to the water in the evaporation ponds but not use the area for nesting, roosting, foraging, or reproduction.

Protected Native Plants

The Arizona Native Plant Law (A.R.S. § 3-904) (ANPL) identifies a lengthy list of plant species—largely cacti, agaves, yuccas, and desert trees—that are susceptible to removal for collection, landscaping, sale, or other commercial uses. The ANPL states that these plants shall not be taken, transported, or possessed from any land without permission and a permit from the ADA; it also requires notification prior to land clearing even if the plants will be destroyed. Protected native plants occur within the Project Area. Velvet mesquite (*Prosopis velutina*), a harvest restricted and salvage assessed protected native plant, was identified in Project Area during the May 2021 survey. Additional native trees, cacti, and succulents have the potential to occur in the Study Area.

NOXIOUS WEEDS

The State of Arizona maintains a list of noxious weeds in three categories: Class A, Class B, and Class C (ADA 2021). Class A species are those that are not known to occur in Arizona, are of limited distribution, and are of high priority for quarantine, control, or mitigation. Class B noxious weeds are species known to occur but are of limited distribution in Arizona and may be high-priority pests for quarantine, control, or mitigation if a significant threat to crop, commodity, or habitat exists. Class C noxious weeds are species of plants that are widespread but may be recommended for active control based on risk assessment.

Noxious weeds are known to occur in the vicinity of the project (iMap Invasives 2021). Noxious weeds were observed within the Project Area during the May 2021 field survey: Class B species, including stinknet (*Oncosiphon piluliferum*) and Saharan mustard (*Brassica tournefortii*), and Class C species, including saltcedar (*Tamarix ramosissima*). Measures will be taken to avoid spreading noxious weeds in the Study Area.

Summary of Potential Effects

Areas of Biological Wealth

The Study Area does not overlap with any areas of biological wealth. Because of the distance to the wildlife corridors and Pinal County riparian areas, the Project is expected to have no impact on the riparian area or the wildlife or plants that occur there. Because the Project Area is already largely disturbed and is surrounded by agricultural, commercial, and residential disturbance, construction and operation of the

Project is unlikely to increase the fragmentation in the vicinity or to create a significant additional barrier to wildlife movement. No IBAs and proposed or designated critical habitat occurs within the Study Area.

Pinal County Riparian Areas intersect the Study Area but would not be expected to be disturbed as a result of Project activities. As noted above, field surveys showed that no riparian areas occurred within the Project Area and riparian vegetation outside the Project Area was limited to xeroriparian vegetation along ephemeral drainages or canals. The Project is not expected to negatively impact Pinal County Riparian Areas occurring in the Study Area.

Federally Listed Threatened and Endangered Species

No suitable habitat occurs within the Study Area for the following species that are listed under the ESA or are candidates for listing—yellow-billed cuckoo, Yuma Ridgway's (clapper) rail, northern Mexican gartersnake, Sonoran desert tortoise, or roundtail chub—and these species would be unlikely to occur. Therefore, the Project would be unlikely to impact these species.

Habitat may be suitable for use by monarch butterfly. Monarch butterfly habitat comprises milkweed, which is used exclusively for reproduction, and floral nectar resources for adult food sources. No milkweed was observed in the Project Area; however, monarch butterflies may use flowering plants in the Study Area for foraging. As such, impacts to this species would be minor. A very small portion of suitable dispersal or foraging habitat would be lost, relative to the total amount of habitat in the vicinity. Individual monarch butterflies may experience injury, change of behavior, and loss of foraging habitat as a result of the Project. Individual monarch butterflies would be expected to largely shift activity to nearby suitable habitat.

Other Special-Status Species

The following sections refer to special-status species that are not federally listed or candidates for federal listing.

SPECIAL-STATUS MAMMAL SPECIES

The Project Area is unlikely to support suitable roosting habitat for most bat species, though within the 2-mile buffer (Study Area) the potential does occur for palm trees (Family Arecaceae) or other large riparian trees that the western red bat or western yellow bat may use for roosting, as well as buildings (abandoned or otherwise) that Brazilian free-tailed bat, lesser long-nosed bat, pocketed free-tailed bat, pale Townsend's big-eared bat, and Yuma myotis may use for roosting. However, no palm trees, large riparian trees, or suitable building structures occur in the Project Area, and therefore, no bat roosts would be expected to be removed or destroyed as a result of the Project. Bats using trees or buildings as day roosts have the potential to be negatively impacted by noise impacts, leading to behavior changes or loss of fitness for individuals. Impacts would be minor as trees used for day roosts would be widespread outside the Study Area.

Project activities would remove vegetation and agricultural irrigation, which may decrease the suitability of the area for foraging by insectivorous bat species. Any lesser-long nosed bats that occur would likely be unaffected by the project. Because they are nocturnal and nectivorous, and no roosts or potential food plants (e.g., agaves [*Agave* spp.] or saguaro [*Carnegiea gigantea*]) occur within the Project Area, no impacts would be expected to any lesser-long nosed bats that occur in the Study Area.

Bat species can collide with human-made structures during long-distance migration. Migrating bats often fly high above ground level and do not actively echolocate. However, during normal foraging activity,

bats actively use echolocation and are typically able to detect and avoid features such as overhead transmission lines (Arnett et al. 2015). No information suggests that transmission lines in a setting such as the Study Area would pose a risk to bats. Project activities at night would increase light pollution and human presence in the Study Area and would impact bat activity patterns. The increase of nighttime lighting in the Project Area has the potential to attract insects, which could have minor beneficial impacts to some bat species as their food source increased. However, some bat species would likely shift their foraging activities away from construction and additional light. However, these negative impacts would likely be minor because foraging habitat for insectivorous species occurs outside of the Study Area.

Project construction activities could cause death or injury to antelope jackrabbit or kit fox, particularly individuals that may be sheltering within underground burrows instead of fleeing. Project construction could cause behavior changes, as individuals would be expected to flee from an increase of noise, vibration, and human presence within the Project vicinity. These behavior changes could increase depredation, decrease foraging success, reduce reproductive success, and result in loss of fitness for that individual from increased metabolic output. Project construction activities would be temporary. The loss and degradation of mammal habitat from short-and long-term project activities would be negligible as the Project Area is relatively small, contains little native vegetation, and is entirely disturbed. Similarly, because the Study Area is largely disturbed by agriculture, infrastructure, and development, any loss of vegetation from construction activities would not contribute meaningfully to habitat fragmentation for special-status mammals or decrease connectivity between habitat patches.

Construction and operation of the Project would result in an increase of emissions including fugitive dust, VOCs, CO, oxides of nitrogen, particulate matter, SO₂, and CO₂ (see Exhibit B for details). The Project would comply with the air permit issued by the Pinal County Air Quality Control District, which will include provisions to ensure that the Project will not cause or contribute to a violation of the NAAQS, which include protections to minimize damage to animals.

Impacts to special-status mammals would not be expected to arise from water quality within the existing or new evaporation ponds, as these areas are fenced and mammals would not be expected to use these ponds.

SPECIAL-STATUS BIRD SPECIES

Because bald and golden eagle habitat does not occur, these species are unlikely to occur. Therefore, no impacts to either of these species resulting from the Project would be expected.

Six bird species (See Table C-2) only occur in the vicinity of the Project for wintering or migration and therefore the Project will have no potential for nesting impacts.

Potential impacts to special-status bird species could include changes in behavior due to Project-related noise, vibration, and the presence of workers and equipment; loss of breeding and foraging habitat; and impacts to nesting species. Potential impacts to nesting birds and their eggs covered under the MBTA, including burrow nests of the western burrowing owl, would be avoided and/or minimized either by limiting ground-clearing/vegetation removal activities to outside the breeding season (generally March–September with raptors breeding generally January–June) or through surveys to identify active nests and placement of buffers around those active nests until the young fledge or the nest fails.

Transmission lines can pose a collision risk to birds (Avian Power Line Interaction Committee [APLIC] 2012). However, many factors influence whether birds are likely to collide with a specific transmission line. Collision risk is relatively low when multiple transmission lines are co-located or placed near other infrastructure (APLIC 2012). The Project would be constructed in an area with numerous existing transmission lines and would be unlikely to contribute to an increase in bird mortality within the Study

Area. To minimize that risk, the Applicant will construct the proposed transmission line following the guidelines outlined in the current version of the *APLIC Suggested Practices for Avian Protection on Powerlines* and *Reducing Avian Collisions with Power Lines* manuals. Electrical transmission and distribution lines can also cause bird electrocution, although the risk is highest with lower voltage lines. Electrocution occurs when a bird simultaneously contacts energized and grounded electrical components. High-voltage lines require spacing between those components that cannot be spanned even by very large birds so that electrocution risk is precluded almost entirely (APLIC 2006).

The Project would comply with the air permit issued by the Pinal County Air Quality Control District, which will include provisions to ensure that the Project will not cause or contribute to a violation of the NAAQS, which include protections to minimize damage to animals. Because bird species can easily circumvent fencing and may use the evaporation ponds for loafing or resting, negative impacts could occur to special-status bird species from water pollutants. However, these impacts would likely be extremely minor as monitoring of the existing evaporation ponds has resulted in no observed negative impacts to wildlife, with no bird deaths. SRP will continue monitoring the existing ponds, will monitor the proposed new ponds, and will take appropriate actions to remain in compliance with the MBTA.

SPECIAL-STATUS REPTILE SPECIES

Potential Project-related impacts on special-status reptile species would include changes in behavior due to the presence of workers and equipment, including moving away from sources of noise and vibration; the potential for individuals being crushed or buried during ground-disturbing activities; and the loss of habitat.

The Project would comply with the air permit issued by the Pinal County Air Quality Control District, which will include provisions to ensure that the Project will not cause or contribute to a violation of the NAAQS, which include protections to minimize damage to animals. Impacts to special-status reptiles, which in this case only includes the Sonoran desert tortoise, would not be expected to arise from water quality within the existing or new evaporation ponds, as these areas are fenced and tortoises would not be expected to use these ponds.

SPECIAL-STATUS AMPHIBIAN SPECIES

Potential impacts to Sonoran Desert toad include death, injury, or impacts arising from behavior changes and would be similar to those described for terrestrial mammals. Potential impacts from the loss, degradation, and fragmentation of amphibian habitat from Project activities would be the same as those described for terrestrial mammals.

The Project would comply with the air permit issued by the Pinal County Air Quality Control District, which will include provisions to ensure that the Project will not cause or contribute to a violation of the NAAQS, which include protections to minimize damage to animals. Amphibians attracted to the evaporation ponds (existing and new) at the Project may experience death or reduced health from any pollutants that may occur there. However, because these ponds are small and localized, impacts would not rise to population-level impacts.

SPECIAL-STATUS FISH SPECIES

The Project would have no impact on special-status fish species because no habitat for special-status fish species is present in the Project Area. Project activities would not impact perennial water outside of the Study Area, including Picacho Reservoir, the CAP canal, or the Gila River. The only perennial water in the project vicinity is the Picacho Reservoir located approximately 3.3 miles southeast of the Project Area. Project activities would not impact the reservoir.

Any fish that occur in the concrete-lined canals would originate from the CAP canal and the Florence-Casa Grande Canal (both of which run approximately north-south outside of the Study Area and may supply water to the concrete canals located in the Project or Study Areas), where fish are known to occur (Kesner and Marsh 2010). However, the fish caught in these canals were invasive species or sport fish that had been stocked or released into waterways. No native, special-status species were known to occur in these canals (Kesner and Marsh 2010). No impacts from increased emissions or from water quality in the evaporative ponds would be expected to occur to special-status fish species as none occur in the Study Area.

Protected Native Plants

Depending on Project activities, plant species protected under the ANPL could be removed during vegetation-clearing activities. Because the relatively small Project Area is largely previously disturbed by the existing Coolidge generating station, agriculture, and development, the loss of vegetation in the Project Area will result in minor impacts to protected native plants. In addition, impacts to special-status plant species from increased air emissions would be minor. The likelihood and severity of impacts from air emissions would decrease with increasing distance from the Project Area.

NOXIOUS WEEDS

Measures will be taken to avoid introducing or spreading noxious weeds in the Project Area, and therefore, the Project would be unlikely to contribute to an increase of noxious weeds, in extent or abundance, in the vicinity of the Project.

Mitigation

The following mitigation measures would reduce the potential for impacts to special-status species as a result of the Project:

- To minimize risk to migratory birds, the powerlines would be constructed following industry-suggested practices aimed at reducing avian collisions and electrocutions (APLIC 2012, 2006). If avian-line interactions become a problem, SRP would move quickly to evaluate the issue and craft a solution using appropriate measures.
- If vegetation-disturbing activities are planned during the migratory bird nesting season (March-September or January-June for raptors), measures to avoid any active bird nests within the Project Area at that time would be taken to maintain compliance with the MBTA since suitable nesting habitat for migratory bird species is present in the Project Area.
- Preconstruction surveys for western burrowing owls and other migratory birds by qualified biologists following current protocol are recommended. During AGFD review of the Project, the agency recommended occupancy surveys be conducted (Exhibit C-3). Occupied burrows are to be avoided, where feasible. If necessary, burrowing owl translocation would be conducted by experienced personnel holding the appropriate state and federal permits.
- If native plants listed under the ANPL are present in the Project Area, the ADA Notice of Intent to Clear Land would be submitted prior to ground clearing. The submittal time frame depends on the acreage of the area to be cleared.
- To reduce or eliminate the potential to introduce or spread noxious or invasive plants, equipment would be cleaned prior to and following mobilizing to the Project Area.

Conclusion

The proposed Project is not likely to significantly affect any rare, endangered, or special-status species. No ESA-listed species are present, and none would be affected by the proposed Project. No protected areas, or any areas of biological wealth, are within the Study Area. The risk that electrical infrastructure poses to birds would be addressed by following industry suggested practices as design features for the Project, and preconstruction surveys for the western burrowing owl would address potential impacts to that species.

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EXHIBIT C-1 – USFWS IPAC

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IPaC resource list

This resource, including IPaC, will be down for a major maintenance event from 11/12 22:00 EST through 11/15 08:00 EST. We apologize for any inconvenience this may cause. Thank you for your patience.

habitat
The list
specially be
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and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Pinal County, Arizona



Local office

Arizona Ecological Services Field Office

☎ (602) 242-0210

📅 (602) 242-2513

9828 North 31st Ave

#c3

Phoenix, AZ 85051-2517

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

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

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. [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.

The following species are potentially affected by activities in this location:

Birds

NAME

STATUS

Yellow-billed Cuckoo *Coccyzus americanus* **Threatened**
 There is **final** critical habitat for this species. The location of the critical habitat is not available.
<https://ecos.fws.gov/ecp/species/3911>

Yuma Ridgways (clapper) Rail *Rallus obsoletus* [=longirostris] **Endangered**
yumanensis
 Wherever found
 No critical habitat has been designated for this species.
<https://ecos.fws.gov/ecp/species/3505>

Reptiles

NAME	STATUS
Northern Mexican Gartersnake <i>Thamnophis eques megalops</i> Wherever found There is final critical habitat for this species. The location of the critical habitat is not available. https://ecos.fws.gov/ecp/species/7655	Threatened
Sonoran Desert Tortoise <i>Gopherus morafkai</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9289	Candidate

Fishes

NAME	STATUS
Roundtail Chub <i>Gila robusta</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2782	Candidate

Insects

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED,

WHICH IS A VERY LIBERAL
ESTIMATE OF THE DATES INSIDE
WHICH THE BIRD BREEDS
ACROSS ITS ENTIRE RANGE.
"BREEDS ELSEWHERE" INDICATES
THAT THE BIRD DOES NOT LIKELY
BREED IN YOUR PROJECT AREA.)

Bendire's Thrasher *Toxostoma bendirei*

Breeds Mar 15 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9435>

Gila Woodpecker *Melanerpes uropygialis*

Breeds Apr 1 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/5960>

Golden Eagle *Aquila chrysaetos*

Breeds Dec 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted

- Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

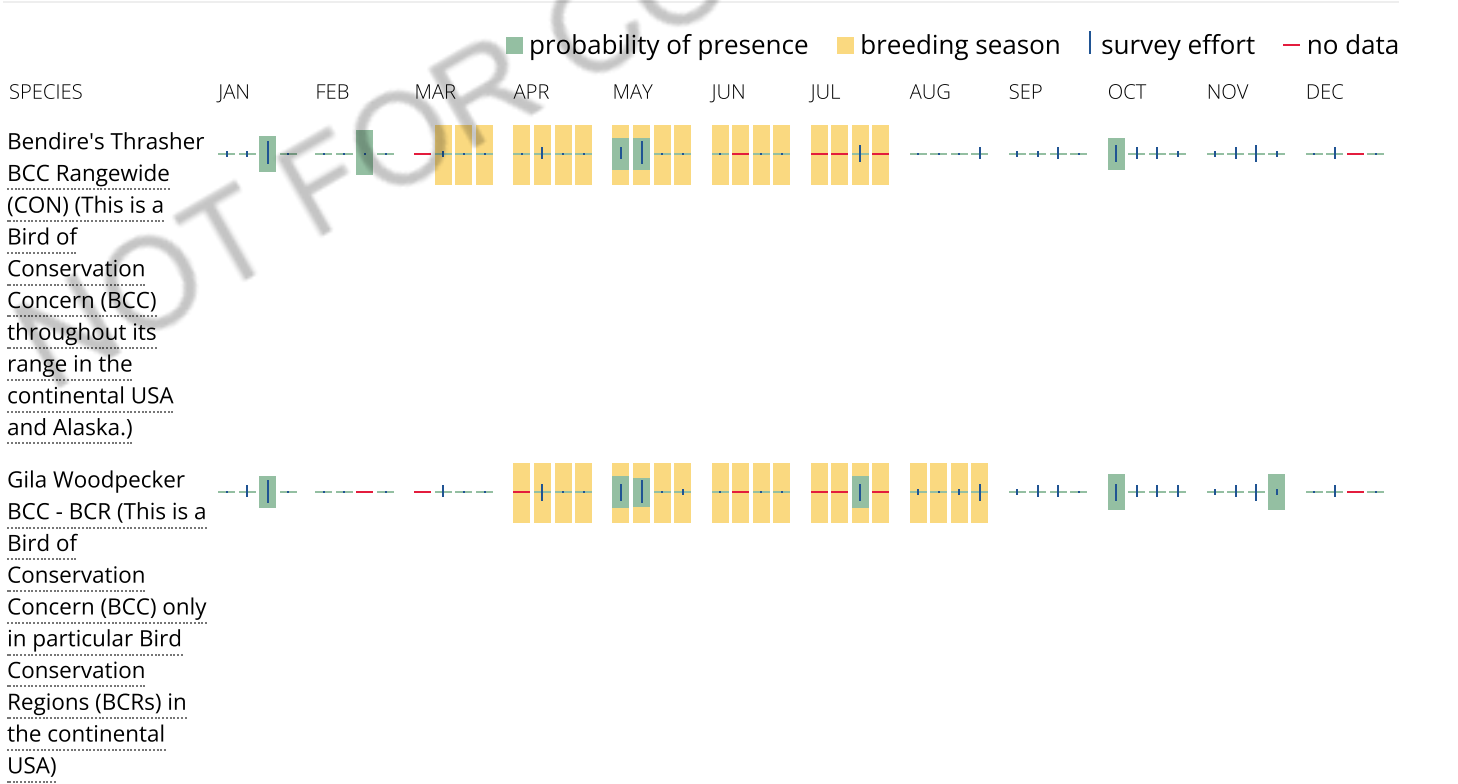
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Golden Eagle
Non-BCC
Vulnerable (This is
not a Bird of
Conservation
Concern (BCC) in
this area, but
warrants attention
because of the
Eagle Act or for
potential
susceptibilities in
offshore areas
from certain types
of development or
activities.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to

confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PSS1Ah](#)

FRESHWATER POND

[PUBHx](#)

RIVERINE

[R4SBjx](#)

[R2UBHx](#)

[R4SBj](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

EXHIBIT C-2 – AGFD ONLINE ENVIRONMENTAL REVIEW TOOL

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Arizona Environmental Online Review Tool Report



Arizona Game and Fish Department Mission

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

Project Name:

Coolidge Expansion Project

User Project Number:

65028

Project Description:

The proposed Coolidge Expansion Project (CEP) involves the construction and operation of 16 new, natural gas fired, simple cycle aeroderivative combustion turbine generators (CTGs). A new 500kV switchyard will be constructed to the west of the new CTGs and new transmission lines will interconnect the proposed CTGs and switchyard with the certificated Pinal West to Southeast Valley/ Browning 500/230 kV transmission line constructed by SRP between the Pinal Central Substation and the Dinosaur Substation. The CEP also includes the addition of 7 wet surface air coolers (WSACs) for both the new CTGs and the 12 existing simple cycle CTGs SRP currently operates at this location. New evaporation ponds, water storage tanks, and various operation buildings and handling areas will also be constructed and/ or expanded.

Project Type:

Energy Storage/Production/Transfer, Energy Production (generation), gas power plant
(expansion/modification)

Contact Person:

Stacy Campbell

Organization:

SWCA

On Behalf Of:

PRIVATE

Project ID:

HGIS-14893

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

Disclaimer:

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

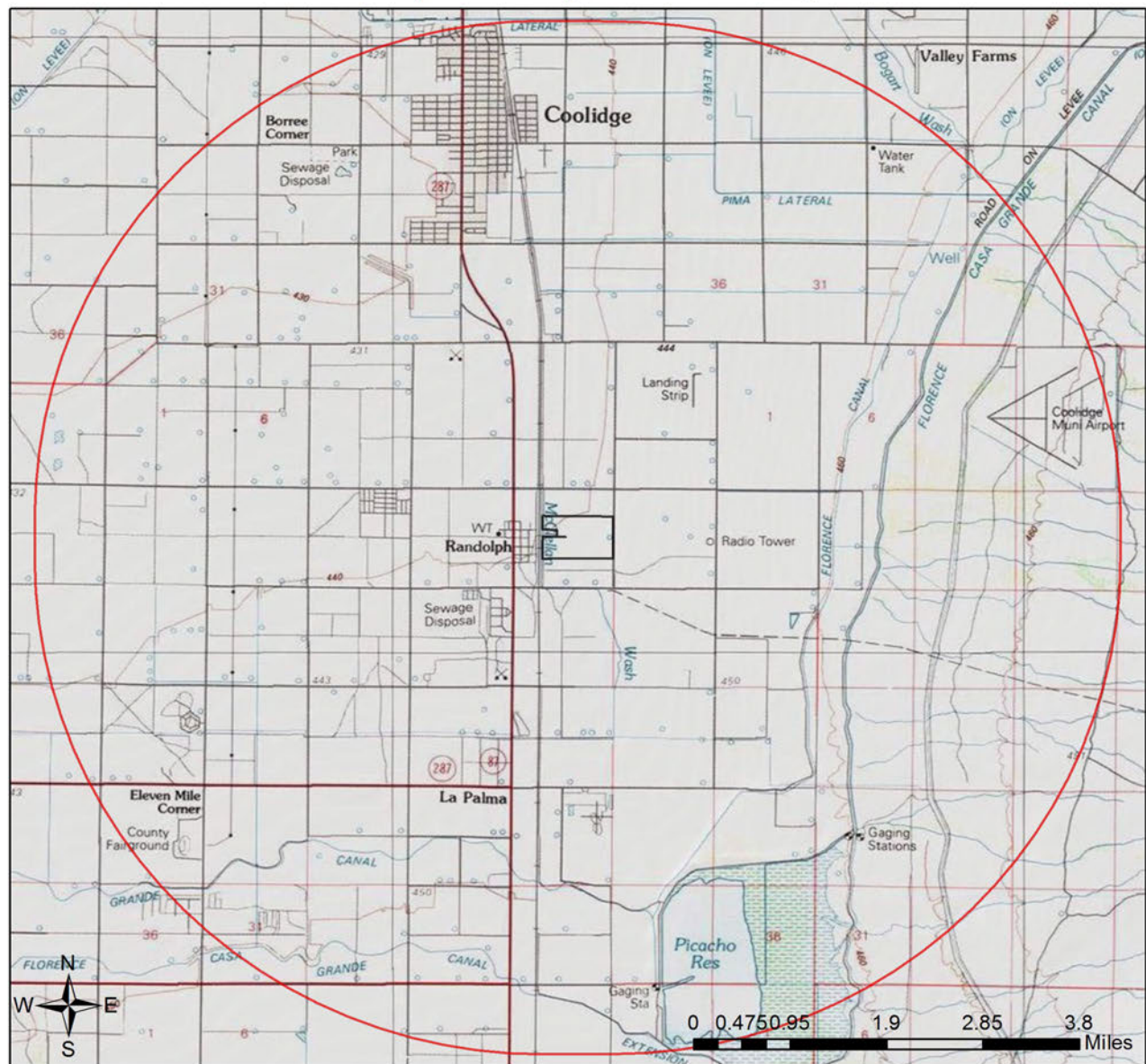
Locations Accuracy Disclaimer:

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

Recommendations Disclaimer:

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

Coolidge Expansion Project USA Topo Basemap With Locator Map



- Project Boundary
- Buffered Project Boundary

Project Size (acres): 184.03

Lat/Long (DD): 32.9156 / -111.5038

County(s): Pinal

AGFD Region(s): Tucson

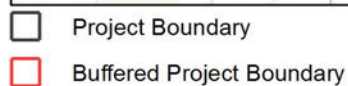
Township/Range(s): T6S, R8E

USGS Quad(s): COOLIDGE; VALLEY FARMS

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



Web Map As Submitted By User

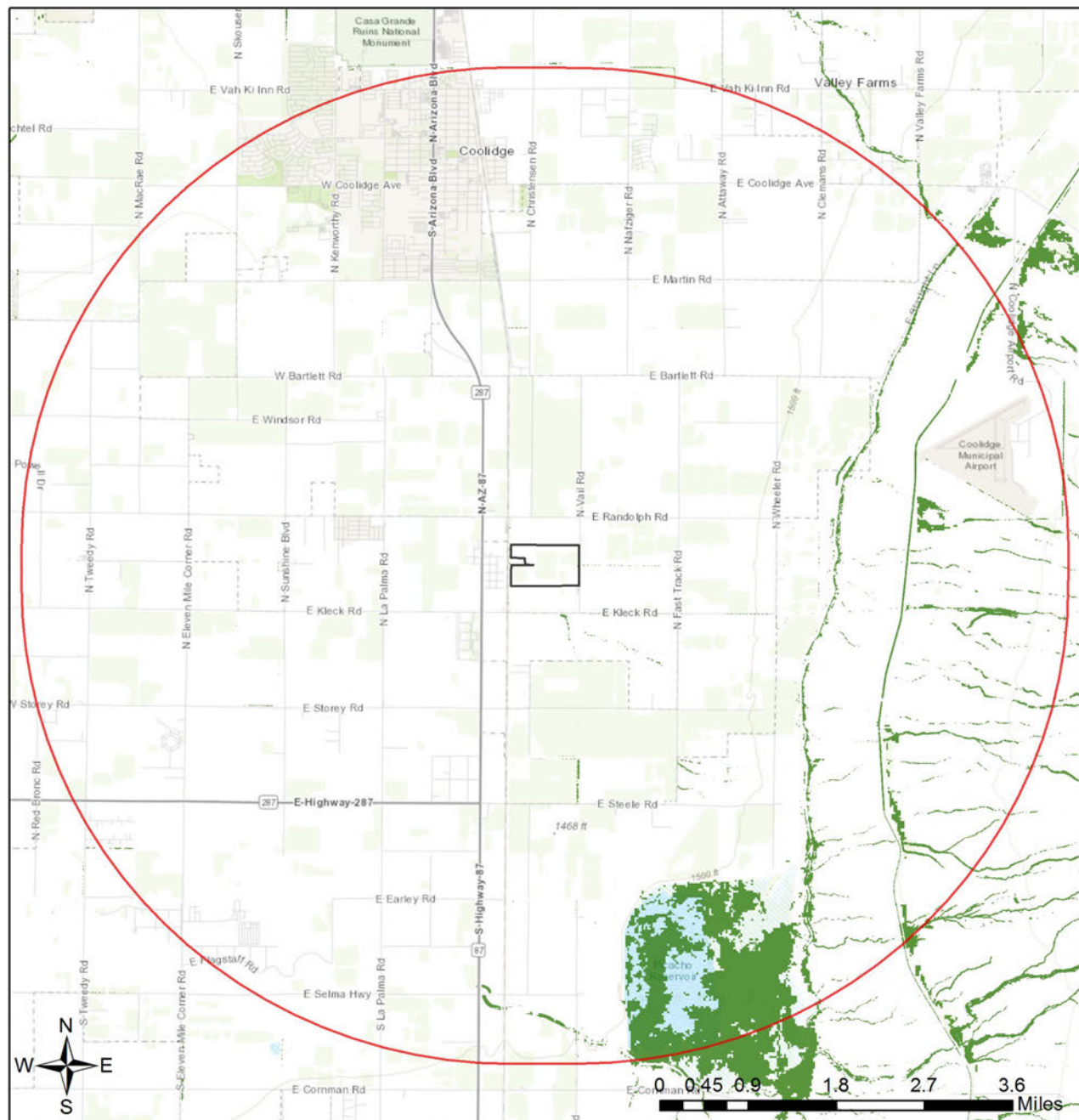


USGS Quad(s): COOLIDGE; VALLEY FARMS

Page 6 of 13

Coolidge Expansion Project

Important Areas



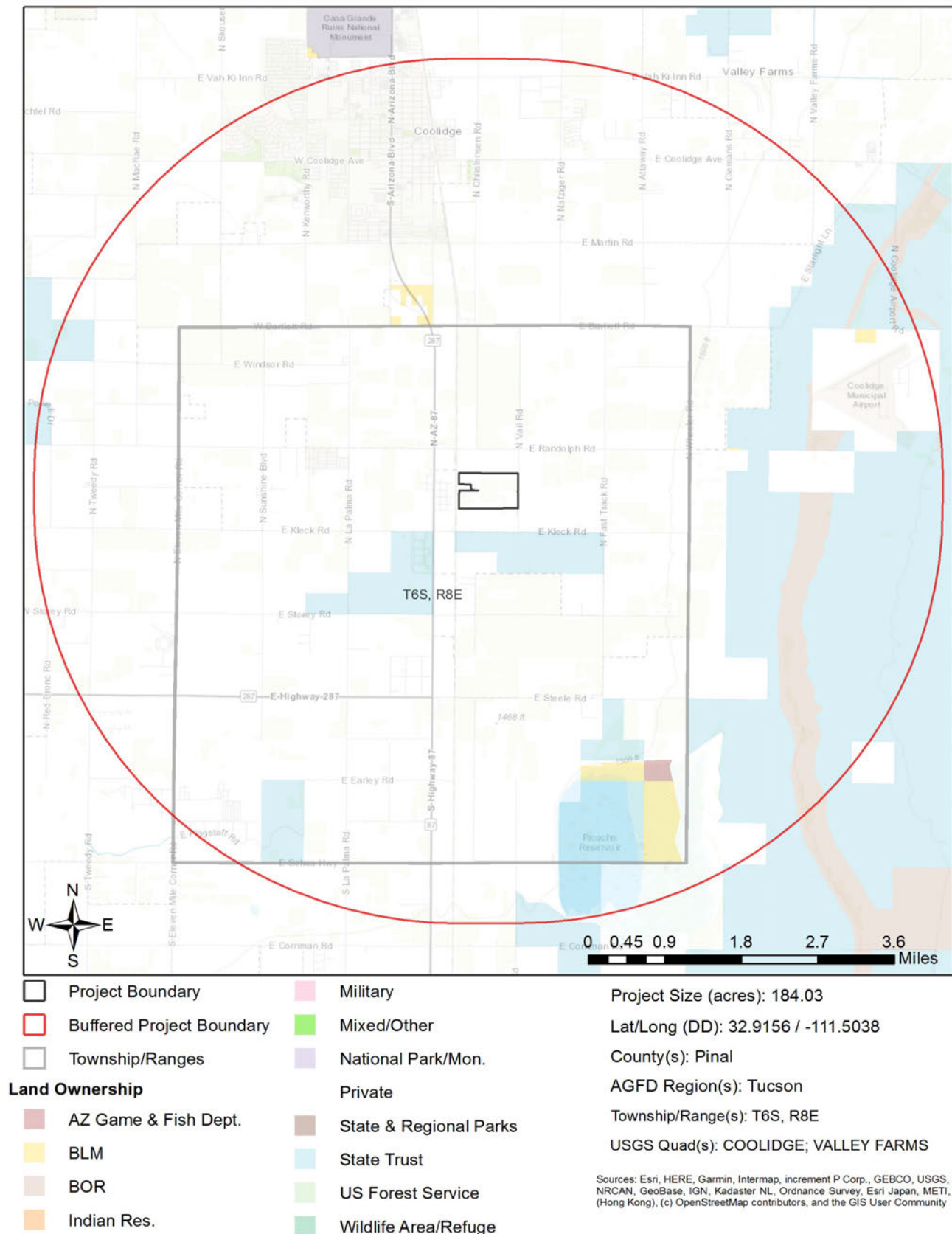
- Project Boundary
- Buffered Project Boundary
- Wildlife Connectivity
- Important Connectivity Zones
- Pinal County Riparian
- Critical Habitat
- Important Bird Areas

Project Size (acres): 184.03
Lat/Long (DD): 32.9156 / -111.5038
County(s): Pinal
AGFD Region(s): Tucson
Township/Range(s): T6S, R8E
USGS Quad(s): COOLIDGE; VALLEY FARMS

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

Coolidge Expansion Project

Township/Ranges and Land Ownership



Special Status Species Documented within 5 Miles of Project Vicinity

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl	SC	S	S		1B
<i>Catostomus clarkii</i>	Desert Sucker	SC	S	S		1B
<i>Coccyzus americanus</i>	Yellow-billed Cuckoo (Western DPS)	LT	S	S		1A
<i>Empidonax traillii extimus</i>	Southwestern Willow Flycatcher	LE				1A
<i>Lepus alleni</i>	Antelope Jackrabbit					1B
<i>Rallus obsoletus yumanensis</i>	Yuma Ridgway's Rail	LE		S		1A

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

Special Areas Documented that Intersect with Project Footprint as Drawn

Scientific Name	Common Name	FWS	USFS	BLM	NPL	SGCN
Riparian Area	Riparian Area					

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

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
<i>Aix sponsa</i>	Wood Duck					1B
<i>Ammospermophilus harrisi</i>	Harris' Antelope Squirrel					1B
<i>Athene cunicularia hypugaea</i>	Western Burrowing Owl	SC	S	S		1B
<i>Botaurus lentiginosus</i>	American Bittern					1B
<i>Buteo regalis</i>	Ferruginous Hawk	SC		S		1B
<i>Calypte costae</i>	Costa's Hummingbird					1C
<i>Chilomeniscus stramineus</i>	Variable Sandsnake					1B
<i>Chionactis annulata</i>	Resplendent Shovel-nosed Snake	SC				1C
<i>Cistothorus palustris</i>	Marsh Wren					1C
<i>Colaptes chrysoides</i>	Gilded Flicker			S		1B
<i>Corynorhinus townsendii pallescens</i>	Pale Townsend's Big-eared Bat	SC	S	S		1B
<i>Crotalus tigris</i>	Tiger Rattlesnake					1B
<i>Euderma maculatum</i>	Spotted Bat	SC	S	S		1B
<i>Eumops perotis californicus</i>	Greater Western Bonneted Bat	SC		S		1B
<i>Haliaeetus leucocephalus</i>	Bald Eagle	SC, BGA	S	S		1A
<i>Heloderma suspectum</i>	Gila Monster					1A
<i>Incilius alvarius</i>	Sonoran Desert Toad					1B
<i>Kinosternon sonoriense sonoriense</i>	Desert Mud Turtle			S		1B
<i>Lasiurus blossevillei</i>	Western Red Bat		S			1B
<i>Lasiurus xanthinus</i>	Western Yellow Bat		S			1B

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
Leptonycteris yerbabuenae	Lesser Long-nosed Bat	SC				1A
Lepus alleni	Antelope Jackrabbit					1B
Melanerpes uropygialis	Gila Woodpecker					1B
Melospiza lincolni	Lincoln's Sparrow					1B
Melospiza aberti	Abert's Towhee		S			1B
Micrathene whitneyi	Elf Owl					1C
Micruroides euryxanthus	Sonoran Coralsnake					1B
Myiarchus tyrannulus	Brown-crested Flycatcher					1C
Myotis occultus	Arizona Myotis	SC		S		1B
Myotis velifer	Cave Myotis	SC		S		1B
Myotis yumanensis	Yuma Myotis	SC				1B
Nyctinomops femorosaccus	Pocketed Free-tailed Bat					1B
Oreoscoptes montanus	Sage Thrasher					1C
Oreothlypis luciae	Lucy's Warbler					1C
Panthera onca	Jaguar	LE				1A
Passerculus sandwichensis	Savannah Sparrow					1B
Phrynosoma goodei	Goode's Horned Lizard					1B
Phrynosoma solare	Regal Horned Lizard					1B
Rallus obsoletus yumanensis	Yuma Ridgway's Rail	LE				1A
Setophaga petechia	Yellow Warbler					1B
Spizella breweri	Brewer's Sparrow					1C
Sturnella magna	Eastern Meadowlark					1C
Tadarida brasiliensis	Brazilian Free-tailed Bat					1B
Toxostoma lecontei	LeConte's Thrasher			S		1B
Troglodytes pacificus	Pacific Wren					1B
Vireo bellii arizonae	Arizona Bell's Vireo					1B
Vulpes macrotis	Kit Fox	No Status				1B

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					
Pecari tajacu	Javelina					
Puma concolor	Mountain Lion					
Zenaidura macroura	White-winged Dove					
Zenaidura macroura	Mourning Dove					

Project Type: Energy Storage/Production/Transfer, Energy Production (generation), gas power plant (expansion/modification)

Project Type Recommendations:

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. Conduct wildlife surveys to determine species within project area, and evaluate proposed activities based on species biology and natural history to determine if artificial lighting may disrupt behavior patterns or habitat use. Use only the minimum amount of light needed for safety. Narrow spectrum bulbs should be used as often as possible to lower the range of species affected by lighting. All lighting should be shielded, canted, or cut to ensure that light reaches only areas needing illumination.

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/unitedstates/az.shtml> and the Arizona Native Plant Society <https://aznps.com/invas> for recommendations on how to control. To view a list of documented invasive species or to report invasive species in or near your project area visit iMapInvasives - 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.

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

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

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

For any powerlines built, proper design and construction of the transmission line is necessary to prevent or minimize risk of electrocution of raptors, owls, vultures, and golden or bald eagles, which are protected under state and federal laws. Limit project activities during the breeding season for birds, generally March through late August, depending on species in the local area (raptors breed in early February through May). Conduct avian surveys to determine bird species that may be utilizing the area and develop a plan to avoid disturbance during the nesting season. For underground powerlines, trenches should be covered or back-filled as soon as possible. Incorporate escape ramps in ditches or fencing along the perimeter to deter small mammals and herptefuna (snakes, lizards, tortoise) from entering ditches. In addition, indirect affects to wildlife due to construction (timing of activity, clearing of rights-of-way, associated bridges and culverts, affects to wetlands, fences) should also be considered and mitigated.

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

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

Based on the project type entered, coordination with Arizona Department of Water Resources may be required (<https://new.azwater.gov/>).

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

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

Avoid/minimize wildlife impacts related to contacting hazardous and other human-made substances in facility water collection/storage basins, evaporation or settling ponds and/or facility storage yards. Design slopes to discourage wading birds and use fencing, netting, hazing or other measures to exclude wildlife.

The Department encourages the use of technology that requires minimal amounts of water, preferably dry cooling. In the desert, water is very scarce and reducing consumption will lessen impacts on wildlife as well as the public.

Project Location and/or Species 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 <http://www.fws.gov/southwest/es/arizona/> or:

Phoenix Main Office

9828 North 31st Avenue #C3
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Flagstaff Sub-Office

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

This review has identified **riparian areas** within the vicinity of your project. During the planning stage of your project, avoid, minimize, or mitigate any potential impacts to riparian areas identified in this report. Riparian areas play an important role in maintaining the functional integrity of the landscape, primarily by acting as natural drainages that convey water through an area, thereby reducing flood events. In addition, riparian areas provide important movement corridors and habitat for fish and wildlife. Riparian areas are channels that contain water year-round or at least part of the year. Riparian areas also include those channels which are dry most of the year, but may contain or convey water following rain events. All types of riparian areas offer vital habitats, resources, and movement corridors for wildlife. The Pinal County Comprehensive Plan (i.e. policies 6.1.2.1 and 7.1.2.4), Open Space and Trails Master Plan, Drainage Ordinance, and Drainage Design Manual all identify riparian area considerations, guidance, and policies. Guidelines to avoid, minimize, or mitigate impacts to riparian habitat can be found at <https://www.azgfd.com/wildlife/planning/wildlifeguidelines/>. Based on the project type entered, further consultation with the Arizona Game and Fish Department and Pinal County may be warranted.

HDMS records indicate that **Western Burrowing Owls** have been documented within the vicinity of your project area. Please review the western burrowing owl resource page at:
<https://www.azgfd.com/wildlife/speciesofgreatestconservneed/burrowingowlmanagement/>.



EXHIBIT C-3 – AGFD REVIEW OF THE SRP COOLIDGE GENERATING STATION-COOLIDGE EXPANSION PROJECT

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November 9, 2021

Bill McClellan
Project Manager
Salt River Project
1500 N. Mill Ave.
Tempe, AZ 85281

Electronically submitted to: bill.mcclellan@srpnet.com

RE: SPR Coolidge Generating Station- Coolidge Expansion Project

Dear Mr. McClellan:

The Arizona Game and Fish Department (Department) appreciates the opportunity to review Salt River Project's (SRP's) Coolidge Expansion Project. This project includes the construction of up to 820 megawatts (MW) of new power generation, produced by 16 gas turbines, adjacent to the existing Coolidge Generating Station. The Coolidge Generating Station is situated just east of SR 87, and south of E. Randolph Road, in Coolidge, Arizona. Current land use within the expansion area consists of agricultural field crops.

Under Title 17 of the Arizona Revised Statutes, the Department, by and through the Arizona Game and Fish Commission (Commission), has jurisdictional authority and public trust responsibilities to protect and conserve the state fish and wildlife resources. In addition, the Department manages threatened and endangered species through authorities of Section 6 of the Endangered Species Act and the Department's 10(a)1(A) permit. It is the mission of the Department to conserve and protect Arizona's diverse fish and wildlife resources and manage for safe, compatible outdoor recreation opportunities for current and future generations. For your consideration, the Department provides the following comments based on the agency's statutory authorities, public trust responsibilities, and special expertise related to wildlife resources and recreation.

Based on the information provided on your website, and presented during a virtual public meeting that Department staff attended on October 21, 2021, the Department has the following recommendation:

- The western burrowing owl (*Athene cunicularia hypugaea*), a special status species that is regulated under the Migratory Bird Treaty Act (MBTA), has been recorded in the vicinity of your project. The Department recommends conducting an occupancy survey for western burrowing owl to determine if this species occurs within your project footprint. Guidelines for conducting this survey are found in [Burrowing Owl Project Clearance Guidance for](#)

azgfd.gov | 602.942.3000

5000 W. CAREFREE HIGHWAY, PHOENIX AZ 85086

GOVERNOR: DOUGLAS A. DUCEY COMMISSIONERS: CHAIRMAN LELAND S. "BILL" BRAKE, ELGIN | JAMES E. GOUGHNOUR, PAYSON
TODD G. GEILER, PRESCOTT | CLAY HERNANDEZ, TUCSON | KURT R. DAVIS, PHOENIX DIRECTOR: TY E. GRAY DEPUTY DIRECTOR: TOM P. FINLEY

[Landowners](#)¹ which can be accessed on-line through the Department's website. Please note that the survey should be conducted by a surveyor that is certified by the Department. If an active burrowing owl burrow is detected, please contact the Department and the U.S. Fish and Wildlife Service for direction, in accordance with the *Burrowing Owl Project Clearance Guidance for Landowners*.

Thank you for the opportunity to provide input on the SPR Coolidge Generating Station-Coolidge Expansion Project. For further coordination, please contact Cheri Bouch  r at cboucher@azgfd.gov or 623-236-7615.

Sincerely,



Ginger Ritter
Project Evaluation Program Supervisor

AGFD # M21-10152643

¹ <https://www.azgfd.com/wildlife/speciesofgreatestconservneed/raptor-management/burrowing-owl-mangement/>