Appendix B1

Biological Resources Technical Report

Biological Resources Technical Report

Sage Temecula Senior Apartments

City of Temecula, California

FINAL REPORT

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June 2024

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GLOSSARY

AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
BMPs	Best Management Practices
CAPSA	Criteria Area Plant Survey Areas
CDFG	California Department of Fish and Game (CDFW effective Jan 1st 2013)
CDFW	California Department of Fish and Wildlife
CESA	California Endangered Species Act
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRPR	California Rare Plant Ranks
CWA	Clean Water Act
DBESP	Determination of Biological Equivalent or Superior Preservation
FESA	federal Endangered Species Act
GIS	Geographic Information System
HANS	Habitat Acquisition and Negotiation Strategy
JPR	Joint Project Review
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
MS4	Municipal Separate Storm Sewer System Permit
MSHCP	Multiple Species Habitat Conservation Plan
NCCP	Natural Communities Conservation Plan
NEPSA	Narrow Endemic Plant Survey Areas
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NWPR	Navigable Water Protection Rule
OHWM	Ordinary High-Water Mark
PQP	Public/Quasi-Public
RCA	Western Riverside County Regional Conservation Authority
RCIP	Riverside County Integrated Project
ROW	Right of Way
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SCE	State Candidate Endangered Species
SSC	California Species of Special Concern
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WDR	Waste Discharge Requirements

INTRODUCTION

The following biological technical report describes a detailed assessment of potential sensitive natural resources located within and immediately adjacent to the Temecula Sage Senior Apartments Project Site. Specifically, the report has been prepared to support the California Environmental Quality Act (CEQA), Mitigated Negative Declaration (MND) and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) documentation, compliance, and review process conducted by the City of Temecula. As discussed below, the assessment includes a thorough literature review, site reconnaissance characterizing baseline conditions (including floral and faunal and dominate vegetation communities), focused sensitive species surveys, impact analysis, and proposed mitigation/conservation measures.

PROJECT LOCATION & DESCRIPTION

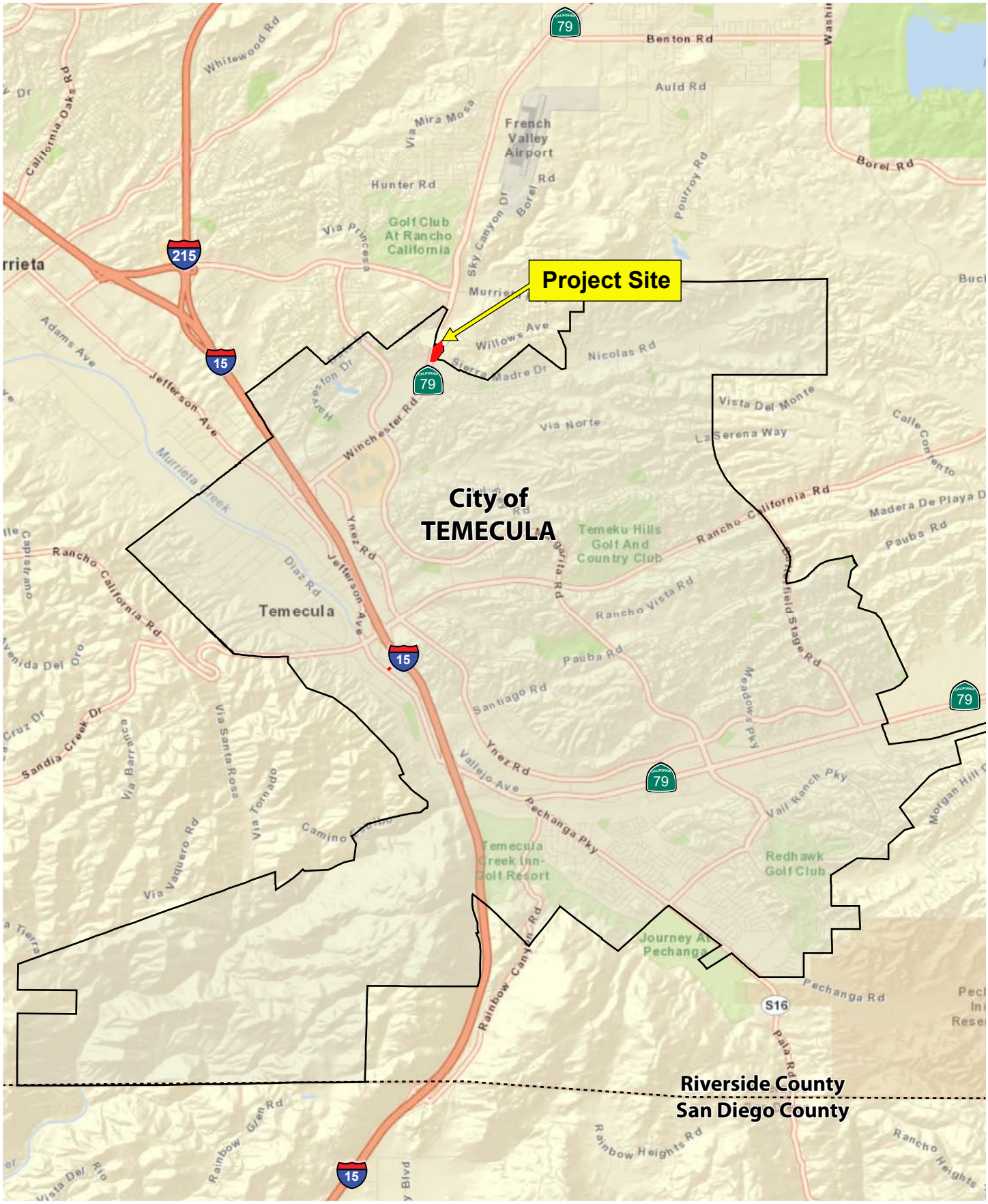
The 5.93-acre Project Site is located within Assessor's Parcel Number (APN) 920-110-005. The Project Site is located within United States Geological Survey (USGS) 7.5' Series Temecula Quadrangle, Riverside County, Township 7 South, Range 3 West. Specifically, the Project Site extends northeast of the Winchester Road/Rustic Glen Drive intersection and west of Tucalota Creek Channel, City of Temecula, Riverside County, California, as shown in Figure 1, *Regional Location Map*, and Figure 2, *Project Site Map*.

The Project Site is located within the Western Riverside County MSHCP Southwest Area Plan and is not located within an MSHCP Criteria Area Cell, Cell Group, or Linkage Area (Western Riverside County Regional Conservation Authority (RCA) Geographic Information System (GIS) Data Downloads 2024).

The Project Site is generally flat and dominated by non-native grassland/ruderal, California buckwheat scrub, and disturbed habitats. A disturbed and unvegetated drainage ditch bisects the northern region of the Project Site within an area designated as open space. The northern ditch drainage outlets offsite within Tucalota Creek Channel. As stated by Helix Environmental Planning, Inc.:

> "*The study area primarily consists of interspersed non-native vegetation and patches of California buckwheat (Eriogonum fasciculatum). Based on aerial review, the study area has been used historically for agriculture since at least 1938 (Historic Aerials 1938). The topography of the study area is flat, with elevations ranging from approximately 1089 feet (332 meters) above mean sea level (AMSL) in the center of the study area to 1,120 feet (341 meters) AMSL in the along the eastern and western boundaries.*" (Helix Environmental Planning, Inc 2022)

The Project proposes a development of a 143-unit senior apartment community including parking, recreational facilities and open space.



APN 920-110-005

Figure 1 - Regional Location Map

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not to scale

Figure 2 - Project Site Map

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1 inch = 80 feet

LITERATURE REVIEW

Existing biological resource conditions within and adjacent to the Project Site were initially investigated through review of pertinent scientific literature. Federal register listings, protocols, and species data provided by the United States Fish and Wildlife Service (USFWS) were reviewed in conjunction with anticipated federally listed species potentially occurring within the Project Site. The California Natural Diversity Database (CNDDB 2024a), a California Department of Fish and Wildlife (CDFW) Natural Heritage Division species account database, was also reviewed for all pertinent information regarding the locations of known occurrences of sensitive species in the vicinity of the property. In addition, numerous regional floral and faunal field guides were utilized in the identification of species and suitable habitats. Combined, the sources reviewed provided an excellent baseline from which to inventory the biological resources potentially occurring in the area. Other sources of information included the review of unpublished biological resource letter reports and assessments. Other CDFW reports and publications consulted include the following:

- Special Animals (CDFW 2024b);
- State and Federally Listed Endangered and Threatened Animals of California (CDFW 2024c);
- Endangered, Threatened, and Rare Plants of California (CDFW 2024d);
- Special Vascular Plants and Bryophytes List (CDFW 2024e).

FIELD SURVEYS

A reconnaissance survey of the Project Site was conducted by Cadre Environmental on May 10th, 2024 in order to characterize and identify potential wildlife habitats, sensitive resources, and to establish the accuracy of the data identified in the literature search and previous surveys.

Geologic and soil maps were examined to identify local soil types that may support sensitive taxa. Aerial photograph, topographic maps, and vegetation and rare plant maps prepared by previous studies in the region were used to determine community types and other physical features that may support sensitive plants/wildlife, uncommon taxa, or rare communities that occur within the Project Site.

The MSHCP has determined that the majority of sensitive species potentially occurring within the Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plant, criteria area, and specific wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004). Based on the initial MSHCP review of predetermined Survey Areas, habitat assessments and focused surveys were conducted for the following six (6) species.

Section 6.1.2 Riparian, Riverine, Vernal Pool Species

- Riverside fairy shrimp *(Streptocephalus woottoni*) [Federal Endangered FE];
- vernal pool fairy shrimp (*Branchinecta lynchi*) [Federally Threatened (FT)];
- least Bell's vireo (*Vireo bellii pusillus*) [FE/State Endangered (SE)];
- southwestern willow flycatcher (*Empidonax traillii extimus*) [FE/SE];
- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) [SE].

Wildlife Species

- burrowing owl (*Athene cunicularia*) [California Species of Special Concern (SSC)].

Vegetation Communities/Habitat Classification Mapping

Natural community names and hierarchical structure follows the CDFW "List of California Terrestrial Natural Communities" and/or Holland (1986) classification systems, which have been refined and augmented where appropriate to better characterize the habitat types observed onsite when not addressed by the MSHCP classification system.

Floristic Plant Inventory

A general plant survey was conducted throughout the Project Site during the initial reconnaissance in a collective effort to identify all species occurring onsite. All plants observed during the survey efforts were either identified in the field or collected and later identified using taxonomic keys. Plant taxonomy follows Hickman (1993). Scientific nomenclature and common names used in this report generally follow Roberts et al. (2004) or Baldwin et al. (2012) for updated taxonomy. Scientific names are included only at the first mention of a species; thereafter, common names alone are used.

Wildlife Resources Inventory

All animals identified during the reconnaissance survey by sight, call, tracks, scat, or other characteristic sign were recorded onto a 1:200 scale orthorectified color aerial photograph or documented using a global positioning system (GPS). In addition to species actually detected, expected use of the site by other wildlife was derived from the analysis of habitats on the site, combined with known habitat preferences of regionally occurring wildlife species.

Vertebrate taxonomy followed in this report is according to the Center for North American Herpetology (2023 for amphibians and reptiles), the American Ornithologists' Union (1988 and supplemental) for birds, and Baker et al. (2003) for mammals. Both common and scientific names are used during the first mention of a species; common names only are used in the remainder of the text.

Regional Connectivity/Wildlife Movement Corridors

The analysis of wildlife movement corridors associated with the Project Site and immediate vicinity is based on information compiled from literature, analysis of the aerial photograph and direct observations made in the field during the reconnaissance site visit.

A literature review was conducted that includes documents on island biogeography (studies of fragmented and isolated habitat "islands"), reports on wildlife home range sizes and migration patterns, and studies on wildlife dispersal. Wildlife movement studies conducted in southern California were also reviewed. Use of field-verified digital data, in conjunction with the GIS database, allowed proper identification of regional vegetation communities and drainage features. This information was crucial to assessing the relationship of the Project Site to large open space areas in the immediate vicinity and was also evaluated in terms of connectivity and habitat linkages. Relative to corridor issues, the discussions in this report are intended to focus on wildlife movement associated within the Project Site and the immediate vicinity.

MSHCP Focused Burrowing Owl Survey Area

The Project Site is located completely within an MSHCP Survey Area for burrowing owl. Therefore, in accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. Step II is comprised of two parts, Part A: Focused Burrow Surveys and Part B: Focused Burrowing Owl Surveys. Each step is briefly outlined below, followed by the methodology and results of each survey conducted within the Project Site.

Step I – Habitat Assessment

Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present onsite. An initial habitat assessment for burrowing owl was conducted by Helix Environmental Planning, Inc. on May 11th, 2022 and Cadre Environmental on May 10th, 2024. Upon arrival at the Project Site, and prior to initiating the assessment survey, Cadre Environmental used binoculars to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, such as California ground squirrels (*Otospermophilus beecheyi*) or American badgers (*Taxidea taxus*), but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles, or openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

According to the MSHCP guidelines, if suitable habitat is present the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the Project Site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. Results from the habitat assessment indicated that suitable burrowing

owl burrows potentially utilized for refugia and/or nesting were documented within and immediately adjacent to the property including foraging habitat documented throughout the Project Site. Accordingly, if suitable habitat is documented onsite, both Step II surveys and the 30-day pre-construction surveys are required in order to comply with the MSHCP guidelines for the species.

Step II – Locating Burrows and Burrowing Owls

Concurrent with the initial habitat assessments, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP protocol, which is described below under Part A. Focused Burrow Survey.

Part A: Focused Burrow Survey

A systematic survey for burrows, including burrowing owl sign, was conducted by walking across all suitable habitats mapped within the Project Site by Helix Environmental Planning, Inc. on May 11th, 2022. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 20 meters (approximately 66 ft.) apart to the extent possible. Transect routes were also adjusted to account for topography and in general ground surface visibility. All observations of suitable burrows or dens, natural or man-made, or sightings of burrowing owl, were recorded and mapped during the survey.

Part B: Focused Burrowing Owl Surveys

Four (4) focused burrowing owl surveys were conducted by Helix Environmental Planning, Inc. on May 11th, 26th, July 14th, and August 10th, 2022, from one hour before sunrise to two hours after sunrise. During visual surveys, all potentially suitable burrow or structure entrances were investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if burrowing owls utilize these features, when present. All burrows are monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior, when present. In addition to monitoring potential burrow locations, all suitable habitats in the Project Site were walked along travel routes which allowed for visual assessments of all suitable habitats. The majority of the Project Site was under active cultivation with 100% canopy of crops. Therefore, survey transects were focused within all regions where exposed soils or potential refugia was documented.

Jurisdictional Delineation

A jurisdictional assessment was conducted by Cadre Environmental on May 10th, 2024. The assessment determined the boundaries or absence of potential wetland and non-wetland waters of the United States subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Clean Water Act (CWA) Section 404; wetland and non-wetland waters of the State subject to the regulatory jurisdiction of the Regional Water Quality Control Board (RWCQB) pursuant to CWA Section 401 and State Porter-Cologne Water Quality Control Act (Porter-Cologne); streambed and riparian habitat subject to the regulatory jurisdiction of the CDFW pursuant Sections 1600 *et seq*. of the

California Fish and Game Code (CDFG Code). All resources delineated as CDFW jurisdictional features were also defined as Western Riverside County MSHCP Section 6.1.2 resources. Wetlands are identified by the presence of three characteristics: hydrophytic vegetation, wetland hydrology, and hydric soils. If any of these criteria were met, one or more transects were run to determine the extent of the wetland. Specifically, the presence of wetland hydrology was evaluated throughout the Project Site by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil pits, where applicable. In addition, indicators of wetland or riverine hydrology were recorded, including water marks, drift lines, rack, debris, and sediment deposits, as warranted. Any indicators of hydric soils, such as redoximorphic features, buried organic matter, organic streaking, reduced soil conditions, gleyed or low-chroma soils, or sulfidic odor were also recorded.

EXISTING ENVIRONMENTAL SETTING

SURROUNDING LAND USES/TOPOGRAPHY/SOILS

The Project Site is generally flat and dominated by non-native grassland/ruderal, California buckwheat scrub, and disturbed habitat, as illustrated in Figure 3, *Vegetation Communities Map* and Figures 4 to 7, *Current Project Site Photographs*. A disturbed and unvegetated drainage ditch bisects the northern region of the Project Site within an area designated as open space. The northern ditch drainage outlets offsite within Tucalota Creek Channel.

The Soil Survey of Western Riverside Area has the following soils mapped within the boundary of the Project Site as shown on Figure 8, *Soils Association Map*:

- HcA – Hanford course sandy loam, 0 to 2 percent slopes,
- ReC2 – Ramona very fine sandy loam, 0 to 8 percent slopes,
- RsC – Riverwash.

VEGETATION COMMUNITIES

Natural community names follow the CDFW “List of California Terrestrial Natural Communities” and/or Holland (1986) classification system, which have been refined and where appropriate to better characterize the habitat types onsite when not addressed by the MSHCP classification system. Acreage totals for vegetation communities documented onsite are listed in Table 1. *Vegetation Communities Acreages*.

Non-native Grassland/Ruderal

The majority of the Project Site is characterized as non-native grassland/ruderal vegetation. Species documented within this vegetation community include common wild oat (*Avena fatua*), rattail fescue (*Vulpia myuros*), foxtail chess (*Bromus madritensis* ssp. *rubens*), Mediterranean schismus (*Schismus barbatus*), ripgut grass (*Bromus diandrus*), common fiddleneck (*Amsinckia intermedia*), telegraph weed (*Heterotheca grandiflora),* stinknet (*Oncosiphon piluliferum*), tocalote (*Centaurea melitensis*), red-stemmed filaree (*Erodium cicutarium*), white-stemmed filaree (*Erodium moschatum*), prickly lettuce

(*Lactuca serriola*), Russian thistle (*Salsola tragus*), horseweed (*Erigeron canadensis*), prickly sow thistle (*Sonchus asper*), yellow sweet clover (*Melilotus officinalis*), and winter vetch (*Vicia villosa*).

California Buckwheat Scrub

Several patches of California buckwheat scrub are located scattered within the Project Site. The dominant species observed within this vegetation community are California buckwheat (*Eriogonum fasciculatum*) and deerweed (*Acmispon glaber*). Common species observed within the understory include desert croton (*Croton californicus*), doveweed (*Croton setigerus*), common sandaster (*Corethrogyne filaginifolia*), narrowleaf cottonrose (*Logfia gallica*), ladies' tobacco (*Pseudognaphalium californicum*), California sun cup (*Camissoniopsis bistorta*), Pomona milk vetch (*Astragalus pomonensis*), strigose lotus (*Acmispon strigosus*), clustered tarweed (*Deinandra fasciculata*), leather spineflower (*Lastarriaea coriacea*), and western ragweed (*Ambrosia psilostachya*).

Disturbed

Disturbed regions of the Project Site include those areas generally devoid of vegetation with scattered ruderal species present, as presented in the previous non-native grassland/ruderal vegetation description.

Ornamental

A single patch of black lotus trees (*Robinia pseudoacacia*) is located within the southern region of the Project Site. The understory is dominated by species presented in the previous non-native grassland/ruderal vegetation description.

Cottonwood (Individual Tree)

A single mature Fremont cottonwood tree is located in the northern region of the Project Site within an area designated as proposed open space. The understory is dominated by leaflitter and species presented in the previous non-native grassland/ruderal vegetation description.

Tamarisk Scrub

A patch of tamarisk scrub (*Tamarix ramosissima*) is located within the northeastern region of the Project Site. The understory is dominated by species presented in the previous non-native grassland/ruderal vegetation description.

Table 1.
Vegetation Communities Acreages

Vegetation Type	Acres TOTAL
Non-native Grassland/Ruderal	3.83
California Buckwheat Scrub	1.85
Disturbed	0.12
Ornamental	0.06
Cottonwood (Individual Tree)	0.05
Tamarisk Scrub	0.02
TOTAL	**5.93**

Source: Cadre Environmental 2024.

GENERAL WILDLIFE SPECIES

General wildlife species documented on site include but are not limited to red-tailed hawk (*Buteo jamaicensis*), northern mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), white throated swift (*Aeronautes saxatalis*), cliff swallow (*Petrochelidon pyrrhonota*), violet green swallow (*Tachycineta thalassina*), California towhee (*Melozone crissalis*), bushtit (*Psaltriparus minimus*), hooded oriole (*Icterus cucullatus*), ash throated flycatcher (*Myiarchus cinerascens*), Nuttall's woodpecker (*Picoides nuttallii*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow (*Melospiza melodia*), yellow rumped warbler (*Setophaga coronata*), warbling vireo (*Vireo gilvus*), American crow (*Corvus brachyrhynchos*), lesser goldfinch (*Spinus psaltria*), house finch (*Haemorhous mexicanus*), desert cottontail rabbit (*Sylvilagus audubonii*), and California ground squirrel.

JURISDICTIONAL RESOURCES

A total of an approximately 0.003-acre (130 linear feet) drainage ditch bisects the northern region of the Project Site and represents a non-wetland CDFW riverine and RWQCB regulated resource, as shown in Figure 9, *Jurisdictional Resources Map*. This region of the Project Site including regulated feature is located within an area proposed as designated open space. No direct impacts are proposed within the designated open space.

MSHCP Riparian/Riverine/Vernal Pool Resources

Regulated activities within inland streams, wetlands and riparian areas in Western Riverside County California fall under the jurisdiction of the MSHCP. The MSHCP requires, among other things, assessments for riparian/riverine and vernal pool resources. As projects are proposed within the MSHCP Area Plan, an assessment of the potentially significant effects of those projects on riparian/riverine areas, and vernal pools are required, as currently mandated by CEQA, using available information augmented by project-specific mapping provided to and reviewed by the permittee's biologist(s). Riparian/riverine areas and vernal pools are defined for this section as follows in accordance with Section 6.1.2, Vol. I, of the Final MSHCP Plan:

> "*Riparian/Riverine Areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year*." (MSHCP 2004)

It is assumed the first part of the definition defines riparian habitat, and the second part defines riverine areas. Vernal pools are defined as:

> "…*seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season*". (MSHCP 2004)

A total of an approximately 0.003-acre (130 linear feet) drainage ditch bisects the northern region of the Project Site and represents an MSHCP Section 6.1.2 riverine resource, as shown in Figure 9, *Jurisdictional Resources Map*. This region of the Project Site including regulated feature is located within an area proposed as designated open space. No direct impacts are proposed within the designated open space.

No evidence of vernal pools, seasonal depressions, seasonally inundated road ruts or other wetland features were recorded on the Project Site. Vernal pools are depressions in areas where a hard-underground layer prevents rainwater from draining downward into the subsoils. When rain fills the pools in the winter and spring, the water collects and remains in the depressions. In the springtime, the water gradually evaporates away, until the pools became completely dry in the summer and fall. Vernal pools tend to have an impermeable layer that results in ponded water. The soil texture (the amount of sand, silt, and clay particles) typically contains higher amounts of fine silts and clays with lower percolation rates. Pools that retain water for a sufficient length of time will develop hydric cells. Hydric cells form when the soil is saturated from flooding for extended periods of time and anaerobic conditions (lacking oxygen or air) develop. Consistent with conditions documented onsite and as previously stated, the Project Site is characterized as Hanford course sandy loam, Ramona very fine sandy loam, and Riverwash – all possessing well drained substrates (drainage class). No indication of clay substrates or hydric soils were documented within the Project Site. A review of historic aerials was conducted to determine if inundated features were present during years of high rainfall when features would certainly be documented. Historic aerials taken in 2011 and 2023 represent an ideal baseline during which known (previously documented) inundated vernal pools, seasonal depressions and road ruts can easily be seen. No sign or indication of inundation was documented within the Project Site during a review of historic aerials. In summary, none of the conditions (i.e., no inundated depressions including road ruts, hydric soils, historic inundation, etc.) were observed or documented within the Project Site. No features are present that would support fairy shrimp. No standing water or other sign of areas that pond water was recorded.

Figure 3 - Vegetation Communities Map
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1 inch = 80 feet

PHOTOGRAPH 1 - Southwest view of Santa Gertrudis/Tucalota Creek Wash confluence.

PHOTOGRAPH 2 - Northward view of Project Site from southern region - Non-native grassland/ruderal vegetation.

Refer to Figure 2 - Project Site Map

Figure 4 - Current Project Site Photographs
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PHOTOGRAPH 3 - Northwest view of Project Site toward SR 79, Winchester Road.

PHOTOGRAPH 4 - Southeast view of Project Site from northern region.

Refer to Figure 2 - Project Site Map

Figure 5 - Current Project Site Photographs
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PHOTOGRAPH 5 - Southeast view of drainage extending through the northern region of Project Site.

PHOTOGRAPH 6 - Southward view of Project Site.

Refer to Figure 2 - Project Site Map

Figure 6 - Current Project Site Photographs
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PHOTOGRAPH 7 - Outfall culvert extending to Tucalota Creek Channel.

PHOTOGRAPH 8 - Inlet extending under berm to Tucalota Creek Channel.

Refer to Figure 2 - Project Site Map

Figure 7 - Current Project Site Photographs
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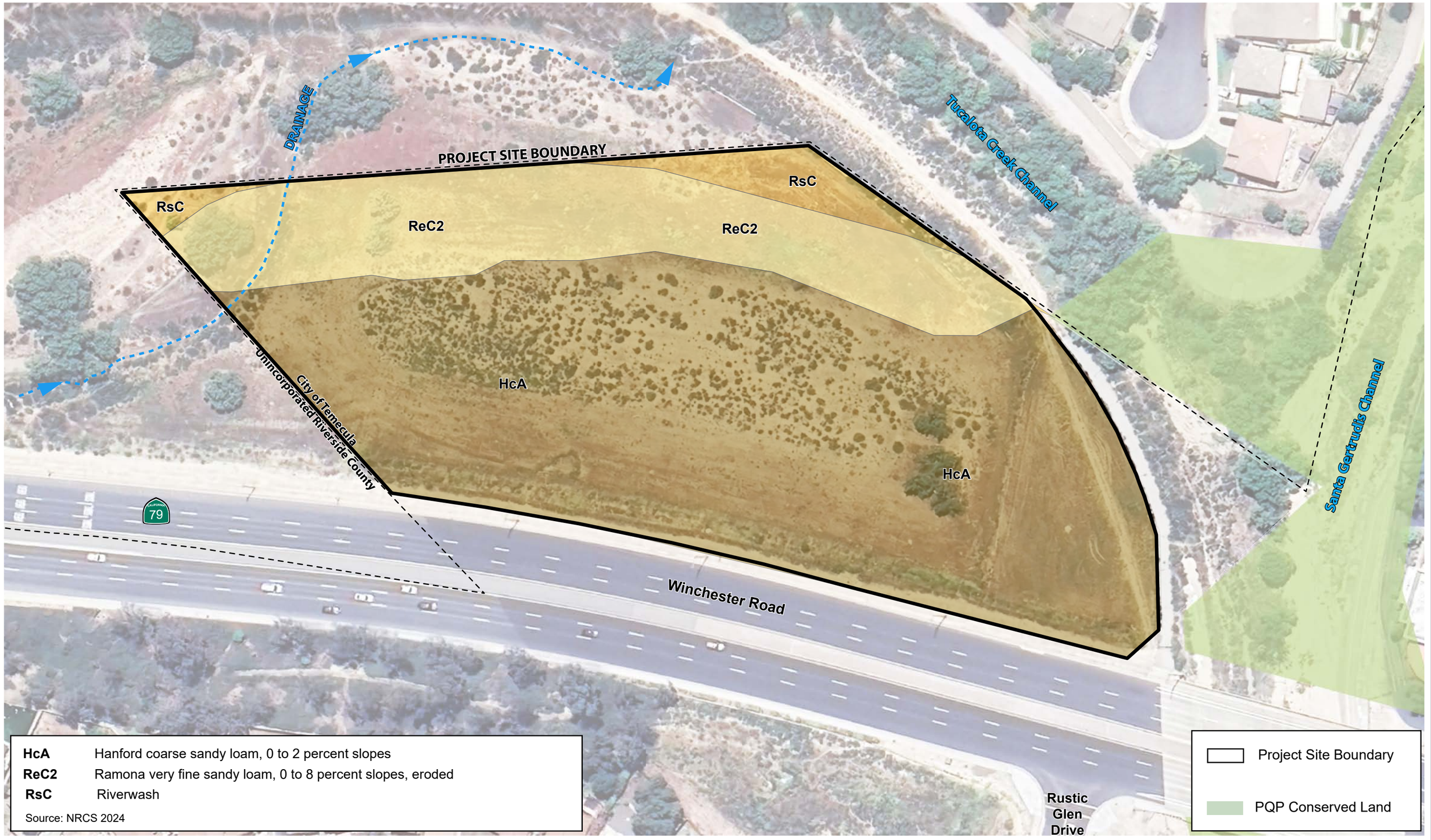

Figure 8 - Soils Association Map

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1 inch = 80 feet

Figure 9 - Jurisdictional Resources Map

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1 inch = 80 feet

SENSITIVE BIOLOGICAL RESOURCES

The following discussion describes the plant and wildlife species present, or potentially present within the property boundaries, that have been afforded special recognition by federal, state, or local resource conservation agencies and organizations, principally due to the species' declining or limited population sizes, usually resulting from habitat loss. Also discussed are habitats that are unique, of relatively limited distribution, or of particular value to wildlife. Protected sensitive species are classified by state and/or federal resource management agencies, or both, as threatened or endangered, under provisions of the state and federal endangered species act. Vulnerable or "at-risk" species that are proposed for listing as threatened or endangered (and thereby for protected status) are categorized administratively as "candidates" by the USFWS. CDFW uses various terminology and classifications to describe vulnerable species. There are additional sensitive species classifications applicable in California. These are described below.

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or rare. The CDFW, USFWS, and special groups like the California Native Plant Society maintain watch lists of such resources. For the purpose of this assessment sources used to determine the sensitive status of biological resources are:

Plants: USFWS (2024), CNDDB (CDFW 2024a), CDFW (2024d, 2024e), CNPS (2024), and Skinner and Pavlik (1994),

Invertebrate - Crotch's bumble bee *Bombus crotchii:* Leif Richardson, Paul Williams, Robbin Thorp and Sheila Colla, et al. (2022), CDFW (2019), CDFW (2023), Hatfield, et al. (2019).

Wildlife: California Wildlife Habitat Relationships (2008), USFWS (2024), CNDDB (CDFW 2024a), CDFW (2024b, 2024c, 2024f), and Leif Richardson, Paul Williams, Robbin Thorp and Sheila Colla, et al. (2022).

Habitats: CNDDB (CDFW 2024a, 2024f).

FEDERAL PROTECTION AND CLASSIFICATIONS

The Federal Endangered Species Act of 1973 (FESA) defines an endangered species as "any species that is in danger of extinction throughout all or a significant portion of its range..." Threatened species are defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Under provisions of Section 9(a)(1)(B) of the FESA it is unlawful to "take" any listed species. "Take" is defined as follows in Section 3(18) of the FESA: "...harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Further, the USFWS, through regulation, has interpreted the terms "harm" and "harass" to include certain types of habitat modification as forms of a "take." These interpretations, however, are generally considered and applied on a case-by-case basis and often vary from species to species. In a case where a property owner seeks

permission from a federal agency for an action that could affect a federally listed plant and animal species, the property owner and agency are required to consult with USFWS. Section 9(a)(2)(b) of the FESA addresses the protections afforded to listed plants. Recently, the USFWS instituted changes in the listing status of former candidate species. Former C1 (candidate) species are now referred to simply as candidate species and represent the only candidates for listing. Former C2 species (for which the USFWS had insufficient evidence to warrant listing at this time) and C3 species (either extinct, no longer a valid taxon or more abundant than was formerly believed) are no longer considered as candidate species. Therefore, these species are no longer maintained in list form by the USFWS, nor are they formally protected. However, some USFWS field offices have issued memoranda stating that former C2 species are henceforth to be considered Federal Species of Concern. This term is employed in this document but carries no official protections. All references to federally protected species in this report (whether listed, proposed for listing or candidate) include the most current published status or candidate category to which each species has been assigned by USFWS. For purposes of this assessment, the following acronyms are used for federal status species:

FE	Federal Endangered
FT	Federal Threatened
FPE	Federal Proposed Endangered
FPT	Federal Proposed Threatened
FC	Federal Candidate for Listing

The designation of critical habitat can also have a significant impact on the development of land designated as "*critical habitat*." The FESA prohibits federal agencies from taking any action that will "*adversely modify or destroy*" critical habitat (16 U.S.C. § 1536(a)(2)). This provision of the FESA applies to the issuance of permits by federal agencies. Before approving an action affecting critical habitat, the federal agency is required to consult with the USFWS who then issues a biological opinion evaluating whether the action will "*adversely modify"* critical habitat. Thus, the designation of critical habitat effectively gives the USFWS extensive regulatory control over the development of land designated as critical habitat.

The federal Migratory Bird Treaty Act (MBTA) makes it unlawful to "*take*" any migratory bird or part, nest, or egg of such bird listed in wildlife protection treaties between the United States and Great Britain, the Republic of Mexico, Japan, and the Union of Soviet States. For purposes of the MBTA, "*take*" is defined as to pursue, hunt, capture, kill, or possess or attempt to do the same.

The Bald Eagle and Golden Eagle Protection Act explicitly protects the bald eagle and golden eagle and imposes its own prohibition on any taking of these species. As defined in this act, take means to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, or molest or disturb. Current USFWS policy is not to refer the incidental take of bald eagles for prosecution under the Bald Eagle and Golden Eagle Protection Act (16 U.S.C. 668-668d).

STATE PROTECTION AND CLASSIFICATIONS

California's Endangered Species Act (CESA) defines an endangered species as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease." The State defines a threatened species as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species." Candidate species are defined as "...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list." Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike FESA, CESA does not include listing provisions for invertebrate species.

Article 3, Sections 2080 through 2085, of CESA addresses the taking of threatened or endangered species by stating "No person shall import into this state, export out of this state, or take, possess, purchase, or sell within this state, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided..." Under CESA, "take" is defined as "...hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Exceptions authorized by the state to allow "take" require "...permits or memorandums of understanding..." and can be authorized for "...endangered species, threatened species, or candidate species for scientific, educational, or management purposes." Sections 1901 and 1913 of the California Fish and Game Code provide that notification is required prior to disturbance.

Additionally, some sensitive mammals and birds are protected by the State as Fully Protected Mammals or Fully Protected Birds, as described in the California Fish and Game Code, Sections 4700 and 3511, respectively. California Species of Special Concern (SSC) listings include special status species, including all state and federal protected and candidate taxa, Bureau of Land Management and US Forest Service sensitive species, species considered to be declining or rare by the National Audubon Society, and a selection of species which are considered to be under population stress but are not formally proposed for listing. This list is primarily a working document for the CDFW's CNDDB project. Informally listed taxa are not protected per se but warrant consideration in the preparation of biotic assessments. For some species, the CNDDB is only concerned with specific portions of the life history, such as roosts, rookeries, or nest sites. For the purposes of this assessment, the following acronyms are used for State status species:

SE	State Endangered
ST	State Threatened

SCE	State Candidate Endangered
SCT	State Candidate Threatened
SFP	State Fully Protected
SP	State Protected
SR	State Rare
SSC	California Species of Special Concern
CWL	California Watch List

Nesting birds, including raptors, are protected under California Fish and Game Code Section 3503, which reads, “It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.” In addition, under California Fish and Game Code Section 3503.5, “it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto”. Passerines and non-passerine land birds are further protected under California Fish and Game Code 3513. As such, CDFW typically recommends surveys for nesting birds that could potentially be directly (e.g., actual removal of trees/vegetation) or indirectly (e.g., noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered “take” by CDFW.

California Native Plant Society

The CNPS is a private plant conservation organization dedicated to the monitoring and protection of sensitive species in the State. This organization has compiled an inventory comprised of the information focusing on geographic distribution and qualitative characterization of rare, threatened, or endangered vascular plant species of California (Tibor 2001). The list serves as the candidate list for listing as threatened and endangered by CDFW. The CNPS has developed five categories of rarity references as California Rare Plant Ranks (CRPR):

CRPR 1A	Presumed extinct in California.
CRPR 1B	Rare, threatened, or endangered in California and elsewhere.
CRPR 2A	Plants presumed extirpated in California but common elsewhere
CRPR 2B	Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3	Plants about which we need more information – a review list.
CRPR 4	Species of limited distribution in California (i.e., naturally rare in the wild), but whose existence does not appear to be susceptible to threat.

As stated by the CNPS:

> "*Threat Rank is an extension added onto the California Rare Plant Rank and designates the level of endangerment by a 1 to 3 ranking with 1 being the most endangered and 3 being the least endangered. A Threat Rank is present for all California Rare Plant Rank 1B's, 2's, 4's, and the majority of California Rare Plant Rank 3's. California Rare Plant Rank 4 plants are seldom assigned a Threat Rank of 0.1, as they generally have large enough populations to not have significant threats to their continued existence in California; however, certain conditions exist to make the plant a species of concern and hence be assigned a California Rare Plant Rank. In addition, all California Rare Plant Rank 1A (presumed extinct in California), and some California Rare Plant Rank 3 (need more information) plants, which lack threat information, do not have a Threat Rank extension." (CNPS 2010)*

0.1	Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
0.2	Fairly threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)
0.3	Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)

SENSITIVE HABITATS

As stated by CDFW:

> "*One purpose of the vegetation classification is to assist in determining the level of rarity and imperilment of vegetation types. Ranking of alliances according to their degree of imperilment (as measured by rarity, trends, and threats) follows NatureServe's Heritage Methodology, in which all alliances are listed with a G (global) and S (state) rank. For alliances with State ranks of S1-S3, all associations within them are also considered to be highly imperiled*" (CDFW 2012)

No vegetation communities listed by CDFW as sensitive were documented within or adjacent to the Project Site. Although select reaches of Tucalota Creek Channel and Santa Gertrudis Creek Channel are mapped as sensitive (Riversidean Alluvial Fan Sage Scrub), the reach located adjacent to the Project Site is not characterized as RAFSS due to a lack of suitable densities of scalebroom (*Lepidospartum squamatum*). No impacts are proposed within Tucalota Creek Channel or Santa Gertrudis Creek Channel.

SENSITIVE PLANTS

The following discussion is presented in two (2) parts:

I) MSHCP Plant Species Subject to Focused Surveys or Evaluated by Habitat Suitability Assessment;
II) Special-Status Plant Species Potentially Occurring Onsite.

I: MSHCP Plant Species Subject to Focused Surveys or Evaluated by Habitat Suitability Assessment

The Project Site is not located within an MSHCP Narrow Endemic Plant Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.1.3.

The Project Site is not located within an MSHCP Criteria Area Plant Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.3.2.

No state or federally listed threatened or endangered plant species were documented or expected to occur onsite based on a lack of suitable habitat, as outlined in Table 4, *Sensitive Plant Species with Potential to Occur Onsite*.

II: Special-Status Species Potentially Occurring Onsite

Low potential habitat was documented onsite for two (2) MSHCP covered species including intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) and Parry's spineflower (*Chorizanthe parryi* var. *parryi*), as outlined in Table 2, Sensitive Floral Species with Potential to Occur Onsite. These species were not detected during the initial habitat assessment and would have been expected to be detected at the time of the survey. As previously stated, the MSHCP has determined that these sensitive species potentially occurring within Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004).

Suitable habitat was documented onsite for one (1) CNPS special-status plant not covered under the MSHCP including chaparral sand-verbena (*Abronia villosa* var. *aurita*), as outlined in Table 2, *Sensitive Plant Species with Potential to Occur Onsite*.

Table 2.
Sensitive Plant Species with Potential to Occur Onsite.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Chaparral sand-verbena (*Abronia villosa* var. *aurita*) CRPR 1B.1	Sandy soils in sage-scrub, chaparral.	Low Potential – The California buckwheat scrub represents suitable habitat for the species. The species was not detected during the initial habitat assessment and would have been expected to be detected at the time of the survey.
Munz's onion (*Allium munzii*) FE/ST CRPR 1B.1	Restricted to mesic clay soils in western Riverside County, CA within needlegrass grassland annual grassland, open coastal sage scrub, or	No Potential – No suitable clay substrate detected onsite. Project Site not located within NEPSA.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
MSHCP Covered/MSHCP Narrow Endemic Plant Survey Area (NEPSA) Species	occasionally, in cismontane juniper woodlands.	
San Diego ambrosia (*Ambrosia pumila*) FE CRPR 1B.1 MSHCP Covered/NE	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	No Potential – Perennial species not detected onsite. Project Site not located within NEPSA.
Rainbow manzanita (*Arctostaphylos rainbowensis*) CRPR 1B.1 MSHCP Covered	Perennial evergreen shrub.	No Potential – Perennial species not detected onsite.
Jaeger's milkvetch (*Astragalus pachypus* var. *jaeger*i) CRPR 1B.1 MSHCP Covered	Perennial shrub.	No Potential – Perennial species not detected onsite.
Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) CRPR List 1B.2 Covered	Perennial bulbiferous herb which generally blooms from May to July within coastal sage scrub, chaparral and grassland habitats (CNPS 2024)	Low Potential – The California buckwheat scrub represent suitable habitat for the species. The species was not detected during the initial habitat assessment and would have been expected to be detected at the time of the survey.
Palmer's grapplinghook (*Harpagonella palmeri*) CRPR 4.2 MSHCP Covered	Annual herb generally blooming from March to May in open grassy areas within chaparral, coastal scrub, grassland habitats in association with clay substrates (CNPS 2024).	No Potential – No suitable clay substrate detected onsite.
Spreading navarretia (*Navarretia fossalis*) FT CRPR 1B.1 MSHCP Covered/NE	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	No Potential – No suitable habitat detected onsite. Project Site not located within NEPSA.
California Orcutt grass (*Orcuttia californica*) FE/SE CRPR 1B.1 MSHCP Covered/NE	Vernal pools.	No Potential – No suitable habitat detected onsite. Project Site not located within NEPSA.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Smooth tarplant (*Centromadia pungens* ssp. *laevis*) CRPR 1B.1 MSHCP Covered	Alkaline soils in chenopod scrub, meadows and seeps, playas, and disturbed habitats.	No Potential – No suitable alkali substrate detected onsite.
Parry's spineflower (*Chorizanthe parryi* var. *parryi*) CRPR 3.2 MSHCP Covered	Sandy or rocky soils in open habitats of chaparral and coastal sage scrub.	Low Potential – The California buckwheat scrub represent suitable habitat for the species. The species was not detected during the initial habitat assessment and would have been expected to be detected at the time of the survey.
Long-spined spineflower (*Chorizanthe polygonoides* var. *longispina*) CRPR List 1B.2	Annual herb generally blooming from April to July in chaparral, coastal scrub, meadows and grassland habitats – often associated with clay substrates (CNPS 2024)	No Potential – No suitable clay substrate detected onsite.
Mesa horkelia (*Horkelia cuneata ssp. puberula*) CRPR 1B.1	Perennial herb which generally blooms from February to September within chaparral (maritime), cismontane woodland and coastal scrub with sandy or gravelly substrates. (CNPS 2024)	No Potential – Perennial species not detected onsite.
Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) CRPR List 1B.1 MSHCP Criteria Area Plant Survey Area (CAPSA) Species	Coulter's goldfields is associated with low-lying alkali and saline habitats along the coast and inland valleys. The majority of the populations are associated with coastal salt marsh. In Riverside County, Coulter's goldfields primarily grow in highly alkaline, silty clays associated with the Traver-Domino-Willows soils, and usually in the wet areas in the alkali vernal plain community.	No Potential – No suitable alkali substrate detected onsite. Project Site not located within CAPSA.
San Bernardino aster (*Symphyotrichum defoliatum*) CRPR 1B.2	Occurs in cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps, and valley and foothill grassland	No Potential – No suitable habitat detected onsite.

Species Name (*Scientific Name*) Status	Habitat Description	Comments
	(vernally mesic)/near ditches, streams springs.	

California Native Plant Society (CNPS): California Rare Plant Rank (CRPR)
CRPR 1A – plants presumed extinct in California
CRPR 1B – plants rare, threatened, or endangered in California, but more common elsewhere
CRPR 2A – plants presumed extirpated in California but common elsewhere
CRPR 2B – plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3 – plants about which we need more information, a review list
CRPR 4 – plants of limited distribution, a watch list
.1 – Seriously endangered in California
.2 – Fairly endangered in California
.3 – Not very endangered in California

Federal (USFWS) Protection and Classification
FE – Federally Endangered
FT – Federally Threatened
FC – Federal Candidate for Listing

State (CDFW) Protection and Classification
SE – State Endangered
ST – State Threatened

MSHCP
NE – Narrow Endemic

Source : Cadre Environmental 2024.

SENSITIVE WILDLIFE

The following discussion is presented in two (2) parts:

I) MSHCP Wildlife Species Subject to Focused Surveys or Evaluated by Habitat Suitability Assessment;
II) Special-Status Species Potentially Occurring Onsite.

I: MSHCP Wildlife Species Subject to Focused Surveys or Evaluated by Habitat Suitability Assessment

The Project Site is not located within an MSHCP Amphibian Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.1.3.

The Project Site is not located within an MSHCP Mammal Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.1.3.

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within and adjacent to the property including foraging habitat documented throughout the lowland regions. Based on the presence of suitable habitat, focused MSHCP burrowing owl surveys were conducted by Helix Environmental Planning, Inc. on May 11th, 26th, July 14th, and August 10th, 2022. No burrowing owl or characteristic sign were detected during the focused surveys.

II. Special-Status Species Potentially Occurring Onsite

Suitable low-quality habitat was documented onsite for one (1) special-status invertebrate species not covered under the MSHCP including Crotch's bumble bee (*Bombus crotchii*) State Candidate Endangered (SCE), as outlined in Table 3, *Sensitive Wildlife Species with Potential to Occur Onsite*. No bumble bees were documented onsite during the general habitat assessment survey conducted on May 10th, 2024. However, suitable scattered foraging habitat for the Crotch's bumble bee is present. Burrows representing suitable nesting resources were also documented throughout the Project Site. Scattered plant species in the genera of several food resources documented to be utilized by Crotch's bumble bee were documented within the Project Site including *Eriogonum, Acmispon, and Vicia*. As stated by Hatfield, et al.:

> "*Bombus crotchii inhabits open grassland and scrub habitats. Nesting occurs underground. Males perch and chase moving objects in search of mates. This species is classified as a short-tongued species, whose food plants include Asclepias, Chaenactis, Lupinus, Medicago, Phacelia, and Salvia (Williams et al. 2014). Bumble bees are social insects that live in colonies composed of a queen, workers, and reproductives (males and new queens). Colonies are annual and only the new, mated queens overwinter. These queens emerge from hibernation in the early spring and immediately start foraging for pollen and nectar and begin to search for a nest site. Nests are often located underground in abandoned rodent nests, or above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees. Initially, the queen does all of the foraging and care for the colony until the first workers emerge and assist with these duties. Bumble bees collect both nectar and pollen of the plants that they pollinate. In general, bumble bees forage from a diversity of plants, although individual species can vary greatly in their plant preferences, largely due to differences in tongue length. Bumble bees are well-known to engage in "buzz pollination," a very effective foraging technique in which they sonicate the flowers to vibrate the pollen loose from the anthers. Tomatoes (Solanaceae), blueberries (Ericaceae), and many other important food plants are pollinated by bumble bees in this way*." Hatfield, et al. (2019).

A single MSHCP covered species, Least Bell's vireo (*Vireo bellii pusillus*) was documented vocalizing within the riparian forest habitat located immediately southeast of the Project Site as shown in Figure 10, *Sensitive Species Observation Map*.

High to low potential habitat was documented onsite for nineteen (19) MSHCP covered species including Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), California horned lark (*Eremophila alpestris actia*), orange-throated whiptail (*Aspidoscelis hyperythra*), coastal western whiptail (*Aspidoscelis tigris stejnegeri*), coast horned lizard (*Phrynosoma blainvillii*), white-tailed kite (*Elanus leucurus*), yellow-breasted chat *(Icteria virens*), yellow warbler (*Setophaga petechia*), southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), grasshopper sparrow (*Ammodramus savannarum*), northern harrier (*Circus cyaneus*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), southwestern willow flycatcher (*Empidonax traillii extimus*), coastal California gnatcatcher (*Polioptila californica californica*), northwestern San Diego

pocket mouse (*Chaetodipus fallax fallax*), San Diego black-tailed jackrabbit (*Lepus californicus bennettii*), Dulzura kangaroo rat (*Dipodomys simulans*), and Los Angeles pocket mouse (*Perognathus longimembris brevinasus*), as outlined in Table 3, *Sensitive Wildlife Species with Potential to Occur Onsite*. As previously stated, the MSHCP has determined that these sensitive species potentially occurring within Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004).

Table 3.
Sensitive Wildlife Species with Potential to Occur Onsite.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
INVERTEBRATES		
Crotch's bumble bee (*Bombus crotchii*) SCE	Range extends from southern to northern California within a variety of habitats including grassland, scrub, chaparral and desert habitats. Food plants include but are not limited to the following genera: *Antirrhinum, Phacelia, Clarkia, Cordylanthus, Dendromecon, Medicago Eschscholzia, Chaenactis, Eriogonum, Hypericum, Lantana, Lupinus, Salvia, Asclepias, Cirsium, Monardella, Keckiella, Acmispon, Euthamia, Ehrendorferia, Vicia,* and/or *Trichostema*.	Low Potential. The California buckwheat scrub vegetation provide suitable habitat for the species based on the presence of the following scattered genera, *Eriogonum, Acmispon, Vicia*, and presence of scattered mammal burrows.
Vernal pool fairy shrimp (*Branchinecta lynchi*) FT MSHCP Covered Species	Vernal pool fairy shrimp is restricted to seasonal vernal pools (Eng, Belk, and Eriksen 1990; USFWS 1994). The vernal pool fairy shrimp prefers cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short lived (Eriksen and Belk 1999, MSHCP 2004).	No Potential. No suitable habitat including vernal pools, seasonal depressions or indication of inundation was documented within or adjacent to the Project Site.
Riverside fairy shrimp (*Streptocephalus woottoni*) FE MSHCP Covered Species	*S. woottoni* is restricted to deep seasonal vernal pools/ephemeral ponds, and stock ponds and other human modified depressions (Eng, Belk,	No Potential. No suitable habitat including vernal pools, seasonal depressions or indication of inundation was documented within or adjacent to the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
	and Eriksen 1990, USFWS 1993, USFWS 2001). Riverside fairy shrimp prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time (MSHCP 2004).	
AMPHIBIANS		
Arroyo toad (*Anaxyrus californicus*) FE/SSC MSHCP Covered Species	Shallow, slow moving active and braided stream channels with sandy substrates for breeding, bench and terrace habitats for foraging and aestivation, willow scrub, coastal sage scrub and riparian/oak woodlands.	No Potential. No suitable breeding or upland habitat documented within or adjacent to the Project Site.
Western spadefoot (*Spea hammondii*) SSC MSHCP Covered Species	The western spadefoot population is patchily but widely distributed throughout the Riverside Lowlands and San Jacinto Foothills Bioregions. Habitat for this species includes suitable breeding habitat below 1500 meters (i.e., vernal pools or other standing water is free of exotic species) secondary habitats including adjacent chaparral, sage scrub, grassland, and alluvial scrub habitats (MSHCP 2004).	No Potential. No suitable breeding habitat including vernal pools, seasonal depressions or indication of inundation was documented within or adjacent to the Project Site.
REPTILES		
Southern California legless lizard (*Anniella stebbinsi*) SSC	Occurs in moist warm loose soil with plant cover. Moisture is essential. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	No Potential. No suitable habitat was documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Orange-throated whiptail (*Aspidoscelis hyperythra*) CWL MSHCP Covered Species	The orange-throated whiptail occurs primarily in a wide variety of habitats but is more closely tied to coastal sage scrub and chaparral habitats with less than 90 percent vegetative cover.	Moderate Potential. The California buckwheat scrub vegetation provides suitable habitat for the species.
Coastal western whiptail (*Aspidoscelis tigris stejnegeri*) SSC MSHCP Covered Species	The coastal western whiptail occurs in a wide variety of habitats including coastal sage scrub, desert scrub, Riversidean alluvial fan scrub, woodlands, grasslands, playas, and respective ecotones between these habitats (MSHCP 2004).	Moderate Potential. The California buckwheat scrub vegetation provides suitable habitat for the species.
San Diego banded gecko (*Coleonyx variegatus abbotti*) SSC MSHCP Covered Species	San Diego banded gecko is a microhabitat generalist and also occurs in habitats ranging from cismontane chaparral and desert scrub to open sand dunes and arid tropical forests (MSHCP 2004).	No Potential. No suitable habitat was documented within the Project Site.
Red-diamond rattlesnake (*Crotalus ruber*) SSC MSHCP Covered Species	The red-diamond rattlesnake is often found in areas with dense vegetation especially chaparral and sage scrub up to 1,520 meters in elevation (MSHCP 2004).	No Potential. No suitable dense habitat was documented within the Project Site.
Western pond turtle (*Actinemys marmorata*) SSC MSHCP Covered Species	The western pond turtle inhabits slow moving permanent or intermittent streams, small ponds, small lakes, reservoirs, abandoned gravel pits, permanent and ephemeral shallow wetlands, stock ponds, and sewage treatment lagoons (Rathbun *et al*., 1992; Holland, 1994). Pools are the preferred habitat within streams (Bury, 1972, MSHCP 2004)	No Potential. No suitable habitat was documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Coast horned lizard (*Phrynosoma blainvillii*) SSC MSHCP Covered Species	The horned lizard occurs primarily in scrub, chaparral, and grassland habitats. The species is common in most areas of the Plan Area except where adjacent to urban situations (MSHCP 2004).	Moderate Potential. The California buckwheat scrub vegetation provides suitable habitat for the species.
Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC	The coast patch-nosed snake prefers brushy coastal sage scrub/ chaparral habitats.	No Potential. No suitable dense habitat was documented within the Project Site.
BIRDS		
Cooper's hawk (*Accipiter cooperii*) SSC MSHCP Covered Species	Cooper's hawk is most commonly found within or adjacent to riparian/oak forest and woodland habitats. This uncommon resident of California increases in numbers during winter migration.	High Potential. Suitable foraging and nesting habitat are present within the adjacent vegetation located within Tucalota Creek and Santa Gertrudis Creek Channels. This species is adapted to urban environments and occurs commonly.
Sharp-shinned hawk (*Accipiter striatus*) SSC MSHCP Covered Species	For the purpose of the conservation analysis, potential habitat for the sharp-shinned hawk includes montane coniferous forest for potential breeding areas (none have been documented) and riparian scrub, woodland, and forest habitat, oak woodland and forest, chaparral, coastal sage scrub, desert scrub, and Riversidean alluvial fan sage scrub for foraging. (MSHCP 2004)	High Potential. Suitable foraging habitat is present within the adjacent vegetation located within Tucalota Creek and Santa Gertrudis Creek Channels. This species is adapted to urban environments and occurs commonly.
Tri-colored blackbird (*Agelaius tricolor*) ST/SSC MSHCP Covered Species	Marshes and grasslands. Breeding colonies require nearby water, nesting substrate, and open range foraging habitat of natural grassland, woodland, or agricultural cropland.	No Potential. No suitable breeding or foraging habitat was documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CWL MSHCP Covered Species	Southern California rufous-crowned sparrow is a non-migratory bird species that primarily occurs within sage scrub and grassland habitats and to a lesser extent chaparral sub-associations (Unitt 2004). This species generally breeds on the ground within grassland and scrub communities in the western and central regions of California.	Low Potential. The California buckwheat scrub vegetation provides suitable habitat for the species.
Grasshopper sparrow (*Ammodramus savannarum*) SSC MSHCP Covered Species	The grasshopper sparrow generally prefers moderately open grasslands and prairies with patchy bare ground (MSHCP 2004).	Low Potential. The patches of non-native grassland documented onsite provides suitable habitat for the species.
Golden eagle (*Aquila chrysaetos*) CWL, SFP MSHCP Covered Species	Within southern California, the species prefers grasslands, brushlands (coastal sage scrub and chaparral), deserts, oak savannas, open coniferous forests, and montane valleys (MSHCP 2004).	No Potential. No suitable habitat was documented within the Project Site.
Bell's sage sparrow (*Artemisiospiza belli belli*) CWL MSHCP Covered Species	Bell's sage sparrow is an uncommon to fairly common but localized resident breeder in dry chaparral and coastal sage scrub along the coastal lowlands, inland valleys, and in the lower foothills of local mountains (MSHCP 2004).	No Potential. No suitable habitat was documented within the Project Site.
Short-eared owl (*Asio otus*) SSC	Suitable habitats include salt- and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures. Tule marsh or tall grasslands with cover 30 to 50 cm in height can support nesting pairs.	No Potential. No suitable habitat was documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Long-eared owl (*Asio otus*) SSC	Deciduous and evergreen forests, orchards, wooded parks, farm woodlots, river woods, desert oases. Wooded areas with dense vegetation needed for roosting and nesting, open areas for hunting. Often associated with deciduous woods near water.	No Potential. No suitable habitat was documented within the Project Site.
Burrowing owl (*Athene cunicularia*) SSC MSHCP Covered Species	The burrowing owl uses predominantly open land, including grassland, agriculture (e.g., dry-land farming and grazing areas), playa, and sparse coastal sage scrub and desert scrub habitats (Garrett and Dunn 1981). Some breeding burrowing owls are year-round residents and additional individuals from the north may winter throughout the MSHCP Area Plan (MSHCP 2004).	No Potential. The Project Site provides suitable foraging habitat and burrows larger than 4 inches in diameter were detected within and adjacent to the property boundaries. Species not detected during focused surveys conducted during the spring of 2022 (Helix Environmental Planning, Inc 2022).
Ferruginous hawk (*Buteo regalis*) CWL MSHCP Covered Species	Range-wide, within California, ferruginous hawks' winter in open terrain and grasslands of plains and foothills (Grinnell and Miller 1944). Within southern California, including the ferruginous hawks typically winter in open fields, grasslands, and agricultural areas.	No Potential. No suitable habitat was documented within the Project Site. .
Swainson's hawk (*Buteo swainsoni*) ST MSHCP Covered Species	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa	No Potential. No suitable habitat was documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
	fields or livestock pastures.	
Vaux's swift (*Chaetura vauxi*) SSC	refers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out snags. Fairly common migrant throughout most of the state in April and May, and August and September.	No Potential. No suitable habitat was documented within the Project Site.
Northern harrier (*Circus cyaneus*) SSC	The northern harrier frequents open wetlands, wet/lightly grazed pastures, fields, dry uplands/prairies, mesic grasslands, drained marshlands, croplands, meadows, grasslands, open rangelands, fresh and saltwater emergent wetlands.	Low Potential. May occasionally forage onsite.
Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FT/SE MSHCP Covered Species	Although the preferred habitat, riparian scrub and forest, is well distributed at scattered locations within the Plan Area in the Riverside Lowland Bioregions, the western yellow-billed cuckoo apparently no longer inhabits much of this habitat (MSHCP 2004).	Low Potential. Suitable foraging and nesting habitat are present within the adjacent vegetation located within Tucalota Creek and Santa Gertrudis Creek Channels.
White-tailed kite (*Elanus leucurus*) SFP MSHCP Covered Species	The white-tailed kite is found in riparian, oak woodlands adjacent to large open spaces including grasslands, wetlands, savannahs and agricultural fields. This non-migratory bird species occurs throughout the lower elevations of California and commonly nests in coast live oaks (Unitt 2004).	Moderate Potential. May occasionally forage onsite.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Southwestern willow flycatcher (*Empidonax traillii extimus*) FE/SE MSHCP Covered Species	The southwestern willow flycatcher is narrowly distributed at few locations within the Plan Area. Although the preferred habitat, riparian woodland and select other forests, is well distributed within all bioregions and spread over the entire Plan Area, few current locations for the willow flycatcher have been documented (MSHCP 2004).	Low Potential. Suitable foraging and nesting habitat are present within the adjacent vegetation located within Tucalota Creek and Santa Gertrudis Creek Channels.
California horned lark (*Eremophila alpestris actia*) SWL MSHCP Covered Species	Habitat for the California horned lark includes agriculture (field croplands), grassland, cismontane alkali marsh, playa and vernal pool habitat, Riversidean alluvial fan sage scrub, and coastal sage scrub (Garrett and Dunn 1988). It has been recorded in chaparral and riparian habitat - however these are not typical habitats used by the species.	High Potential. May occasionally forage onsite.
Merlin (*Falco columbarius*) CWL MSHCP Covered Species	The merlin has a sparse and widespread distribution throughout the MSHCP Plan Area within almost every habitat that occurs within the Plan Area. It occurs within the Plan Area as a transient in the spring and fall and may occasionally winter within the area. It does not require specific conditions or locations for nesting because it does not nest in the region. (MSHCP 2004)	No Potential. No suitable habitat was documented within the Project Site.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Prairie falcon (*Falco mexicanus*) CWL MSHCP Covered Species	Habitat use of the prairie falcon includes annual grasslands to alpine meadows. The prairie falcon is associated primarily with perennial grasslands, savannahs, rangeland, some agricultural fields during the winter season, and desert scrub areas, all typically dry environments of western North American where there are cliffs or bluffs for nest sites (MSHCP 2004)	No Potential. No suitable habitat was documented within the Project Site.
American peregrine falcon (*Falco peregrinus anatum*) SFP MSHCP Covered Species	Throughout the species' range, peregrine falcons are found in a large variety of open habitats, including tundra, marshes, seacoasts, savannahs and high mountains (AOU 1998, MSHCP 2004).	No Potential. No suitable habitat was documented within the Project Site.
Yellow-breasted chat (*Icteria virens*) SSC MSHCP Covered Species	The yellow-breasted chat is associated with riparian woodland and riparian scrub habitats (MSHCP 2004)	Moderate Potential. Suitable foraging and nesting habitat are present within the adjacent vegetation located within Tucalota Creek and Santa Gertrudis Creek Channels.
Loggerhead shrike (*Lanius ludovicianus*) SSC MSHCP Covered *Species*	Loggerhead shrike prefer open ground for foraging and thick trees and shrubs including sage scrub, chaparral, and desert scrub habitats for nesting.	No Potential. No suitable habitat was documented within the Project Site.
Coastal California gnatcatcher (*Polioptila californica californica*) FT/SSC MSHCP Covered Species	The coastal California gnatcatcher is a non-migratory bird species that primarily occurs within sage scrub habitats in coastal southern California dominated by California sagebrush (*Artemisia californica*), and California buckwheat (*Eriogonum fasciculatum*).	Low Potential. The low-density California buckwheat scrub provide suitable habitat for the species.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
Yellow warbler (*Setophaga petechia*) SSC MSHCP Covered Species	Habitat characteristics of the yellow warbler are well known to include riparian scrub and forest and woodland (MSHCP 2004)	Moderate Potential. Suitable foraging and nesting habitat are present within the adjacent vegetation located within Tucalota Creek and Santa Gertrudis Creek Channels.
Least Bell's vireo (*Vireo bellii pusillus*) FE/SE MSHCP Covered Species	Least Bell's vireo resides in riparian habitats with a well-defined understory including southern willow scrub, mule fat, and riparian forest/woodland habitats.	Present. Least bell's vireo was documented vocalizing within the riparian forest habitat located immediately southeast of the Project Site as shown in Figure 10, *Sensitive Species Observation Map*.
Yellow-headed blackbird (*Xanthocephalus xanthocephalus*) SSC	Prefers freshwater marshes habitat dominated by cattails and tule.	No Potential. No suitable marsh habitat was documented within or adjacent to the Project Site.
MAMMALS		
Pallid bat (*Antrozous pallidus*) SSC	In California, the species has been documented occurring in a variety of habitats, including coniferous forests, oak woodlands, brushy terrain, rocky canyons, open farmland, and desert. Roosts are selected on the basis of temperature/proximity to foraging habitat. They are generalists in their roosting requirements, using a variety of structures including rock crevices, tree hollows, mines/caves, structures.	No Potential. No suitable roosting habitat documented within Project Site.
Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) SSC MSHCP Covered Species	The northwestern San Diego pocket mouse occurs throughout the Plan Area in coastal sage scrub (including Diegan and Riversidean upland sage scrubs and alluvial fan sage scrub), sage scrub/grassland ecotones, chaparral at all elevations up to 6,000 feet (MSHCP 2004).	Low Potential. The California buckwheat scrub vegetation provides suitable habitat for the species.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
San Bernardino kangaroo rat (*Dipodomys merriami parvus*) FE MSHCP Covered Species	Alluvial sage scrub on alluvial fans, flood plains, along washes, in adjacent upland areas, and in areas with historic braided stream channels; these habitats characterized by sand, loam, sandy loam, or gravelly soils. Prefers the more open early and intermediate phases of alluvial sage scrub, but mature sage scrub is important as refugia during floods.	No Potential. No suitable habitat documented onsite.
Western mastiff bat (*Eumops perotis californicus*) SSC	Western mastiff bats are found in a variety of biotic environments from low desert scrub to chaparral, oak woodland and ponderosa pine.	No Potential. No suitable roosting habitat documented onsite.
Western yellow bat (*Lasiurus xanthinus*) SSC	Although formerly associated only with the desert palm oasis in California (Bond, 1970), yellow bats appear to be expanding their range to the coast and northward, possibly as a result of the planting of ornamental palms.	No Potential. No suitable roosting habitat documented onsite.
San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC MSHCP Covered Species	The San Diego black-tailed jackrabbit in open habitats, primarily including grasslands, sage scrub, alluvial fan sage scrub, and Great Basin sage scrub.	Low Potential. The California buckwheat scrub and adjacent non-native grassland vegetation provides suitable habitat for the species.
Bobcat (*Lynx rufus*) MSHCP Covered Species	The bobcat requires large expanses of relatively undisturbed brushy and rocky habitats near springs or other perennial water sources.	Low Potential. The Project Site and adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels represent suitable movement and foraging habitat.
Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC	Usually associated with rugged canyons, high cliffs, and rock outcroppings. Roosts in rock crevices and caves during the day; may also	No Potential. No suitable roosting habitat documented onsite.

Species Name (*Scientific Name*) Status	**Habitat Description**	**Comments**
	roost in buildings or under roof tiles (Ziener et al. 1988-1990).	
Big free-tailed bat (*Nyctinomops macrotis*) SSC	Desert habitats. Roosts in rock crevices in cliffs	No Potential. No suitable roosting habitat documented onsite.
Townsend's big-eared bat (*Corynorhinus townsendii*) SSC	A wide variety of habitats including woodlands and arid grasslands. Roosts in mines and caves.	No Potential. No suitable roosting habitat documented within Project Site.
Dulzura kangaroo rat (*Dipodomys simulans*) MSHCP Covered Species	The Dulzura kangaroo rat occurs throughout the Plan Area in coastal sage scrub (including Diegan and Riversidean upland sage scrubs and alluvial fan sage scrub), sage scrub/grassland ecotones, chaparral, and desert scrubs at all elevations up to 2,600 feet (MSHCP 2004)	Low Potential. The California buckwheat scrub and adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels provides suitable habitat for the species.
San Diego desert woodrat (*Neotoma lepida intermedia*) SSC MSHCP Covered Species	The San Diego desert woodrat is found throughout the Plan Area in sage scrub and chaparral wherever there are rock outcrops, boulders, cactus patches and dense undergrowth (MSHCP 2004).	No Potential. No suitable habitat or nests documented onsite.
Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) SSC MSHCP Covered Species	The Los Angeles pocket mouse appears to be limited to sparsely vegetated habitat areas in patches of fine sandy soils associated with washes or of aeolian (windblown) origin, such as dunes (MSHCP 2004)	Low Potential. The California buckwheat scrub and adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels provides suitable habitat for the species.
American badger (*Taxidea taxus*) SSC	The American badger prefers friable soils in open grassland and scrub habitat in southern California.	No Potential. No burrows documented onsite.

Species Name (*Scientific Name*) Status	Habitat Description	Comments
Federal (USFWS) Protection and Classification FE – Federally Endangered FT – Federally Threatened FC – Federal Candidate for Listing **State (CDFW) Protection and Classification** SE – State Endangered SCE – State Candidate Endangered ST – State Threatened SSC – State Species of Special Concern CWL – California Watch List SPF – State Fully Protected		

Sources: Cadre Environmental 2024.

Critical habitat designations by the USFWS were researched to determine if any of the Project Site is located within USFWS critical habitat. The Project Site does not occur within a designated critical habitat for federally endangered or threatened species.

REGIONAL CONNECTIVITY/WILDLIFE MOVEMENT CORRIDORS

Overview

Wildlife corridors link areas of suitable habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because they prohibit the infusion of new individuals and genetic information (MacArthur and Wilson 1967; Soule 1987; Harris and Gallager 1989; Bennett 1990). Corridors effectively act as links between different populations of a species. A group of smaller populations (termed "demes") linked together via a system of corridors is termed a "metapopulation." The long-term health of each deme within the metapopulation is dependent upon its size and the frequency of interchange of individuals (immigration vs. emigration). The smaller the deme, the more important immigration becomes, because prolonged inbreeding with the same individuals can reduce genetic variability. Immigrant individuals that move into the deme from adjoining demes mate with individuals and supply that deme with new genes and gene combinations that increases overall genetic diversity. An increase in a population's genetic variability is generally associated with an increase in a population's health. Corridors mitigate the effects of habitat fragmentation by:

(1) allowing animals to move between remaining habitats, which allows depleted populations to be replenished and promotes genetic diversity;
(2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events (such as fires or disease) will result in population or local species extinction; and
(3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, mates, and other needs (Noss 1983; Fahrig and Merriam 1985; Simberloff and Cox 1987; Harris and Gallagher 1989).

Wildlife movement activities usually fall into one of three movement categories: (1) dispersal (e.g., juvenile animals from natal areas, individuals extending range distributions); (2) seasonal migration; and (3) movements related to home range activities (foraging for food or water, defending territories, searching for mates, breeding areas, or cover). A number of terms have been used in various wildlife movement studies, such as "wildlife corridor", "travel route", "habitat linkage", and "wildlife crossing" to refer to areas in which wildlife moves from one area to another. To clarify the meaning of these terms and facilitate the discussion on wildlife movement in this study, these terms are defined as follows:

Travel Route: A landscape feature (such as a ridge line, drainage, canyon, or riparian strip) within a larger natural habitat area that is used frequently by animals to facilitate movement and provide access to necessary resources (e.g., water, food, cover, den sites). The travel route is generally preferred because it provides the least amount of topographic resistance in moving from one area to another; it contains adequate food, water, and/or cover while moving between habitat areas; and provides a relatively direct link between target habitat areas.

Wildlife Corridor: A piece of habitat, usually linear in nature, that connects two or more habitat patches that would otherwise be fragmented or isolated from one another. Wildlife corridors are usually bounded by urban land areas or other areas unsuitable for wildlife. The corridor generally contains suitable cover, food, and/or water to support species and facilitate movement while in the corridor. Larger, landscape-level corridors (often referred to as "habitat or landscape linkages") can provide both transitory and resident habitat for a variety of species.

Wildlife Crossing: A small, narrow area, relatively short in length and generally constricted in nature, that allows wildlife to pass under or through an obstacle or barrier that otherwise hinders or prevents movement. Crossings typically are manmade and include culverts, underpasses, drainage pipes, and tunnels to provide access across or under roads, highways, pipelines, or other physical obstacles. These are often "choke points" along a movement corridor.

Wildlife Movement within Project Site

The Project Site is not located within or adjacent to an MSHCP designated core, extension of existing core, non-contiguous habitat block, constrained linkage, or linkage area. However, the adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels are located within Public/Quasi-Public (PQP) conserved land (Riverside County Flood Control & Conservation District). Tucalota Creek and Santa Gertrudis Creek Channels also provide refugia and movement routes for wildlife extending northwest toward preserved lands (Johnson Ranch and Southwestern Riverside Multi-Species Reserve) and southwest toward Murrieta Creek. Therefore, proposed development located adjacent to reaches of Tucalota Creek and Santa Gertrudis Creek Channels will be required to comply with all MSHCP urban/wildlands interface guidelines presented in Section 6.1.4 and the fuels management guidelines presented in Section 6.4, as applicable.

Figure 10 - Sensitive Species Observation Map
Biological Resources Technical Report
Sage Temecula Senior Apartments

● Least Bell's Vireo (*Vireo bellii pusillus*) FE/SE (Cadre Environmental 2024)

CADRE Environmental

1 inch = 80 feet

LOCAL/MSHCP COMPLIANCE ANALYSIS

Western Riverside County Multiple Species Habitat Conservation Plan Compliance Analysis

The proposed Project Site is located completely within the MSHCP, which is a comprehensive multi-jurisdictional effort that includes western Riverside County and eighteen (18) cities including the City of Temecula. Rather than addressing sensitive species on an individual basis, the MSHCP focuses on conservation of 146 species, including those listed at the federal and state levels and those that could become listed in the future. The MSHCP proposed a reserve system of approximate 500,000 acres, of which 347,000 acres are currently within public ownership and 153,000 acres will need to be assembled from lands currently in private ownership. The MHSCP allows the County and other permittees to issue take permits for listed species so that applicants do not need to receive endangered species incidental take authorization from the USFWS and CDFW.

On June 7th, 2003, the County Board of Supervisors adopted the MSHCP, certified the Environmental Impact Report/Environmental Impact Statement, and authorized the Chairman to sign the Implementing Agreement with the respective wildlife agencies. The Incidental Take Permit was issued by the wildlife agencies on June 22nd, 2004. The City of Temecula is a Permittee under the MSHCP.

MSHCP Reserve Design & Criteria Area Objectives

Regions of the MHSCP have been organized into Area Plans that generally coincide with logical political boundaries, including city limits or long-standing unincorporated communities.

The Temecula Sage Senior Apartments project is located within the Southwest Area Plan. The Southwest Area Plan has a target conservation acreage of 58,295 – 72,155 acres; it is composed of approximately 35,795-acres of existing Public/Quasi-Public Lands and 22,500 – 36,360 acres of Additional Reserve Lands. The target acreage range within the City of Temecula is 600 – 1,380 acres. (MSHCP 2004).

The Project Site is not located within an MSHCP Criteria Area Cell or Cell Group. Therefore, no Habitat Evaluation and Acquisition Negotiation Strategy (HANS) or Joint Project Review (JPR) are required.

MSHCP Sensitive Species Surveys

The Project Site is not located within an MSHCP Narrow Endemic Plant Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.1.3.

The Project Site is not located within an MSHCP Criteria Area Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.3.2.

The Project Site is not located within an MSHCP Amphibian Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.3.2.

The Project Site is not located within an MSHCP Mammal Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.3.2.

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within and adjacent to the property including foraging habitat documented throughout the lowland regions. Based on the presence of suitable habitat, focused MSHCP burrowing owl surveys were conducted by Helix Environmental Planning, Inc. on May 11th, 26th, July 14th, and August 10th, 2022. No burrowing owl or characteristic sign were detected during the focused surveys. In addition to conducting focused surveys, an MSHCP preconstruction survey will be required at least 30-days immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP.

No burrowing owls were detected onsite during the spring 2022 focused surveys. If burrowing owl are detected during the 30-day preconstruction survey, a burrowing owl relocation plan will be developed for the passive/active translocation of individuals as directed by the City of Temecula and MSHCP wildlife agencies. Following completion of the burrowing owl preconstruction survey, and compliance with MSHCP species guidelines, if detected, the project will be consistent with MSHCP Section 6.3.2.

MSHCP Riparian, Riverine, Vernal Pool Resources (Section 6.1.2)

Regulated activities within inland streams, wetlands and riparian areas in Western Riverside County California fall under the jurisdiction of the MSHCP. The MSHCP requires, among other things, assessments for riparian/riverine and vernal pool resources. As projects are proposed within the MSHCP Plan Area, an assessment of the potentially significant effects of those projects on riparian/riverine areas, and vernal pools are required, as currently mandated by CEQA, using available information augmented by project-specific mapping provided to and reviewed by the permittee's biologist(s). Riparian/riverine areas and vernal pools are defined for this section as follows in accordance with Section 6.1.2, Vol. I, of the Final MSHCP Plan:

> "*Riparian/Riverine Areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year*." (MSHCP 2004)

It is assumed the first part of the definition defines riparian habitat, and the second part defines riverine areas. Vernal pools are defined as:

> "…*seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season, while upland species (annuals) may be dominant during the drier portion of the growing season*". (MSHCP 2004)

No Section 6.1.2 riparian scrub, forest or woodland habitat is located within the Project Site. A single MSHCP covered species, Least Bell's was documented vocalizing within the riparian forest habitat located immediately southeast of the Project Site within Tucalota Creek as shown in Figure 10, *Sensitive Species Observation Map*. The species is also expected to utilize the riparian scrub and forest habitat within the adjacent reaches of Tucalota Creek Channel and Santa Gertrudis Creek Channel for breeding and foraging. The riparian forest located within the adjacent channels also represents suitable habitat for the southwestern willow flycatcher and western yellow-billed cuckoo. No direct impacts are proposed within Tucalota Creek Channel or Santa Gertrudis Creek Channel where suitable habitat was documented for sensitive riparian bird species. To ensure the proposed project does not result in indirect impacts to sensitive riparian bird species, compliance with all MSHCP urban/wildlands interface guidelines presented in Section 6.1.4 will be implemented. Following implementation of urban/wildlands interface guidelines the project will be consistent with MSHCP Section 6.1.2.

No evidence of vernal pools, seasonal depressions, seasonally inundated road ruts or other wetland features were recorded on the Project Site. Vernal pools are depressions in areas where a hard-underground layer prevents rainwater from draining downward into the subsoils. When rain fills the pools in the winter and spring, the water collects and remains in the depressions. In the springtime, the water gradually evaporates away, until the pools became completely dry in the summer and fall. Vernal pools tend to have an impermeable layer that results in ponded water. The soil texture (the amount of sand, silt, and clay particles) typically contains higher amounts of fine silts and clays with lower percolation rates. Pools that retain water for a sufficient length of time will develop hydric cells. Hydric cells form when the soil is saturated from flooding for extended periods of time and anaerobic conditions (lacking oxygen or air) develop.

Consistent with conditions documented onsite and as previously stated, the Project Site is characterized as Hanford course sandy loam, Ramona very fine sandy loam, and Riverwash – all possessing well drained substrates (drainage class). No indication of clay substrates or hydric soils were documented within the Project Site. A review of historic aerials was conducted to determine if inundated features were present during years of high rainfall when features would certainly be documented. Historic aerials taken in 2011 and 2023 represent an ideal baseline during which known (previously documented) inundated vernal pools, seasonal depressions and road ruts can easily be seen. No sign or indication of inundation was documented within the Project Site during a review of historic aerials. In summary, none of the conditions (i.e., no inundated

depressions including road ruts, hydric soils, historic inundation, etc.) were observed or documented within the Project Site. No features are present that would support fairy shrimp. No standing water or other sign of areas that pond water was recorded. The project is consistent with MSHCP Section 6.1.2.

A total of an approximately 0.003-acre (130 linear feet) drainage ditch bisects the northern region of the Project Site and represents an MSHCP Section 6.1.2 riverine resource, as shown in Figure 9, *Jurisdictional Resources Map*. This region of the Project Site including regulated feature is located within an area proposed as designated open space. No direct impacts are proposed within the designated open space. The project is consistent with MSHCP Section 6.1.2.

The proposed project will not impact Section 6.1.2 riparian, riverine or vernal pool resources or section 6.3.2 species. A Determination of Biologically Equivalent or Superior. Preservation (DBESP) is not required.

MSHCP Urban/Wildlands Interface Guidelines

The MSHCP Urban/Wildlands Interface guidelines presented in Section 6.1.4 are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to an MSHCP Conservation Area.

The adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels are located within PQP conserved land (Riverside County Flood Control & Conservation District). Tucalota Creek and Santa Gertrudis Creek Channels also provide refugia and movement routes for wildlife extending northwest toward preserved lands (Johnson Ranch and Southwestern Riverside Multi-Species Reserve) and southwest toward Murrieta Creek. Therefore, proposed development located adjacent to reaches of Tucalota Creek and Santa Gertrudis Creek Channels will be required to comply with all MSHCP urban/wildlands interface guidelines presented in Section 6.1.4, as applicable.

MSHCP Fuels Management Guidelines

The fuels management guidelines presented in Section 6.4 of the MSHCP are intended to address brush management activities around new development within or adjacent to MSHCP Conservation Areas.

The adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels are located within PQP conserved land (Riverside County Flood Control & Conservation District). Tucalota Creek and Santa Gertrudis Creek Channels also provide refugia and movement routes for wildlife extending northwest toward preserved lands (Johnson Ranch and Southwestern Riverside Multi-Species Reserve) and southwest toward Murrieta Creek. Therefore, proposed development located adjacent to reaches of Tucalota Creek and Santa Gertrudis Creek Channels will be required to comply with all fuels management guidelines presented in Section 6.4, as applicable.

City of Temecula (MSHCP Local Development Mitigation Fee)

Prior to issuance of a building permit, the project applicant shall pay MSHCP Local Development Mitigation fees as established by the RCA and implemented by the City of Temecula (Temecula Municipal Code Chapter 15.10). Five categories of the fee are defined and include: Residential, density less than 8.0 dwelling units per acre $4,358 per dwelling unit; Residential, density between 8.1 and 14.0 dwelling units per acre $1.817 per dwelling unit; Residential, density greater than 14.1 dwelling units per acre $803 per dwelling unit; Commercial $19,615 per acre; and Industrial $19,615 per acre. These fees are adjusted annually.

Stephens' Kangaroo Rat Fee

At the time of permit issuance, a fee of $500 per acre is due for all new development. Single-family residences where lots sizes are greater than ½ acre will only be subject to a flat fee of $500 per unit. Non-profit entities reduced by 75% as defined in 26 U.S.C. section 501 (c) (3).

City of Temecula General Plan – Open Space/Conservation Element

Goal 3: Conservation of important biological habitats and protection of plant and animal species of concern, wildlife movement corridors, and general biodiversity.

Policy 3.1: Require development proposals to identify significant biological resources and provide mitigation, including the use of adequate buffering and sensitive site planning techniques, selective preservation, provision of replacement habitats; and other appropriate measures.

The following biological resources technical report has been prepared to ensure compliance with CEQA and MSHCP requirements including but not limited to the protection and avoidance of sensitive resources and implementation of mitigation measures to reduce potential edge effects of development adjacent to Tucalota Creek and Santa Gertrudis Creek Channels. No direct impacts to Tucalota Creek and Santa Gertrudis Creek Channels are proposed.

Policy 3.2: Work with State, regional and non-profit agencies and organizations to preserve and enhance significant biological resources.

No direct impacts to Tucalota Creek and Santa Gertrudis Creek Channels are proposed.

Policy 3.3: Coordinate with the County of Riverside and other relevant agencies in the adoption and implementation of the Riverside County Multi-Species Habitat Conservation Plan.

The Temecula Sage Senior Apartments project is located within the Southwest Area Plan. The Southwest Area Plan has a target conservation acreage of 58,295 – 72,155 acres; it is composed of approximately 35,795-acres of existing PQP Lands and 22,500 – 36,360 acres of Additional Reserve Lands. The target acreage range within the City of Temecula

is 600 – 1,380 acres. (MSHCP 2004). The Project Site is not located within an MSHCP Criteria Area Cell or Cell Group. Therefore, no HANS or JPR are required.

The proposed project will not impact Section 6.1.2 riparian, riverine or vernal pool resources, or section 6.3.2 species. A Determination of Biologically Equivalent or Superior. Preservation (DBESP) is not required.

Policy 3.4: Encourage developers to incorporate native drought-resistant vegetation, mature trees, and other significant vegetation into site and landscape designs for proposed projects.

As part of the Development Plan entitlement process a Conceptual Landscape plan has been submitted and will be approved as part of the entitlement process. Construction Landscape Plans will then be submitted, reviewed, and approved prior to building permit issuance.

Policy 3.5: Maintain an inventory of existing natural resources in the City.

The following biological resources technical report includes a comprehensive assessment of natural resources documented within the Project Site.

Policy 3.6: Limit recreational use of designated open space areas where there are sensitive biological resources as needed to protect these resources.

The proposed project will include fencing to prevent access to the northern proposed open space and southern region of the Project Site located within the floodprone area of Tucalota Creek and Santa Gertrudis Creek Channels.

Policy 3.7: Maintain and enhance the resources of Temecula Creek, Pechanga Creek, Murrieta Creek, Santa Gertrudis Creek, Santa Margarita River, and other waterways to the ensure the long-term viability of the habitat, wildlife, and wildlife movement corridors.

The proposed project will include fencing to prevent access to the northern proposed open space and floodprone area of Tucalota Creek and Santa Gertrudis Creek Channels. Proposed development located adjacent to reaches of Tucalota Creek and Santa Gertrudis Creek Channels will be required to comply with all MSHCP urban/wildlands interface guidelines presented in Section 6.1.4, as applicable.

City of Temecula Municipal Code

No trees meeting the City of Temecula tree removal ordinance as outlined in Municipal Code Chapter 8.49, City Tree Care and Preservation and Urban Forest Management Plan are located within or adjacent to the Project Site impact area. No impact.

FEDERAL

Federal Endangered Species Act

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the FESA of 1973, allowing participating jurisdictions to authorize "*take*" of plant and wildlife species. The MSHCP has been issued under this Section and provides incidental take for all covered species.

Clean Water Act

The Clean Water Act, Section 401 provides guidance for the restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters. Section 401 requires a project operator to obtain a federal license or permit that allows activities resulting in a discharge to waters of the United States to obtain state certification, thereby ensuring that the discharge will comply with provisions of the CWA. The Regional Water Quality Control Board administers the certification program in California. Section 404 establishes a permit program administered by the USACE that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. The USACE implementing regulations are found at 33 CFR 320 and 330. Guidelines for implementation are referred to as the Section 404(b)(1) Guidelines, which were developed by the United States Environmental Protection Agency in conjunction with the USACE (40 CFR 230). The guidelines allow the discharge of dredged or fill material into the aquatic system only if there is no practicable alternative that would have less adverse impacts.

Wetland Definition Pursuant to Section 404 of the Clean Water Act

Aquatic resources, including riparian areas, wetlands, and certain aquatic vegetation communities, are considered sensitive biological resources and fall under the jurisdiction of several regulatory agencies. The USACE exerts jurisdiction over waters of the United States, including all waters that are subject to the ebb and flow of the tide; wetlands and other waters such as lakes, rivers, streams (including intermittent or ephemeral streams), mudflats, sandflats, sloughs, prairie potholes, vernal pools, wet meadows, playa lakes, or natural ponds; and tributaries of the above features. The extent of waters of the United States is generally defined as the portion that falls within the limits of the OHWM. The OHWM is defined as the "line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

On April 21, 2020 the U.S. Environmental Protection Agency (EPA) and the USACE published the Navigable Waters Protection Rule to define "Waters of the United States" in the Federal Register. The April 2020 definition includes four simple categories of jurisdictional waters, including: (1) the territorial seas and traditional navigable waters; (2) perennial and intermittent tributaries to those waters; (3) certain lakes, ponds and impoundments; and (4) wetlands adjacent to jurisdictional waters.

The April 2020 definition provides clear exclusions for many water features that traditionally have been regulated, such as ephemeral drainages. The April 2020 definition has been formally adopted by EPA and the USACE and was used for this Jurisdictional Delineation.

Wetlands, including swamps, bogs, seasonal wetlands, seeps, marshes, and similar areas, are defined by USACE as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3[b]; 40 CFR 230.3[t]). Indicators of three wetland parameters (i.e., hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by field investigation, must be present for a site to be classified as a wetland by USACE (USACE 1987).

It is important to note that the RWQCB definition of wetland was redefined and the new definition went into effect May 28th, 2020. The definition of a wetland is as follows: An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area’s vegetation is dominated by hydrophytes or the area lacks vegetation. This RWQCB modified three-parameter definition is similar to the federal definition in that it identifies three wetland characteristics that determine the presence of a wetland: wetland hydrology, hydric soils, and hydrophytic vegetation. Unlike the federal definition, however, the RWQCB wetland definition allows for the presence of hydric substrates as a criterion for wetland identification (not just wetland soils) and wetland hydrology for an area devoid of vegetation (less than 5% cover) to be considered a wetland.

However, if any vegetation is present, then the USACE delineation procedures would apply to the vegetated component (i.e., hydrophytes must dominate). Examples of waters that would be considered wetlands by the RWQCB definition, but not by the federal wetland definition, are non-vegetated wetlands, or wetlands characterized by exposed bare substrates like mudflats and playas, as long as they meet the three-parameters as described in the RWQCB definition. It is important to note that while the USACE may not designate a feature as a wetland, that feature could be considered a special aquatic site or other water of the U.S. by the USACE and potentially subject to USACE jurisdiction.

Migratory Bird Treaty and Bald and Golden Eagle Protection Acts

Migratory birds including resident raptors and passerines are protected under the federal MBTA. The MBTA of 1918 implemented the 1916 convention between the United States and Great Britain for the protection of birds migrating between the U.S. and Canada. Similar conventions between the United States and Mexico (1936), Japan (1972) and the Union of Soviet Socialists Republics (1976) further expanded the scope of international protection of migratory birds. Each new treaty has been incorporated into the MBTA as an amendment and the provisions of the new treaty are implemented domestically. These four treaties and their enabling legislation, the MBTA, established Federal responsibilities for the protection of nearly all species of birds, their eggs and nests. The MBTA made it illegal for people to "take" migratory birds, their eggs, feathers or nests. Take is defined

in the MBTA to include by any means or in any manner, any attempt at hunting, pursuing, wounding, killing, possessing or transporting any migratory bird, nest, egg, or part thereof. The Bald and Golden Eagle Protection Act affords additional protection to all bald and golden eagles.

STATE

California Endangered Species Act

The CESA is similar to FESA in that it contains a process for listing of species regulating potential impacts to listed species. Section 2081 of the CESA authorizes the CDFW to enter into a memorandum of agreement for take of listed species for scientific, educational, or management purposes. The MSHCP serves as an HCP pursuant the Natural Communities Conservation Plan (NCCP) under the NCCP Act of 2001, allowing participating jurisdictions to authorize "*Take*" of plant and wildlife species.

As stated by CDFW:

> "*On June 22, 2004, the Department issued NCCP Approval and Take Authorization for the Western Riverside County MSCHP per Section 2800 et seq. of the California Fish and Game Code. The MSHCP establishes a multiple species conservation program to minimize and mitigate habitat loss and the incidental take of covered species in association with activities covered under the permit*." (CDFG 2004)

California Fish and Game Code 3503 and 3513

As stated by CDFW:

> "*CHAPTER 1. General Provisions [3500 - 3516] (Chapter 1 enacted by Stats. 1957, Ch. 456.) It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. (Amended by Stats. 1971, Ch. 1470.)"*

Native Plant Protection Act

The Native Plant Protection Act (NPPA) enacted a process by which plants are listed as rare or endangered. The NPPA regulates collection, transport, and commerce in plants that are listed. The CESA follows the NPPA and covers both plants and wildlife determined to be threatened with extinction or endangered. Plants listed as rare under the NPPA are designated as threated under the CESA. No plants listed under the CESA occur on the Project Site.

Regional Water Quality Control Board

The RWQCB also has jurisdiction over waters deemed "isolated" or not subject to Section 404 jurisdiction under the Solid Waste Agency of Northern Cook County v. Corps decision. Dredging, filling, or excavation of isolated waters constitutes a discharge of

waste to waters of the state and prospective dischargers are required to obtain authorization through an Order of Waste Discharge Requirements (WDR) or waiver thereof from the RWQCB and comply with other requirements of Porter-Cologne Act.

Under Section 401 of the CWA, the local RWQCB must certify that actions receiving authorization under Section 404 of the CWA also meet state water quality standards. The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net loss of wetland acreage or a net loss of wetland function and values. Compensatory mitigation for impacts to wetlands and/or waters of the state is required.

CDFW Streambed Alteration Agreement

Waters of the State are regulated by the California Department of Fish and Wildlife (CDFW) through Section 1600 et seq. of the California Fish and Game Code. Section 1600 et seq. requires notifying the CDFW prior to any project activity that might (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. If, after this notification, the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement (SAA) will need to be obtained. CDFW may then place conditions in the Section 1602 Streambed Alteration Agreement to avoid, minimize, and mitigate any potentially significant adverse impacts within CDFW jurisdictional limits.

The limits of Waters of the State are defined as the “body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation." Therefore, the limits extend from the channel bed to the top of the bank, with the addition of the canopy of any riparian habitat associated with the watercourse.

ENVIRONMENTAL IMPACTS

The following sections include an analysis of the direct impacts, indirect impacts, and cumulative effects of the proposed action on sensitive biological resources. This analysis characterizes the project related activities that are anticipated to adversely impact the species, and when feasible, quantifies such impacts. Direct effects are defined as actions that may cause an immediate effect on the species or its habitat, including the effects of interrelated actions and interdependent actions. Indirect effects are caused by or result from the proposed actions, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the proposed action.

Cumulative impacts refer to incremental, individual environmental effects of two or more projects when considered together. These impacts taken individually may be minor but may be collectively significant. Cumulative effects include future tribal, local, or private actions that are reasonably certain to occur in the proposal vicinity considered in this

report. A cumulative impact to biological resources may occur if a project has the potential to collectively degrade the quality of the environment, substantially reduce the habitat of wildlife species or cause a population to drop below self-sustaining levels, thereby threatening to eliminate a plant or animal community, or reduce the number or restrict the range of a rare or endangered plant or animal species.

THRESHOLD OF SIGNIFICANCE

The environmental impacts relative to biological resources are assessed using impact significance criteria which mirror the policy statement contained in the CEQA at Section 21001 (c) of the Public Resources Code. This section reflects that the legislature has established it to be the policy of the state to:

> "*Prevent the elimination of fish and wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities*…"

The following definitions apply to the significance criteria for biological resources:

- "*Endangered*" means that the species is listed as endangered under state or federal law.

- "*Threatened*" means that the species is listed as threatened under state or federal law.

- "*Rare*" means that the species exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens.

- "*Region*" refers to the area within southern California that is within the range of the individual species.

- "*Sensitive habitat*" refers to habitat for plants and animals (1) which plays a special role in perpetuating species utilizing the habitat on the property, and (2) without which there would be substantial danger that the population of that species would drop below self-perpetuating levels.

- "*Substantial effect*" means significance loss or harm of a magnitude which, based on current scientific data and knowledge, (1) would cause a species or a native plant or animal community to drop below self-perpetuating levels on a statewide or regional basis or (2) would cause a species to become threatened or endangered.

Impacts to biological resources may result in a significant adverse impact if one or more of the following conditions would result from implementation of the proposed project.

- Have a substantial adverse effect, either directly or through habitat modification, on any endangered, or threatened species, as listed in Tittle 14 of the California Code of Regulations (Sections 670.2 or 670.5) or Title 50, Code of Federal Regulations (Sections 17.11 or 17.12).

- Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS, and meets the definition of Section 15380 (b), (c), or (d) of the CEQA Guidelines.

- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS.

- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

- Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident migratory wildlife corridors, or impede the use of native nursery sites.

- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

- Conflict with the provisions of an adopted HCP, NCCP, or other approved local, regional, or state conservation plan.

Also, the determination of impacts has been made according to the federal definition of "*take*". The federal FESA prohibits the "*taking*" of a member of an endangered or threatened wildlife species or removing, damaging, or destroying a listed plant species by any person (including private individuals and private or government entities). The FESA defines "*take*" as "*to harass, harm, pursue, hunt, shoot, would, kill, trap, capture or collect*" an endangered or threatened species, or to attempt to engage in these activities. Specifically, the biological resources assessment report addresses the following CEQA Environmental Checklist items.

Environmental Issues	**Potentially Significant Impact**	**Less than Significant with Mitigation**	**Less than Significant Impact**	**No Impact**
Would the Project:				
a) Have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		**X**		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the				**X**

Environmental Issues	Potentially Significant Impact	Less than Significant with Mitigation	Less than Significant Impact	No Impact
California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				**X**
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			**X**	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				**X**
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Native Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?		**X**		

DIRECT IMPACTS

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?

Sensitive Plants

The Project Site is not located within an MSHCP Narrow Endemic Plant Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.1.3. No Impact.

The Project Site is not located within an MSHCP Criteria Area Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.3.2. . No Impact.

No state or federally listed threatened or endangered plant species were documented or expected to occur onsite based on a lack of suitable habitat, as outlined in Table 2, *Sensitive Plant Species with Potential to Occur Onsite*.

Suitable habitat was documented onsite for one (1) CNPS special-status plant not covered under the MSHCP including chaparral sand-verbena, as outlined in Table 2,

Sensitive Plant Species with Potential to Occur Onsite. However, the species was not detected onsite during the habitat assessment. The species would have been expected to have been detectable during the time of the habitat assessment and is assumed absent. No Impact.

Low potential habitat was documented onsite for two (2) MSHCP covered species including intermediate mariposa lily and Parry's spineflower as outlined in Table 2, *Sensitive Floral Species with Potential to Occur Onsite*. However, the species were not detected onsite during the habitat assessment. These species would have been expected to have been detectable during the time of the habitat assessment and are assumed absent. As previously stated, the MSHCP has determined that these sensitive species potentially occurring within Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). Potential impacts to MSHCP Covered sensitive plant species will be mitigated following payment of the MSHCP Local Development Mitigation Fee (**BIO-CM1** MSHCP Local Development Mitigation Fee). Less than Significant Impact with Mitigation.

Sensitive Wildlife

No vernal pools, depressions or inundated features are present that would support sensitive fairy shrimp. No Impact.

Suitable low-quality habitat was documented onsite for one (1) special-status invertebrate species not covered under the MSHCP including Crotch's bumble bee, SCE, as outlined in Table 3, *Sensitive Wildlife Species with Potential to Occur Onsite*. No bumble bees were documented onsite during the general habitat assessment survey conducted on May 10th, 2024. However, suitable scattered foraging habitat for the Crotch's bumble bee is present. Burrows representing suitable nesting resources were also documented throughout the Project Site. Scattered plant species in the genera of several food resources documented to be utilized by Crotch's bumble bee were documented within the Project Site including *Eriogonum, Acmispon*, and *Vicia*. Although the species was not covered during the initial adoption of the MSHCP, the purpose and intent of the MSHCP Local Development Mitigation Fee (LDMF) includes acquiring and preserving vegetation communities and natural areas within the City/County and the region which are known to support threatened, endangered, or key sensitive populations of plant and wildlife species. Payment of the fee would contribute to the acquisition of higher quality habitat than those currently present onsite for the species. Potential impacts to low quality habitat including scattered food resources will be mitigated following payment of the MSHCP LDMF (**BIO-CM1** MSHCP Local Development Mitigation Fee). Less than Significant Impact with Mitigation.

The Project Site is not located within an MSHCP Amphibian Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2023). The project is consistent with MSHCP Section 6.3.2. No Impact.

The Project Site occurs completely within a predetermined Survey Area for the burrowing owl. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented within and adjacent to the property including foraging habitat documented throughout the lowland regions. Based on the presence of suitable habitat, focused

MSHCP burrowing owl surveys were conducted by Helix Environmental Planning, Inc. on May 11th, 26th, July 14th, and August 10th, 2022. No burrowing owl or characteristic sign were detected during the focused surveys. An MSHCP preconstruction survey will be required at least 30-days immediately prior to the initiation of construction to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. Following completion of the 30-day preconstruction surveys and compliance with MSHCP conservation goals for the target species, the project will be consistent with MSHCP Section 6.3.2 (**BIO-CM2** MSHCP Burrowing Owl 30-Day Preconstruction Surveys). Less than Significant Impact.

Section 6.1.2 riparian scrub, forest or woodland habitat is located adjacent to the southern region of the Project Site within Tucalota Creek and Santa Gertrudis Creek Channels. A single MSHCP Covered species, Least Bell's vireo was documented vocalizing within the riparian forest habitat located immediately southeast of the Project Site as shown in Figure 10, *Sensitive Species Observation Map*. The riparian forest located within the adjacent channels also represents suitable habitat for the southwestern willow flycatcher and western yellow-billed cuckoo. No direct impacts are proposed within Tucalota Creek Channel or Santa Gertrudis Creek Channel where suitable and occupied least Bell's vireo habitat was documented. To ensure the proposed project does not result in indirect impacts to least Bell's vireo or other potential sensitive riparian bird species, compliance with all MSHCP urban/wildlands interface guidelines presented in Section 6.1.4 will be implemented. Following implementation of urban/wildlands interface guidelines, **BIO-CM3** Least Bell's Vireo Avoidance Measures, and **BIO-CM4**: Nesting Bird Preconstruction Surveys, the project will be consistent with MSHCP Section 6.1.2. No Impact.

The Project Site is not located within an MSHCP Mammal Species Survey Area; therefore, no surveys are required (RCA GIS Data Downloads 2024). The project is consistent with MSHCP Section 6.3.2.

The Project Site falls within the SKR Fee Area outlined in the Riverside County SKR HCP. The project applicant shall pay the fees pursuant to County Ordinance 663.10 for the SKR HCP Fee Assessment Area as established and implemented by the County of Riverside (**BIO-CM5** SKR Fee).

High to low potential habitat was documented within and adjacent to the Project Site for nineteen (19) MSHCP covered species including Cooper's hawk, sharp-shinned hawk, California horned lark, orange-throated whiptail, coastal western whiptail, coast horned lizard, white-tailed kite, yellow-breasted chat, yellow warbler, southern California rufous-crowned sparrow, grasshopper sparrow, northern harrier, western yellow-billed cuckoo, southwestern willow flycatcher, coastal California gnatcatcher, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, Dulzura kangaroo rat, and Los Angeles pocket mouse, as outlined in Table 3, *Sensitive Wildlife Species with Potential to Occur Onsite*. As previously stated, the MSHCP has determined that these sensitive species potentially occurring within Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). Potential impacts to MSHCP Covered sensitive wildlife species will be mitigated following payment of the MSHCP LDMF (**BIO-CM1** MSHCP Local Development Mitigation Fee). Less than Significant Impact with Mitigation.

The Project Site possess vegetation expected to provide nesting habitat for migratory birds protected under the MBTA and CDFG Code Section 3503, 3503.5, and 3513. Measures for potential direct/indirect impacts to common and sensitive bird and raptor species will require compliance with the MBTA and CDFG Code Section 3503, 3503.5, and 3513. Construction outside the nesting season (between September 1st and January 31st) does not require preconstruction nesting bird surveys. However, if construction is proposed between February 1st and August 31st, a qualified biologist will conduct a preconstruction nesting bird and raptor survey(s) no more than three (3) days prior to initiation of grading to document the presence or absence of nesting birds within or directly adjacent to the Project Site. Loss of an active nest would be considered a potentially significant impact. Impacts to nesting birds would be reduced to less than significant with the implementation of Conservation Measure **BIO-CM4**: Nesting Bird Preconstruction Surveys. Less than Significant Impact with Mitigation.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS?

A total of 5.66-acres of non-native grassland/ruderal, California buckwheat scrub, disturbed/developed, ornamental and Tamarisk scrub vegetation communities will be directly impacted as a result of project implementation as summarized in Table 4, *Vegetation Community Impacts,* and illustrated on Figure 11*, Vegetation Communities Impact Map*. No impacts to sensitive vegetation will occur as a result of the proposed project. Compliance with the City of Temecula MSHCP LDMF (Condition of Approval) would ensure direct impacts to all vegetation communities will remain consistent with MSHCP guidelines, **BIO-CM1** MSHCP Local Development Mitigation Fee.

Table 4.
Project Site Vegetation Community Impacts

Vegetation Type	Acres onsite	Acres onsite impacts	Acres onsite open space north
Non-native Grassland/Ruderal	3.83	3.65	0.18
California Buckwheat Scrub	1.85	1.81	0.04
Disturbed	0.12	0.12	--
Ornamental	0.06	0.06	--
Cottonwood (Individual Tree)	0.05	--	0.05
Tamarisk Scrub	0.02	0.02	--
TOTAL	**5.93**	**5.66**	**0.27**

Source: Cadre Environmental 2024.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

A total of an approximately 0.003-acre (130 linear feet) drainage ditch bisects the northern region of the Project Site and represents a non-wetland CDFW riverine and RWQCB regulated resource. No direct impacts are proposed within the northern region of the

Project Site proposed as designated open space, as shown in Figure 12, *Jurisdictional Resources Impact Map*. No Impact.

The project will comply with all applicable water quality regulations, including complying with a NPDES regulations and Municipal Separate Storm Sewer System (MS4) Permit requirements issued by the San Diego Regional Water Quality Control Board. The MS4 permit places pollution prevention requirements on planned developments, construction sites, commercial and industrial businesses, municipal facilities and activities, and residential communities. Both of these permits include the treatment of all surface runoff from paved and developed areas, the implementation of applicable Best Management Practices (BMPs) during construction activities and the installation and proper maintenance of structural BMPs to ensure adequate long-term treatment of water before entering into any stream course or municipal system.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The adjacent reaches of Tucalota Creek and Santa Gertrudis Creek Channels are located within PQP conserved land (Riverside County Flood Control & Conservation District). Tucalota Creek and Santa Gertrudis Creek Channels also provide refugia and movement routes for wildlife extending northwest toward preserved lands (Johnson Ranch and Southwestern Riverside Multi-Species Reserve) and southwest toward Murrieta Creek. Therefore, proposed development located adjacent to reaches of Tucalota Creek and Santa Gertrudis Creek Channels will be required to comply with all MSHCP urban/wildlands interface guidelines presented in Section 6.1.4, as applicable. No Impact.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

No trees meeting the City of Temecula tree removal ordinance as outlined in Municipal Code Chapter 8.49, City Tree Care and Preservation and Urban Forest Management Plan are located within or adjacent to the Project Site impact area. No impact.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Native Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The Project Site is located within the Western Riverside County MSHCP Southwest Area Plan and is not located within an MSHCP Criteria Area Cell, Cell Group, or Linkage Area. Following implementation of **BIO-CM1** MSHCP Local Development Mitigation Fee, **BIO-CM2** MSHCP Burrowing 30-Day Preconstruction Survey, and **BIO-CM4** Nesting Bird Preconstruction Surveys, the project will be in compliance with MSHCP guidelines. Less than Significant Impact with Mitigation. A detailed summary of MSHCP compliance is presented in the Regional and Regulatory Setting/Local/ Western Riverside County Multiple Species Habitat Conservation Plan Compliance Analysis section of the report.

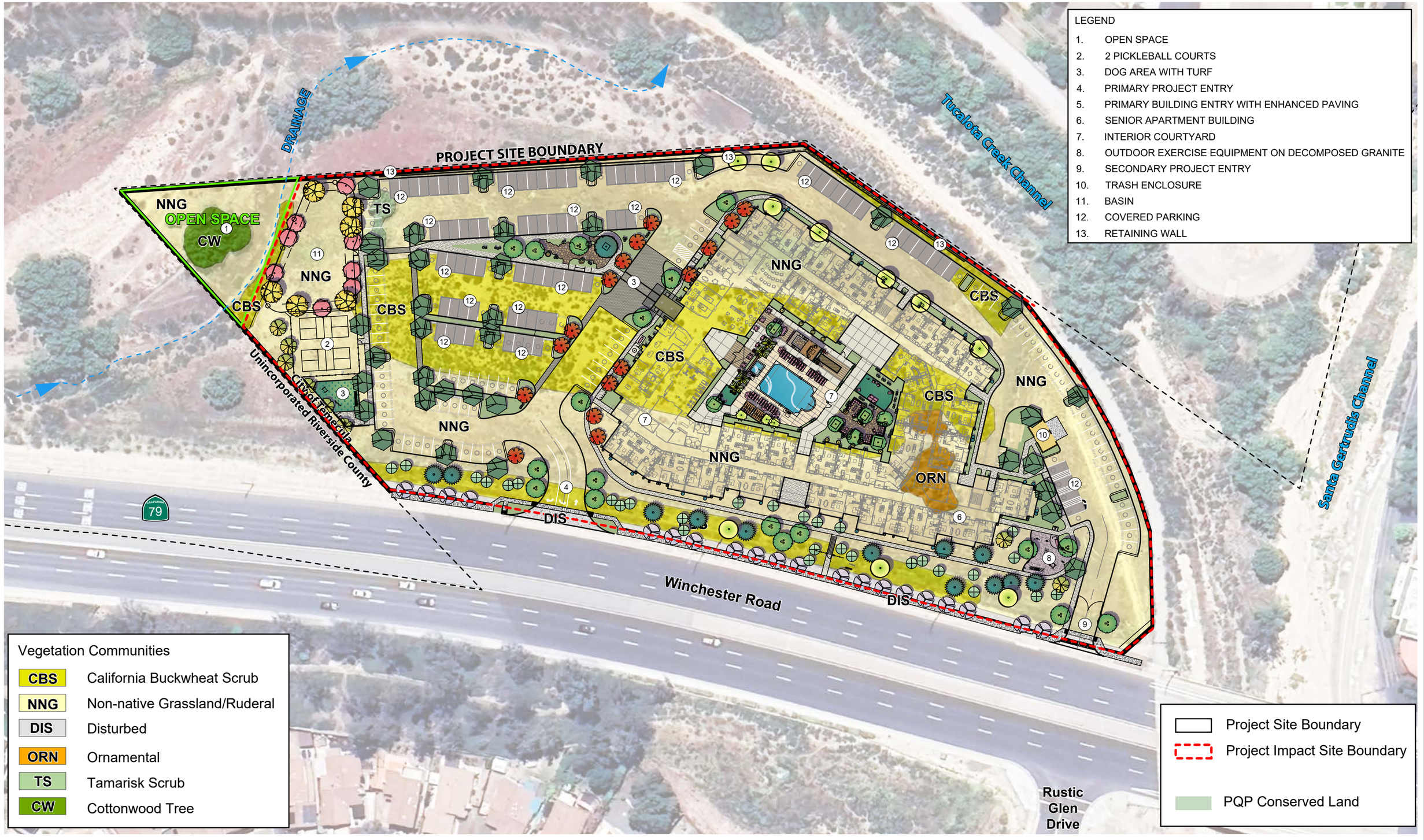

Figure 11 - Vegetation Communities Impact Map
Biological Resources Technical Report
Sage Temecula Senior Apartments

Source: BMLA Landscape Architects 2024.

CADRE Environmental

1 inch = 80 feet

Figure 12 - Jurisdictional Resources Impact Map

Biological Resources Technical Report
Sage Temecula Senior Apartments

CADRE Environmental

1 inch = 80 feet

INDIRECT IMPACTS

MSHCP Urban/Wildlands Interface Guidelines

The MSHCP Urban/Wildlands Interface guidelines presented in Section 6.1.4 are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to an MSHCP Conservation Area.

Water Quality/Hydrology

The project's stormwater should be directed to a stormwater basin onsite, away from the PQP Conservation Area. The basin shall be designed in accordance with all federal, state, regional, and local standards and regulations concerning water quality. These measures will assure that the project stormwater discharges are no greater in volume and velocity than current conditions and that the water leaving the site complies with all applicable water quality standards.

The project will comply with all applicable water quality regulations, including obtaining and complying with NPDES regulations and Municipal Separate Storm Sewer System (MS4) Permit requirements issued by the San Diego Regional Water Quality Control Board. Both of these permits include the treatment of all surface runoff from paved and developed areas, the implementation of applicable BMPs during construction activities and the installation and proper maintenance of structural BMPs to ensure adequate long-term treatment of water before entering into any stream course. No significant impacts are anticipated.

Toxics

Storm water treatment systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm downstream biological or aquatic resources. Toxic sources within the Project Site would be limited to those commonly associated with residential development, such as pesticides, insecticides, herbicides, fertilizers, and vehicle emissions. In order to mitigate the potential effects of these toxics, the project will incorporate structural BMPs, as required in association with compliance with NPDES regulations and MS4 Permit requirements, in order to reduce or prevent the level of toxins introduced into downstream resources including Murrieta Creek. No significant impacts are anticipated.

Lighting

Night lighting associated with the proposed development along the eastern and southern boundaries will be directed away from PQP Conserved Land, Tucalota Creek and Santa Gertrudis Creek Channels. No significant impacts are anticipated.

Noise

Because the proposed project development will not result in noise levels that exceed residential, commercial or mixed-use noise standards established for the City of Temecula, wildlife within open space habitat proposed in the northern region of the

project, PQP Conserved Land, Tucalota Creek and Santa Gertrudis Creek Channels south and east of the Project Site will not be subject to noise that exceeds these established standards. Short-term construction-related noise impacts will be reduced by the implementation of the following:

- During all Project Site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards

- The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by City of Temecula staff.

- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

No significant impacts are anticipated.

Invasive Species

The landscape plans for the residential, commercial and mixed development shall avoid the use of invasive species for the portions of the development areas adjacent to the open space areas south of the Project Site. Therefore, the following plants will be avoided as outlined in Table 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*. A final landscape plan will be submitted to the City of Temecula for review and approval. No significant impacts are anticipated.

Barriers

Barriers are intended to reduce or minimize unauthorized public access and associated impacts to protected resources. The Project Site is a residential development project. Residential development located adjacent to the proposed open space land, PQP lands, Tucalota Creek and Santa Gertrudis Creek Channels will be separated by permanent fencing to prevent access to these sensitive resources. No significant impacts are anticipated.

CUMULATIVE IMPACTS

The direct and/or indirect impacts of the project would not result in cumulative impacts (CEQA Section 15310) to environmental resources within the region of the Project Site. Cumulative impacts refer to incremental effects of an individual project when assessed with the effects of past, current, and proposed projects. The Project Site is located completely within the City of Temecula, an MSHCP permittee. As stated in the County of Riverside Transportation and Land Management Agency:

> "*Implementation of the MSHCP and Covered Projects will not result in a cumulative adverse effect, either directly or through habitat modifications, on any of the Covered Species, including the 31 species that are currently*

listed as threatened or endangered and the one species that is currently proposed for listing. Implementation of the MSHCP will benefit the Covered Species by preserving their habitat in order to address their life cycle needs. Thus, based on the features of the Plan itself, impacts to Covered Species are mitigated below a level of significance." (County of Riverside Transportation and Land Management Agency 2003)

Although the project would result in the permanent loss of 5.66-acres of primarily non-native grassland/ruderal, California buckwheat scrub, and disturbed habitats, as referenced above, the MSHCP was developed to address the comprehensive regional planning effort and anticipated growth in the City of Temecula.

As stated in the County of Riverside Transportation and Land Management Agency:

"*The Plan will not cause adverse cumulative effects related to the reduction of sensitive vegetation communities within the Plan Area; rather, the Plan is designed to preserve sufficient acreage of the sensitive vegetation communities present in western Riverside County. Similarly, the Plan will not cause adverse cumulative effects related to interference with the movement of any native resident or migratory fish or wildlife species or obstruction of genetic flow for the identified Planning Species. Part of the purpose and goals of the MSHCP is to use regional planning efforts to assemble a reserve that will preserve contiguous blocks of habitat in large enough areas to ensure that the reserve will allow movement of species and flow of genetic information.*

The MSHCP will not cause adverse cumulative impacts by conflicting with the provisions of any adopted Habitat Conservation Plan, Natural Communities Conservation Plan or other approved local, regional, or State habitat conservation plan either within or outside of the Plan area. Rather, the MSHCP has been written specifically to complement existing HCPs, such as the Stephens' kangaroo rat long-term HCP." (County of Riverside Transportation and Land Management Agency 2003)

The proposed project has been designed and conservation measures will be implemented to remain in compliance with all MSHCP conservation goals and guidelines and therefore will not result in an adverse cumulative impact. No Impact.

BEST MANAGEMENT PRACTICES

The following BMP's will be implemented as warranted and applicable to final project designs.

1. A condition shall be placed on grading permits requiring a qualified biologist to conduct a training session for project personnel prior to grading. The training shall include a description of the species of concern potentially occurring within and/or adjacent to the Project Site and associated habitats, the general provisions of the FESA and the MSHCP, the need to adhere to the provisions of the FESA and the

MSHCP, the penalties associated with violating the provisions of the FESA, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and from the Project Site boundaries within which the project activities must be accomplished.

2. A qualified biologist shall be onsite prior to and during all initial ground and habitat disturbance activities adjacent to the open space lands and avoidance areas to move out of harm's way special status species or other wildlife of low or limited mobility that would otherwise be injured or killed from project-related activities.

3. The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

4. Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to the City of Temecula and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

5. Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

6. The qualified project biologist shall monitor construction activities for the duration of the project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the project impact footprint.

7. Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

8. To avoid attracting predators of the species of concern, the project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).

9. Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

CONSERVATION MEASURES

The following biological conservation measures address those adverse impacts determined to be potentially significant or are relevant to the protection of biological resources to the extent practicable as part of ensuring compliance and consistency with all MSHCP conservation goals and CEQA guidelines.

BIO-CM1 MSHCP Local Development Mitigation Fee

Prior to issuance of a building permit, the project applicant shall pay MSHCP Local Development Mitigation fees as established by the RCA and implemented by the City of Temecula (Temecula Municipal Code Chapter 15.10). Five categories of the fee are defined and include: Residential, density less than 8.0 dwelling units per acre $4,358 per dwelling unit; Residential, density between 8.1 and 14.0 dwelling units per acre $1.817 per dwelling unit; Residential, density greater than 14.1 dwelling units per acre $803 per dwelling unit; Commercial $19,615 per acre; and Industrial $19,615 per acre. These fees are adjusted annually.

BIO-CM2 MSHCP Burrowing Owl 30-Day Preconstruction Surveys

A pre-construction survey for burrowing owls is required within 30-days prior to initial ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, grading, tree removal, site watering, equipment staging) to ensure that no owls have colonized the site in the days or weeks preceding the ground-disturbing activities. If burrowing owls have colonized the Project Site prior to the initiation of ground-disturbing activities, the project proponent will immediately inform the City of Temecula and the Wildlife Agencies and will need to coordinate further with City and the Wildlife Agencies, including the possibility of preparing a Burrowing Owl Protection and Relocation Plan, prior to initiating ground disturbance. If ground-disturbing activities occur, but the site is left undisturbed for more than 30 days, a pre-construction survey will again be necessary to ensure that burrowing owl have not colonized the site since it was last disturbed. If burrowing owl is found, the same coordination described above will be necessary.

BIO-CM3 Least Bell's Vireo Avoidance Measures

Ground-disturbing activities, including grubbing, grading, clearing, and construction within 300 feet of suitable or occupied habitat shall be scheduled outside of the least Bell's vireo breeding season (March 1st through August 31st). If ground-disturbing or construction activities are scheduled during the least Bell's vireo breeding season, then the follow measures shall be taken:

1. A biological monitor shall survey suitable habitat adjacent to the Project Site to determine the status of least bell's vireo within three (3) days of initiation of construction. If detected, the biological monitor shall be present during any ground disturbance or construction conducted during the breeding season to observe the birds' behavior. The construction supervisor shall be notified if the ground-disturbing or construction activities appear to be altering the birds' normal breeding behavior. Construction activities shall cease until additional minimization measures have been performed. Measures may include, but are not limited to, limitation on the use of

certain equipment, placement of equipment, restrictions on the simultaneous use of equipment, installation of sound barrier, or other noise attenuation methods as deemed appropriate by the monitoring biologist. If the birds' behavior is still altered from normal breeding behavior, ground disturbance shall cease until CDFW and USFWS is contacted to discuss alternative methods.

If ground disturbance occurs within or adjacent (300-foot) of occupied habitat, a qualified acoustician shall also be retained to determine ambient noise levels and project-related noise levels at the edge of suitable habitat. The need for sound monitoring shall be recommended by the biological monitor based on the presence of nesting individuals and observation of the birds' behavior. Noise levels at the edge of the suitable habitat shall not exceed an hourly average of 60 decibels (dB[A]), or a 3 dB(A) increase in noise levels if ambient noise levels exceed 60 dB(A). If project-related noise levels at the edge of the suitable habitat are above 60 dB(A) or the 3 dB(A) increase in noise occurs, additional minimization measures shall be taken to reduce project-related noise levels to an acceptable level as determined by the biological monitor. If additional measures do not decrease project-related noise levels below the thresholds described above, construction activities shall cease until CDFW and USFWS are contacted to discuss alternative methods.

2. Construction limits in and around any occupied least Bell's vireo habitat shall be delineated with flags and/or fencing prior to the initiation of any grading or construction activities to clearly identify the limits of the avoidance buffer during the breeding season.

3. Prior to grading and construction, a training program shall be developed and implemented by the qualified biologist to inform all workers on the project about the listed species, its habitat, and the importance of complying with avoidance and minimization measures.

4. All construction work shall occur during daylight hours. The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours determined by the City of Temecula.

5. During any excavation and grading adjacent (300-foot) to occupied habitat, the construction contractors shall install properly operating and maintained mufflers on all construction equipment, fixed or mobile, to reduce construction equipment noise to the maximum extent possible. The mufflers shall be installed consistent with manufacturers' standards. The construction contractor shall also place all stationary construction equipment, so that emitted noise is directed away from the occupied least Bell's vireo habitat.

6. The construction contractor shall stage equipment in areas that will create the greatest distance between construction-related noise sources and occupied habitat during all project construction occurring during the breeding season.

<u>Post Construction</u>

1. Access to occupied habitat areas shall be restricted.

2. All night lighting associated with the development shall be directed away from occupied or suitable habitat areas. The project shall be designed to minimize exterior night lighting while remaining compliant with local ordinances related to street lighting. Any necessary lighting (e.g., to light up equipment for security measures) shall be shielded or directed away from the occupied or suitable habitat areas and are not to exceed City of Temecula standards.

BIO-CM4 Nesting Bird Preconstruction Surveys

Regulatory requirement for potential direct/indirect impacts to nesting common and sensitive bird species will require compliance with the MBTA and CDFG Code Section 3503, 3503.5, and 3513. Construction outside the nesting season (between September 1st and January 31st) do not require pre-removal nesting bird surveys. If construction is proposed between February 1st and August 31st, a qualified biologist will conduct a preconstruction nesting bird, raptor survey and sensitive riparian bird species potentially occurring adjacent to the impact area no more than three (3) days prior to initiation of grading to document the presence or absence of nesting birds within or directly adjacent to the Project Site.

The survey(s) will focus on identifying any bird nests that would be directly or indirectly affected by construction activities. If active nests are documented, species-specific measures will be prepared by a qualified biologist and implemented to prevent abandonment of the active nest. At a minimum, grading in the vicinity of a nest will be postponed until the young birds have fledged. The perimeter of the nest setback zone will be fenced or adequately demarcated with stakes and flagging at 20-foot intervals, and construction personnel and activities restricted from the area. A survey report by a qualified biologist verifying that no active nests are present, or that the young have fledged, will be submitted to the City of Temecula for review and approval prior to initiation of grading in the nest-setback zone. The qualified biologist will serve as a construction monitor during those periods when construction activities occur near active nest areas to ensure that no inadvertent impacts on these nests occur. A final monitoring report of the findings, prepared by a qualified biologist, will be submitted to the City of Temecula documenting compliance with the MBTA and CDFG Code. Any nest permanently vacated for the season would not warrant protection pursuant to the MBTA and CDFG Code.

BIO-CM5 SKR Fee Area

The Project Site falls within the SKR Fee Area outlined in the Riverside County SKR HCP. The project applicant shall pay the fees pursuant to County Ordinance 663.10 for the SKR HCP Fee Assessment Area as established and implemented by the County of Riverside.

Implementation of Conservation Measures **BIO-CM1** through **BIO-CM5** would reduce all potential significant unavoidable impacts on biological resources below a level of significance and ensure compliance with MSHCP conservation requirements.

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Certification "*I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge.*

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