

**Determination of
Biologically Equivalent or Superior Preservation
Report**

Arroyo Vista Project

Permittee Name

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Riverside, California 92501

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1 EXECUTIVE SUMMARY

This report contains the results of the Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis to demonstrate compliance with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) for impacts to riparian/riverine resources. The proposed project would develop a Tentative Tract Map No. 38510 with 231 residential lots in unincorporated Riverside County, California

Two drainage features were observed within the project site. Drainage 1 transverses the site from the southeast to the northwest and converges with Drainage 2 near the northwest corner of the site. Drainage 2 is located on the northwest corner of the project site and flows from east to west. This drainage enters and exits the project site through the northern boundary and is directly supported by flows from Drainage 1 to the south.

Approximately 2.99 acres (5,598 linear feet) of riparian/riverine habitat were mapped within the proposed project site. The riparian/riverine habitat is synonymous with the jurisdiction of the California Department of Fish and Wildlife (CDFW) jurisdictional streambed. The proposed project design will result in permanent impacts of 0.24 acre to riparian/riverine habitat within Drainage 1 associated with road crossings. The project has been designed to avoid Drainage 1 to the maximum extent possible, with only two road crossings impacting Drainage 1 and a small erosional finger associated with Drainage 1. No impacts to Drainage 2 will occur.

Table 1: Summary of Riparian/Riverine Habitat

Drainage Name	Riparian/Riverine Resources Acres (linear feet)	Impacts Acres (linear feet)
Drainage 1	2.24 (4,795)	0.24 (408)
Drainage 2	0.75 (803)	0.0
Total	2.99 (5,598)	0.24 (408)

The applicant will mitigate impacts to 0.24 acre of riparian/riverine habitat through the management (removal of invasives) of approximately 2.75 acres of the riparian/riverine habitat onsite. Further, a conservation easement will be placed over the 2.75 acre area onsite, and a Habitat Mitigation Monitoring and Reporting Program will be prepared that will need to be approved by the County of Riverside Environmental Programs Division, Western Riverside County Regional Conservation Authority and regulatory agencies. The 2.75 acre of riverine/riparian habitat remaining onsite currently supports invasive plant species (i.e., Mexican fan palm, salt cedar, Arundo, and tree tobacco) that will be removed to enhance the riparian/riverine habitat onsite. This area will be managed by an approved third party.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region by preserving/enhancing high quality habitat within the existing drainage, and by

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ensuring that approximately 92 percent of all riparian/riverine habitat onsite remain in its existing state in perpetuity through a conservation easement on future development over Drainage 1 and Drainage 2.

Focused surveys were conducted during the 2024 breeding season for least Bell's vireo. Five least Bell's vireo territories were observed onsite within Drainage 1 and 2 onsite, and one additional territory was observed within Drainage 2, just outside the project footprint. To reduce impacts to least Bell's vireo, approximately 92% of the onsite drainage features will be preserved and enhanced, and 6-foot solid masonry walls will be installed as far away from the edge of the riparian habitat as possible, separating the project from the riparian habitat which will act as a noise barrier. The masonry walls will be installed on an average of approximately 98-feet from the edge of riparian habitat which will separate the riparian habitats within Drainage 1 and Drainage 2 from the onsite development and act as a buffer. Double picket tubular steel fencing with gaps no greater than 2" will be installed along the backyards of lots 87 through 90 as to prevent cats from crossing the fence line (refer to Appendix D, *Riparian/Riverine Habitat Setbacks*). In addition to the proposed setbacks from the riparian riverine to the proposed walls or fences, there is an elevation difference between the drainage features and the pads, which range between 5 feet and 39 feet (refer to Appendix E, *Fence and Wall Plan*). With the 6-foot solid masonry wall, the elevation difference between the drainage feature would range from approximately 11 to 45 feet, creating a larger barrier from potential indirect impacts associated with noise and light on the riparian habitat.

In addition to each lot's perimeter wall/fence described above, the entire trail will be fenced by a 4-foot-high wood split rail fence with wire mesh covering the entire width and height of the fence to deter pedestrians, and dogs, from going into the riparian riverine habitat. The trail will also have posted signs at all trail entrances reflecting limited hours of use to the trail, signage to enforce dogs on leash at all times, as well as cautionary signage of rattlesnakes to deter residents from going into the riparian habitat as well as ensuring pedestrians keep their dogs on leashes. The project will not have any lighting on the trail. Any landscaping associated with the trail will have a restriction of non-native and invasive plant species and will not use any species listed in Table 6-2 of the MSHCP. To minimize the potential of temporal losses of least Bell's vireo, habitat enhancement and restoration activities will be phased to ensure that higher quality habitat will be available through restoration prior to impacting potentially occupied least Bell's vireo habitat.

The Project's Homeowner's Association (HOA) will be responsible for the maintenance of the trail, including fencing along the trail. Further, the development's HOA will educate the residents of the natural occurring wildlife and natural habitat as to better preserve and protect.

2 INTRODUCTION

2.1 Project Area

The site is generally located southeast of Interstate 91, west of Interstate 215 and east of Interstate 15 in unincorporated Riverside County, California. The project site is depicted on the Riverside East quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within Section 24 of Township 3 South, Range 5 West. Specifically, the project site is located south of Gentian, west of Chicago Avenue, north of Iris Avenue, and east of Porter Avenue. within Assessor Parcel Numbers 245-300-001 and -004. Refer to Exhibits 1-3 in Appendix A.

2.2 Project Description

The project proposes to develop a Tentative Tract Map No. 38510 with 231 residential lots. The project will include offsite improvements to the frontage road and the road on the northeast corner of the site. No temporary impact areas are proposed.

2.3 Existing Conditions

Presently, the project site primarily supports inactive agricultural fields with some associated development and a series of arroyos that slope downwards from the southern and eastern boundaries towards the northwest corner. Undeveloped land supported on-site has been subject to a variety of anthropogenic disturbances associated with historic agricultural activities, associated development, discing activities, routine weed abatement, light vehicle and off-highway recreational vehicle access, and illicit dumping and camping. Historic aeriels show that the site supported agricultural land uses since at least 1948. Prior to conducting the field investigation, aerial photography was reviewed to document existing site conditions and document the changes to the project site and surrounding area.

1948: The project site and surrounding areas support agricultural fields. The only portions of the site that do not support agricultural land uses occur along the steep arroyos that permeate the site. The site is bounded by agricultural fields to the west, south, and east, and open space to the north along downstream portions of the arroyos.

1948 – 1966: On-site and surrounding agricultural fields have been converted to citrus groves. Citrus groves now abut the top of the arroyo slopes. A relatively shallow arroyo extending north from the southern boundary has been filled and supports citrus groves. A residential development is present near the middle of the eastern portion of the site. Some residential parcels are present just beyond Iris Avenue at the southern boundary of the site. Former agricultural fields in the northwest portion of the site and off-site to the west are in various states of unuse.

1966 – 1967: Citrus groves have expanded further into the northwest portion of the site.

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- 1967 – 1978: Agricultural fields are now present in the northwest corner of the site. The majority of adjacent land to the south has been converted into residential developments. New residential developments are present off-site to the southeast and northeast.
- 1978 – 1985: Agricultural land uses have been abandoned in the northwest corner of the site. Additional residential developments are present to the north.
- 1985 – 1994: Additional residential developments are present to the north and east. The abandoned agricultural field in the northwest corner of the site have been impacted by off-roading activities such that tracks are visible.
- 1994 – 2005: No changes.
- 2005 – 2009: Some grading and crop clearing has occurred in association with agricultural operations.
- 2010 – 2012: A small, paved loading area is present in the southeast portion of the site.
- 2012 – 2020: No changes occur outside of normal crop rotation activities.
- 2020 – 2021: Citrus groves have been removed.
- 2021 – 2023: No changes.

The disturbances outlined above have eliminated the natural plant communities that historically occurred on the less-topographically variable portions of the project site and surrounding area. Natural plant communities supported within the arroyo remain in a relatively natural state.

Vegetation

Three (3) plant communities are supported within the project site: southern willow scrub, Riversidean sage scrub, and non-native grassland. In addition, the project site supports two (2) land cover types that would be classified as disturbed and developed. Refer to Exhibit 4, *Vegetation*. The vegetation communities and land cover types are described in further detail below.

Southern Willow Scrub

The drainage feature that bisects the project site primarily supports a southern willow scrub plant community. This plant community is dominated by arroyo willow (*Salix lasiolepis*) and black willow (*Salix goodingii*) and supports a variety of other trees and shrubs with an herbaceous understory. Other common species observed in the southern willow scrub plant community include Mexican fan palm (*Washingtonia robusta*), salt cedar (*Tamarix* sp.), giant creek nettle, mule fat, elderberry (*Sambucus mexicana* [*S. caerulea*]), bowlesia (*Bowlesia incana*), California bee plant (*Scrophularia californica*), common phacelia (*Phacelia distans*), Douglas' nightshade (*Solanum douglasii*), goldfields (*Lasthenia glabrata*), hairy leaved sunflower (*Helianthus annuus*), London rocket (*Sisymbrium irio*), needle goldfields

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(*Lasthenia gracilis*), stinknet (*Oncosiphon pilulifer*), virgin's bower (*Clematis pauciflora*), barley (*Hordeum murinum*), and willow baccharis (*Baccharis salicina*).

The areas within the arroyo that support more routine surface flows are dominated by narrow-leaved cattail (*Typha augustifolia*), sparse watercress (*Sisymbrium nasturtium-aquaticum*), watercress (*Nasturtium officinale*), salt grass (*Distichlis spicata*), mule fat (*Baccharis salicifolia*), and giant creek nettle (*Urtica dioica* ssp. *holosericea*).

Riversidean Sage Scrub

The upper limits of the drainage feature that bisects the project site and some adjacent spaces support Riversidean sage scrub plant communities similar to historic vegetative cover that historically occupied the rolling hills of the site, prior to agricultural land uses. Due to the proximity of this plant community to the active flows and southern willow scrub supported within the arroyo, the Riversidean sage scrub supported on-site exhibits denser vegetation and higher diversity than would otherwise be found in the surrounding hills. This plant community is dominated by woody shrubs and trees such as elderberry, California sagebrush (*Artemisia californica*), black sage (*Salvia mellifera*), and mulefat, and supports a variety of low-growing shrubs and an herbaceous understory. Other common plant species observed in the Riversidean sage scrub supported by the project site include common phacelia, Douglas' nightshade, goldfields, London rocket, needle goldfields, stinknet, virgin's bower, barley, baby blue eyes (*Nemophila menziesii*), popcorn flower (*Plagiobothrys collinus*), chia sage (*Salvia columbariae*), fiddleneck (*Amsinckia* sp.), desert wishbone bush (*Mirabilis laevis*), foxtail chess (*Bromus madritensis*), miniature lupine (*Lupinus bicolor*), Pomona milk vetch (*Astragalus pomonensis*), strigose lotus (*Acemisson strigosus*), wild canterbury bells (*Phacelia minor*), wildoats (*Avena fatua*), and tarragon (*Artemisia dracunculus*).

Non-Native Grassland

The non-native grassland plant community is located on the northeast portion of the project site, in areas that have been subject to frequent anthropogenic disturbances but did not support historic agricultural land uses. This plant community is dominated by non-native grasses such as oat grasses (*Avena barbata* and *A. fatua*), brome grasses (*Bromus diandrus* and *B. madritensis*), and rattail fescue (*Festuca myuros*), with a limited presence of other early successional species such as Mediterranean schismus (*Schismus barbatus*), filarees (*Erodium brachycarpum* and *E. cicutarum*), mustard (*Hirschfeldia incana*), tocalote (*Centaurea melitensis*), annual beard grass (*Polypogon monspeliensis*), and Jersey cudweed (*Pseudognaphalium luteoalbum*).

Disturbed

Disturbed land is supported through most portions of the project site that occur away from the arroyo, where historic agricultural land uses eliminated the natural plant communities that once occurred. The disturbed areas of the project site support many of the aforementioned species found in the non-native grassland plant community. Disturbance type varies throughout the site, with grading and weed abatement occurring throughout all areas, piling of refuse materials occurring near the center of most parcels, and illegal dumping being prominent around the site boundaries.

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Additionally, the northern boundary of the site supports an unnamed man-made drainage and is bounded to the north by residential development. This feature primarily supports non-native weedy/early successional species, but also supports ornamental vegetation, and species adapted to more mesic conditions. Common plant species observed along the northern boundary include those observed in the non-native grassland in addition to oleander (*Nerium oleander*), red gum eucalyptus (*Eucalyptus camaldulensis*), vinegar weed (*Trichostema lanceolatum*), morning glory (*Calystegia macrostegia*), curly dock (*Rumex crispus*), speedwell (*Veronica* sp.), and common sunflower (*Helianthus annuus*).

Developed

Developed areas generally encompass all buildings/structures or any paved or otherwise impervious surfaces. Developed land is present in the northern and southwest portions of the project site, in the middle portion of the site where remnant roads have not deteriorated, and areas associated with the house onsite. Vegetative cover in these areas is generally barren but may include sparse coverage of weedy, invasive, and/or primary-successional species, or remnant ornamental species.

Jurisdictional Resources

Drainage 1

Drainage 1 is the longest drainage feature on the project site. It flows from southeast to northwest as it bisects the project site and converges with Drainage 2 near the northwest corner of the site, and supports a sparse southern willow scrub plant community. The drainage enters the site from an earthen channel at the southeastern corner of the project site and flows ephemeral. The onsite drainage features receive flows via direct precipitation, and from the discharge urban runoff from residential developments upstream. Drainage 1 is approximately 4,795 linear feet with an average OHWM that ranges from 2 to 13 feet wide.

The drainage feature that bisects the project site primarily supports a southern willow scrub plant community. This plant community is dominated by arroyo willow (*Salix lasiolepis*) and black willow (*Salix goodingii*) and supports a variety of other trees and shrubs with an herbaceous understory. Other common species observed in the southern willow scrub plant community include Mexican fan palm (*Washingtonia robusta*), salt cedar (*Tamarix* sp.), giant creek nettle, mule fat, elderberry (*Sambucus mexicana* [*S. caerulea*]), bowlesia (*Bowlesia incana*), California bee plant (*Scrophularia californica*), common phacelia (*Phacelia distans*), Douglas' nightshade (*Solanum douglasii*), goldfields (*Lasthenia glabrata*), hairy leaved sunflower (*Helianthus annuus*), London rocket (*Sisymbrium irio*), needle goldfields (*Lasthenia gracilis*), stinknet (*Oncosiphon pilulifer*), virgin's bower (*Clematis pauciflora*), barley (*Hordeum murinum*), and willow baccharis (*Baccharis salicina*).

There are two smaller drainages that are part of Drainage 1 on the northwest portion of the site. These two features are small features that follow on-site topography and connect into Drainage 1. They are ephemeral features with no hydrophytic vegetation or soils.

Drainage 2

Drainage 2 is located on the northwest corner of the project site and flows in an east-west direction. The segment of the drainage that occurs within the project site is approximately 803 linear feet with an average

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OHWL that ranges from 12 to 18 feet wide. Flows originate east of the project site and convey natural runoff, agricultural runoff, and nuisance flows from the surrounding residential developments. Water flows through the drainage quickly and there is evidence of scouring during large storm events. Although the drainage supports a stand of southern willow scrub, there is little to no vegetation with the active channel (within the OHWL). The feature is an earthen channel with clearly defined bed and banks that conveys flows all year round. The unnamed drainage feature supports a southern willow scrub vegetation community characterized by arroyo willow (*Salix lasiolepis*; FACW) and mule fat (*Baccharis salicifolia*; FAC).

3 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

Section 6.1.2 of the MSHCP, identifies Riparian/Riverine resources as lands which contain habitat dominated by trees, shrubs, persistent emergent vegetation, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from nearby fresh water sources, or areas with freshwater flow during all or a portion of the year. Riverine habitat includes all wetlands and deep-water habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water. Riverine habitat is bounded on the landward side by upland, by the channel bank (including natural and man-made levees), or by wetlands dominated by trees, shrubs, persistent emergents, mosses, or lichens. In braided streams, the system is bounded by the banks forming the outer limits of the depression within which the braiding occurs. Springs discharging into a channel are considered part of the riverine habitat. The term riparian is used to define the type of wildlife habitat found along the banks of a river, stream, lake or other body of water. Riparian habitats are ecologically diverse and can be found in many types of environments including grasslands, wetlands and forests.

Based on the results of a Delineation of State and Federal Jurisdictional Waters Report (ELMT, 2023) prepared under a separate cover, two (2) unnamed drainage features were observed on the project site. These features will be considered riparian/riverine habitat under Section 6.1.2 of the MSHCP. The extent of the riparian/riverine habitat on the project site is synonymous with the jurisdiction of CDFW. The majority of the project has been designed to avoid riparian areas associated with Drainage 1 and Drainage 2 in their existing condition. However, approximately 0.24 acre of southern willow scrub habitat will be impacted from project implementation.

The majority of the project site does not support riparian habitats; however, Drainage 1 and 2, support a southern willow scrub plant community that provides moderate quality habitat for the State- and federally-listed as endangered least Bell's Vireo (*Vireo bellii pusillus* [LBVI]), and is not expected to provide suitable habitat for the other riparian obligate species listed under the MSHCP that may occur within the regional vicinity, including southwestern willow flycatcher (*Empidonax traillii extimus*), or yellow-billed cuckoo (*Coccyzus americanus*).

The composition of the southern willow scrub plant community riparian scrub supported on-site has been degraded by invasive plant species and previous agricultural activities. The mixed riparian scrub, located outside of the proposed limits of disturbance does not have a contiguous willow canopy, and does not provide the dense, multi-storied canopy for southwestern willow flycatcher and yellow-billed cuckoo. Due to incomplete canopy, limited acreage, and lack of riparian plant species diversity of the mixed riparian scrub supported on-site, the habitat associated with the on-site drainage feature was determined not to provide suitable habitat for southwestern willow flycatcher and yellow-billed cuckoo. However, the southern willow scrub plant community has the potential to provide moderate quality habitat for LBVI. LBVI do not require the dense multi-storied riparian canopy that southwestern willow flycatcher and yellow-billed cuckoo need.

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Focused surveys were conducted during the 2024 survey season for LBVI and southwestern willow flycatcher. No Southwestern willow flycatcher were observed onsite during the 2024 surveys. However, LBVI territories were observed during the 2024 season.

Based on results of the habitat assessment for Section 6.1.2 riparian bird species, focused surveys for the least Bell's vireo were conducted during the spring of 2024. A total of eight (8) protocol least Bell's vireo surveys were conducted within the riparian corridor that bisects the property as illustrated in Exhibit 4. All surveys followed the recommended USFWS guidelines. Specifically, guidelines for least Bell's vireo surveys require that at least eight (8) surveys be conducted from April 10th to July 31st, and guidelines for southwestern willow flycatcher require five (5) surveys from May 15 and May 31, with the second and third between June 1 and June 21, and the fourth and fifth between June 22 and July 17.

The riparian habitats were systematically surveyed on May 11, 21, 31, June 10, 21, and July 3 and 11, 2024, by walking slowly and methodically along their margins. All observations of least Bell's vireo, including their behavior and breeding status were recorded and their locations noted. All surveys were conducted under optimal weather conditions and during early morning hours when bird activity is at a peak.

Vernal Pools

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland 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. The determination that an area exhibits vernal pool characteristics and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should be considered the length of time the areas exhibit upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

Vernal pools are seasonally inundated, ponded areas that only form in regions where specialized soil and climatic conditions exist. During fall and winter rains typical of Mediterranean climates, water collects in shallow depressions where downward percolation of water is prevented by the presence of a hard pan or clay pan layer (duripan) below the soil surface. Later in the spring when rains decrease and the weather warms, the water evaporates, and the pools generally disappear by May. The shallow depressions remain relatively dry until late fall and early winter with the advent of greater precipitation and cooler temperatures. Vernal pools provide unusual "flood and drought" habitat conditions to which certain plant and wildlife species have specifically adapted as well as invertebrate species such as fairy shrimp.

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The MSHCP lists two general classes of soils known to be associated with listed and special-status plant species: clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status plant or wildlife species associated with vernal pools can occur on the project site. None of these soils have been documented within the project site.

A review of recent and historic aerial photographs (1948-2023) of the project site during wet and dry seasons did not provide visual evidence of an astatic or vernal pool conditions within the project site. The site supported historic agricultural activities which heavily compacted the soils on-site. No ponding was observed during the field investigation, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regime needed for vernal pools. From this review of historic aerial photographs and observations during the field investigations, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat occurring within the proposed project site.

Based on the historical aerial review, existing human disturbances, and current hydrologic regimes of the project site, it can be concluded that the project site lacks astatic conditions, and, therefore, would not provide suitable fairy shrimp habitat. Fairy shrimp require astatic conditions and a complete drying of occupied ponds so that the fairy shrimp cysts will not rot. As a result, none of the sensitive plant or wildlife species associated with vernal pools are expected to occur on the project site. Sensitive plant and wildlife species associated with vernal pools and clay soils, including fairy shrimp, are presumed absent from the project site.

3.2 Results/Impacts

The on-site drainage collectively performs the following functions within the local area of the watershed: regulation of nuisance flows, energy dissipation, nutrient cycling, retention of particulates, nutrient/particulate uptake from off-site, upstream development, and connectivity with similar habitat upstream. Drainages 1 and 2, within the project footprint, will be considered riparian/riverine habitat under the MSHCP.

The proposed project will result in permanent impacts to approximately 0.24-acre of riparian/riverine habitat within Drainage 1.

Table 2: Impacts to Riparian/Riverine Habitat

Jurisdictional Feature	Riparian/Riverine Habitat	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	2.24 (4,795)	0.24
Drainage 2	0.75 (803)	0
TOTAL	2.99 (5,598)	0.24

3.3 Mitigation and Equivalency

3.3.1 *Direct Effects*

The applicant will mitigate impacts to 0.24 acre of riparian/riverine habitat through the management (removal of invasives) of approximately 2.75 acres of the riparian/riverine habitat onsite. Further, a conservation easement will be placed over the 2.75 acre area onsite, and a Habitat Mitigation Monitoring and Reporting Program will be prepared that will need to be approved by the County of Riverside Environmental Programs Division, Western Riverside County Regional Conservation Authority and regulatory agencies. The 2.75 acre of riverine/riparian habitat currently supports invasive plant species (i.e., Mexican fan palm, salt cedar, and tree tobacco) that will be removed to enhance the riparian/riverine habitat onsite. The applicant will replant the impacted areas with native landscaping.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region by preserving/enhancing high quality habitat within the existing drainage, and by ensuring that approximately 92 percent of all riparian/riverine habitat onsite remain in its existing state in perpetuity through a conservation easement on future development over Drainage 1 and Drainage 2.

In effort to mitigate and ensure suitable habitat for Least Bell's Vireo, the applicant will preserve and enhance approximately 92% of the onsite drainage features. Six-foot solid concrete masonry walls will be installed as far away from the edge of the riparian habitat as possible, separating the project from the riparian habitat which will act as a barrier for noise and light. The masonry walls will be installed on an average of approximately 98-feet from the edge of riparian habitat which will separate the riparian habitats within Drainage 1 and Drainage 2 from the onsite development and act as a buffer. Double picket tubular steel fencing with gaps no greater than 2" will be installed along the backyards of lots 87 through 90 as to prevent cats from crossing the fence line. In addition to the proposed setbacks from the riparian riverine to the proposed walls or fences, there is an elevation difference between the drainage features and the pads, which range between 5 feet and 39 feet. With the 6-foot solid masonry wall, the elevation difference between the drainage feature would range from approximately 11 to 45 feet, creating a larger barrier from potential indirect impacts associated with noise and light on the riparian habitat. The quality and amount of suitable habitat for Least Bell's Vireo decreases at the southeast end of the drainage feature, thus decreasing the need for larger buffers.

In addition to each lot's perimeter wall/fence described above, the entire trail will be fenced by a 4-foot-high wood split rail fence with wire mesh covering the entire width and height of the fence to deter pedestrians, and dogs, from going into the riparian riverine habitat. The trail will also have posted signs at all trail entrances reflecting limited hours of use to the trail, signage to enforce dogs on leash at all times, as well as cautionary signage of rattlesnakes to deter residents from going into the riparian habitat as well as ensuring pedestrians keep their dogs on leashes. The project will not have any lighting on the trail. Any landscaping associated with the trail will have a restriction of non-native and invasive plant species and will not use any species listed in Table 6-2 of the MSHCP. To minimize the potential of temporal losses of least Bell's vireo, habitat enhancement and restoration activities will be phased to ensure that higher quality

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habitat will be available through restoration prior to impacting potentially occupied least Bell's vireo habitat.

The Project's Homeowner's Association (HOA) will be responsible for the maintenance of the trail, including fencing along the trail. Further, the development's HOA will educate the residents of the natural occurring wildlife and natural habitat as to better preserve and protect.

Least Bell's Vireo

A total of 0.24-acre of permanent impacts to suitable and occupied least Bell's vireo habitat (southern willow scrub) will occur within Drainage 1. As outlined below, the MSHCP identifies four (4) objectives (presented as *italics/underlined*) for the protection of least Bell's vireo habitat, followed by an analysis of MSHCP project consistency.

- 1) *“Include within the MSHCP Conservation Area at least 9,430 acres of suitable habitat”* (MSHCP 2004). Permanent impacts to 0.24-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Drainage 1 will be subject to additional mitigation through enhancement and protection of the remaining onsite riparian habitat. The preservation and enhancement of approximately 2.75 acre of onsite riparian/riverine habitat will provide suitable habitat to the MSHCP conservation area, that would not have normally been conserved in perpetuity for least Bell's vireo.
- 2) *“Include within the MSHCP Conservation Area at least 8 core areas and interconnecting linkages”* (MSHCP 2004). Permanent impacts to 0.24-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Drainage 1. The project site is not located within any of the 8 identified core areas or interconnecting linkages.
- 3) *“Include within the MSHCP Conservation Area additional areas within the Criteria Area identified as important to the least Bell's vireo. If survey results are positive, 90% of the occupied portions of the property that provide for long-term conservation value shall be conserved. This will involve including 100 meters of undeveloped landscape adjacent to the habitat conserved”* (MSHCP 2004). As previously noted, the project site is not located within any of the 8 identified core areas, interconnecting linkages, or MSHCP designated Criteria Cells. In order to reduce impacts to least Bell's vireo, approximately 92% of the onsite drainage features will be preserved and enhanced and 6 foot solid masonry walls will be installed as far away from the edge of the riparian habitat as possible. The masonry walls will be installed approximately **20 feet** from the edge of riparian habitat which will separate the riparian habitats within Drainage 1 and Drainage 2 from the onsite development. Additionally, the elevation difference between the drainage features and the pads ranges between 5 feet and 39 feet. With the 6-foot solid masonry wall, the elevation difference between the drainage feature would range from approximately 11 to 45 feet, a larger barrier from potential indirect impacts associated with noise and light on the riparian habitat. In addition to each lot's perimeter wall/fence described above, the entire trail will be fenced by a 4-foot-high wood split rail fence with wire mesh covering the entire width and height of the fence

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to deter pedestrians, and dogs, from going into the riparian riverine habitat. The trail will also have posted signs at all trail entrances reflecting limited hours of use to the trail, signage to enforce dogs on leash at all times, as well as cautionary signage of rattlesnakes to deter residents from going into the riparian habitat as well as ensuring pedestrians keep their dogs on leashes. The project will not have any lighting on the trail. Any landscaping associated with the trail will have a restriction of non-native and invasive plant species and will not use any species listed in Table 6-2 of the MSHCP. To minimize the potential of temporal losses of least Bell's vireo, habitat enhancement and restoration activities will be phased to ensure that higher quality habitat will be available through restoration prior to impacting potentially occupied least Bell's vireo habitat.

The Project's Homeowner's Association (HOA) will be responsible for the maintenance of the trail, including fencing along the trail. Further, the development's HOA will educate the residents of the natural occurring wildlife and natural habitat as to better preserve and protect.

- 4) *“Within the MSHCP Conservation Area, maintain (once every 3 years) the continued use of, and successful reproduction at 75% percent of known vireo occupied habitat (including any nesting locations identified in the MSHCP Conservation Area in the future)”* (MSHCP 2004). Based on recent as well as historic observations of least Bell's vireo within Riverside County, the species is expected to continue to breed within Drainage 1 and 2 onsite following project implementation.

In addition to implementing all four (4) least Bell's vireo objectives listed above, initial vegetation clearing of occupied or potential least Bell's vireo habitat will occur outside of the nesting season (March 15th to September 15th). Potential indirect impacts to suitable least Bell's vireo habitat within Drainage 1 and Drainage 2 during and following completion of construction and riparian reestablishment will be avoided by implementing all MSHCP Best Management Practices (BMP) including a commitment to conduct noise monitoring during construction activities in order to ensure noise levels do not exceed 60dB within 300 feet of least Bell's vireo habitat during the nesting period.

3.3.2 Indirect Effects

The following minimization measures have been incorporated into the project design to ensure that all indirect project-related impacts to riparian/riverine habitat, including impacts from fugitive dust, toxics, invasive plant species, and grading/land development, are avoided or minimized to the greatest extent feasible.

Fugitive Dust

During soil excavation, grading, or other subsurface disturbance within 100 feet of conserved riparian/riverine habitat onsite, the construction superintendent shall supervise provision and maintenance of all standard dust control best management practices (BMPs) to reduce fugitive dust emissions, including but not limited to the following actions:

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- Water any exposed soil areas a minimum of twice per day, or as allowed under any imposed drought restrictions. On windy days or when fugitive dust can be observed leaving the construction site, additional water shall be applied at a frequency to be determined by the on-site construction superintendent.
- Pave, periodically water, or apply chemical stabilizer to construction access/egress points.
- Minimize the amount of area disturbed by clearing, grading, earthmoving, or excavation operations at all times.
- Operate all vehicles on graded areas at speeds less than 15 miles per hour.
- Cover all stockpiles that will not be utilized within three days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with a non-toxic chemical stabilizer.

Runoff - Toxics

To address potential short-term impacts to water quality from construction runoff that may carry storm water pollutants downstream, a Storm Water Pollution Prevention Program (SWPPP) shall be implemented by the construction contractor as required by the California General Construction Storm Water Permit pursuant to State Water Quality Control Board and Regional Board regulations. The SWPPP shall identify BMPs related to the control of toxic substances, including construction fuels, oils, and other liquids. These BMPs will be implemented by the Applicant's contractor prior to the start of any ground clearing activity, shall be subject to periodic inspections by the City and the project's hydrological consultant, and shall be maintained throughout the construction period and remain in place until all landscape and permanent BMPs are in place. BMPs shall be monitored and repaired if necessary to ensure maximum erosion, sediment, and pollution control.

- Permittee shall prohibit the use of erosion control materials potentially harmful to fish and wildlife species, such as mono-filament netting (erosion control matting) or similar material, within and adjacent to CDFW jurisdictional areas.
- All fiber rolls¹, straw waddles, and/or hay bales utilized within and adjacent to the project site shall be free of non-native plant materials.
- Permittee shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of Permittee to ensure compliance.
- Permittee shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake, streambed, or flowing stream or be placed in locations that may be subjected to high storm flows.

¹ Fiber rolls or erosion control mesh shall be made of loose-weave mesh that is not fused at the intersections of the weave, such as jute, or coconut (coir) fiber, or other products without welded weaves. Non-welded weaves reduce entanglement risks to wildlife by allowing animals to push through the weave, which expands when spread.

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- Spoil sites shall not be located within a lake, streambed, or flowing stream or locations that may be subjected to high storm flows, where spoil shall be washed back into a lake, streambed, or flowing stream where it will impact streambed habitat and aquatic or riparian vegetation.
- Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to fish and wildlife resources resulting from project related activities shall be prevented from contaminating the soil and/or entering the waters of the State. These materials, placed within or where they may enter a lake, streambed, or flowing stream by Permittee or any party working under contract or with the permission of Permittee, shall be removed immediately.
- No equipment maintenance shall be done within or near any lake, streambed, or flowing stream where petroleum products or other pollutants from the equipment may enter these areas under any flow.
- No broken concrete, cement, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or washings thereof, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the edge of any lake, streambed, or flowing stream.

Accidental Encroachments During Construction

The following measures shall also be incorporated into the construction documents and specifications, and implemented by the contractor, to avoid potential construction-related impacts to conserved riparian/riverine habitat outside of the approved disturbance limits:

- Construction worker training shall be provided by a qualified biologist at the first pre-construction meeting;
- Exclusionary fencing and signs shall be erected near the top of slope adjacent to conserved riparian/riverine habitat to prevent accidental/unauthorized intrusions during construction;
- No equipment shall be operated in areas of flowing water;
- Construction access and staging areas for storage of materials and heavy equipment, and for fueling, cleaning, or maintenance of construction vehicles or equipment, shall be prohibited within 20 feet from the top of slope adjacent to conserved riparian/riverine habitat; and
- A qualified biologist shall be onsite during initial clearing/grubbing, grading, and/or construction activities within the riparian/riverine habitat that will be impacted within the onsite drainage features, or within 100 feet of the habitat to be avoided and shall periodically monitor these activities to ensure they do not exceed the fenced construction limits.

Post-Construction Human Disturbances

The project shall incorporate special edge treatments designed to minimize edge effects by providing a safe transition between developed areas and conserved riparian/riverine habitat, and which would be compatible with project operation and the protection and sustainability of conserved areas. Special edge treatments shall include native landscaping on manufactured slopes within the conserved areas and fencing/signage

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near the top of slope adjacent to conserved areas to prevent unauthorized public access, vandalism, illegal dumping, and other adverse human disturbances. The 6-foot masonry walls, and grade separation will act as a buffer following development, reducing noise and lighting impacts within the onsite drainage features.

In addition to each lot's perimeter wall/fence described above, the entire trail will be fenced by a 4-foot-high wood split rail fence with wire mesh covering the entire width and height of the fence to deter pedestrians, and dogs, from going into the riparian riverine habitat. The trail will also have posted signs at all trail entrances reflecting limited hours of use to the trail, signage to enforce dogs on leash at all times, as well as cautionary signage of rattlesnakes to deter residents from going into the riparian habitat as well as ensuring pedestrians keep their dogs on leashes. The project will not have any lighting on the trail. Any landscaping associated with the trail will have a restriction of non-native and invasive plant species and will not use any species listed in Table 6-2 of the MSHCP. To minimize the potential of temporal losses of least Bell's vireo, habitat enhancement and restoration activities will be phased to ensure that higher quality habitat will be available through restoration prior to impacting potentially occupied least Bell's vireo habitat.

The Project's Homeowner's Association (HOA) will be responsible for the maintenance of the trail, including fencing along the trail. Further, the development's HOA will educate the residents of the natural occurring wildlife and natural habitat as to better preserve and protect.

4 ADDITIONAL SURVEY NEEDS (SECTION 6.3.2)

4.1 Burrowing Owl

Burrowing owl is currently designated as a California Species of Special Concern. The burrowing owl is a grassland specialist distributed throughout western North America where it occupies open areas with short vegetation and bare ground within shrub, desert, and grassland environments. Burrowing owls use a wide variety of arid and semi-arid environments with level to gently sloping areas characterized by open vegetation and bare ground. The western burrowing owl (*A.c. hypugaea*), which occurs throughout the western United States including California, rarely digs its own burrows and is instead dependent upon the presence of burrowing mammals (i.e., California ground squirrels, coyotes, and badgers) whose burrows are often used for roosting and nesting. The presence or absence of colonial mammal burrows is often a major factor that limits the presence or absence of burrowing owls. Where mammal burrows are scarce, burrowing owls have been found occupying man-made cavities, such as buried and non-functioning drain pipes, stand-pipes, and dry culverts. They also require low growth or open vegetation allowing line-of-sight observation of the surrounding habitat to forage and watch for predators. In California, the burrowing owl breeding season extends from the beginning of February through the end of August.

4.1.1 Methods

Under the MSHCP burrowing owl is considered an adequately conserved covered species that may still require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The project site occurs within the MSHCP burrowing owl survey area and a habitat assessment was conducted for the species to ensure compliance with MSHCP guidelines for the species. 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. The following section describes the methodology followed during the burrowing owl habitat assessment conducted for this project.

- 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 on-site. Two habitat assessments were conducted on November 1, 2021, and February 9, 2023. Upon arrival at the project site, and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to establish 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 on-site. 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, but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

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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. In addition to surveying the entire Project Site all bordering natural habitats located immediately adjacent to the Project Site were assessed. Results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the Project Site. Accordingly, if suitable habitat is documented on-site or within adjacent habitats, both Step II, focused surveys and the 30-day pre-construction surveys are required in order to comply with the MSHCP guidelines.

- 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. The MSHCP protocol indicates that no more than 100 acres should be surveyed per day/per biologist.
 - 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 on November 1, 2021, and February 9, 2023. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 30 meters (approximately 100 feet) apart, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for topography and in general ground surface visibility. Areas providing potential habitat for burrowing owls were surveyed for suitable burrows, consisting of natural and non-natural substrates in areas with low, open vegetation. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.
 - Part B – Focused Surveys: Due to surrounding development to the south, east, and northeast, a zone of influence was not able to be surveyed; however, these areas do not support suitable habitat for burrowing owls. Some areas to the north and west of the project site within 500 feet, support dense vegetation and were determined not to provide suitable habitat. Survey transects on the project site were oriented north to west and were conducted at a maximum of 30-meter (approximately 100 feet) intervals to ensure 100% visual coverage of all areas in suitable habitat on the project site, and within the survey area. The focused burrowing owl surveys were conducted during the recognized timeframe (the breeding season is typically March through August) in the morning one hour before sunrise to two hours after sunrise.

Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. The location of all suitable

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burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed were recorded and mapped, with a hand-held GPS unit, if observed. Methods to detect presence of burrowing owls included direct observation, aural detection, and signs of presence. Binoculars were used to observe distant birds and their activity around potential nesting habitat. During the focused surveys, the survey area was assessed on foot by qualified biologists Jacob H. Lloyd Davies, Rachael A. Lyons, and Megan E. Peukert, who are knowledgeable in the habitats and behavior of burrowing owls.

4.1.2 Results/Impacts

Four focused burrowing owl surveys were conducted on April 22, May 6 and 28, and June 18, 2024. All surveys were completed between 0630 and 1030. The surveys were conducted to document the presence/absence of burrowing owl on the project site. Refer to Table 3, *Survey Data*, for a summary of the survey dates and times, personnel, weather conditions, and general findings.

Table 3: Burrowing Owl Survey Data

Survey No.	Survey Date	Surveyor	Time	Temperature (°F)	Cloud Cover	Wind Speed (mph)	Burrowing Owl Detected On-Site
1	4/22/24	Jacob H. Lloyd Davies, Rachael A. Lyons, Megan E. Peukert	0700-1030	56-67	0%	2-5	No
2	5/6/24	Rachael A. Lyons & Megan E. Peukert	0700-1015	57-63	30%	3-8	No
3	5/28/24	Rachael A. Lyons & Megan E. Peukert	0700-1030	56-67	30%	2-10	No
4	6/18/24	Rachael A. Lyons & Megan E. Peukert	0630-1030	61-73	30%	2-10	No

Based on the results of the 2024 burrowing owl focused surveys, no burrowing owls or evidence of recent or historic use by burrowing owls were observed on the project site. As a result, burrowing owls are presumed to be absent from the project site.

4.1.3 Mitigation and Equivalency

4.1.3.1 Direct Effects

To ensure burrowing owl remain absent from the project site, it is recommended that a 30-day burrowing owl pre-construction clearance survey be conducted in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area* prior to any ground disturbing activities. If burrowing owls and/or birds displaying nesting behaviors are observed within the project site during future construction, further review may be needed to ensure compliance with the MSHCP, MBTA and Fish and Game Code.

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4.1.3.2 Indirect Effects

If no burrowing owls are found onsite during the pre-construction clearance survey, no indirect effects to burrowing owl are expected to occur.

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5 REFERENCES

Google, Inc. 2024. Google Earth Pro version 7.3.6.9796. Build date 2/22/24.

ELMT Consulting Inc. 2024. Habitat Assessment and MSHCP Consistency Analysis for the Proposed Woodcrest Project.

ELMT Consulting Inc. 2024. Delineation of State and Federal Jurisdictional Waters for the Proposed Woodcrest Project.

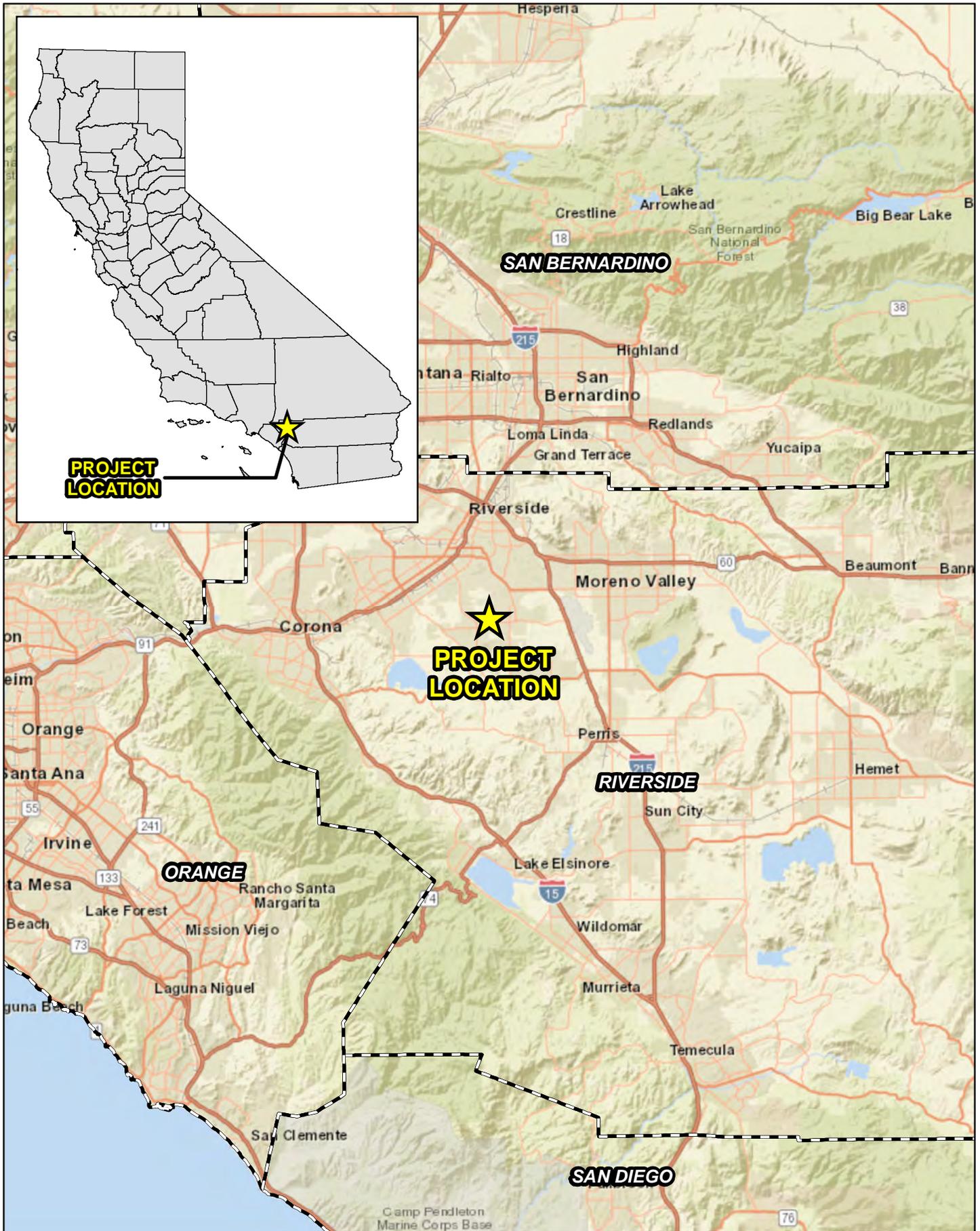
Riverside County. 2003 (June). Final Western Riverside County Multiple Species Habitat Conservation Plan. Available online at <http://www.rcip.org/>.

USFWS (United States Fish and Wildlife Service). 2000. Southwestern Willow Flycatcher Protocol Revision 2000. Sacramento, California: USFWS. <https://www.fws.gov/pacific/ecoservices/endangered/recovery/documents/SWWFlycatcher.2000.protocol.pdf>

USFWS. 2001. Least Bell's Vireo Survey Guidelines. January 19, 2001. Sacramento, California: USFWS. https://www.fws.gov/cno/es/Recovery_Permitting/birds/least_bells_vireo/LeastBellsVireo_SurveyGuidelines_20010119.pdf

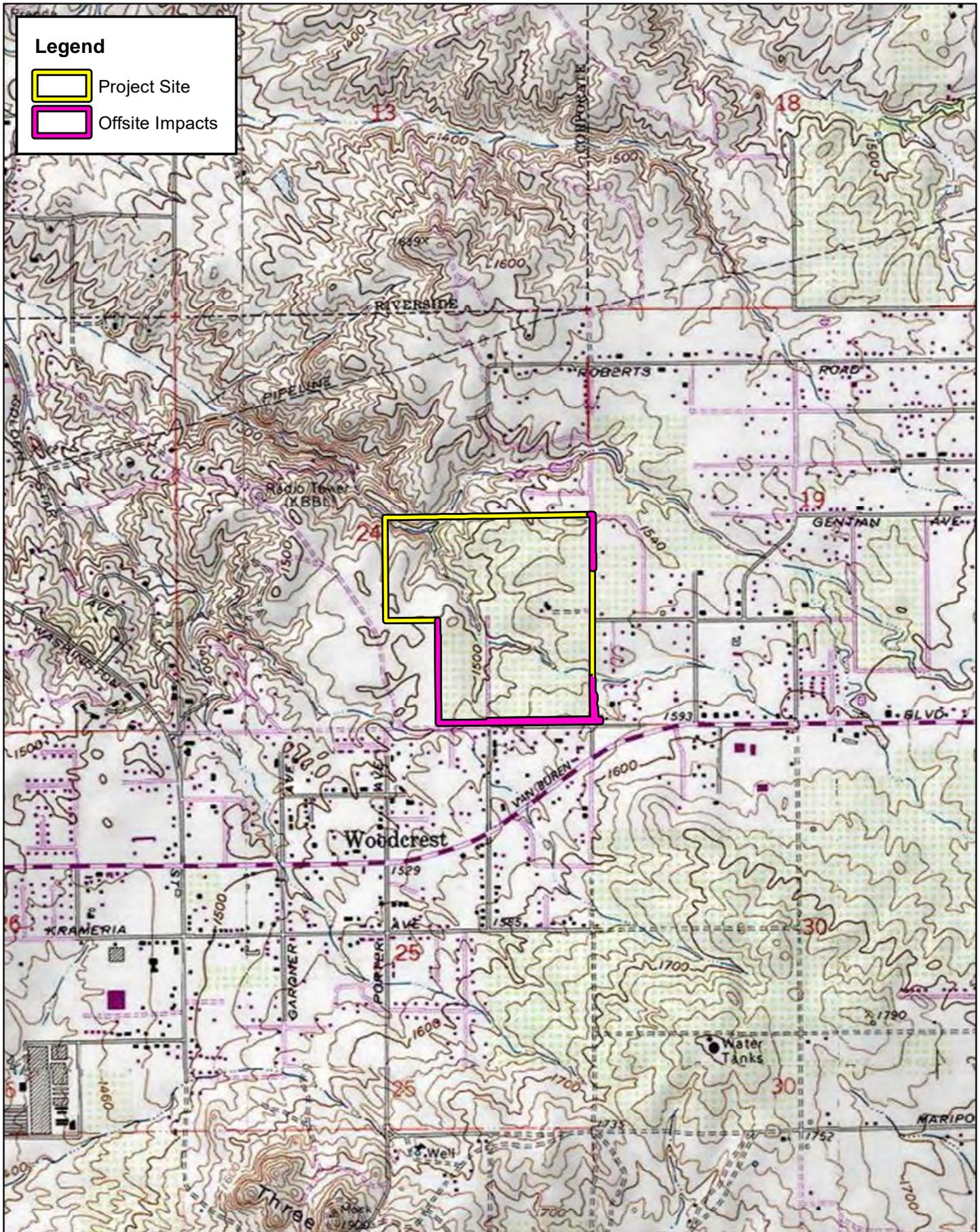
USFWS. 2015. A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-Billed Cuckoo. Prepared by M. Halterman, M.J. Johnson, J.A. Holmes, and S.A. Laymon. Sacramento, California: USFWS. April 2015. https://www.fws.gov/southwest/es/Documents/R2ES/YBCU_SurveyProtocol_FINAL_DRAFT_2Apr2015.pdf

Appendix A Project Exhibits



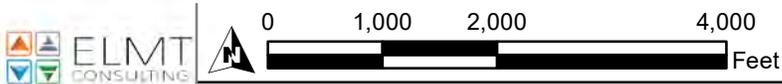
Source: World Street Map, Riverside County

WOODCREST PROJECT
Regional Vicinity



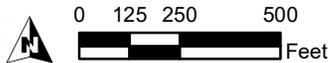
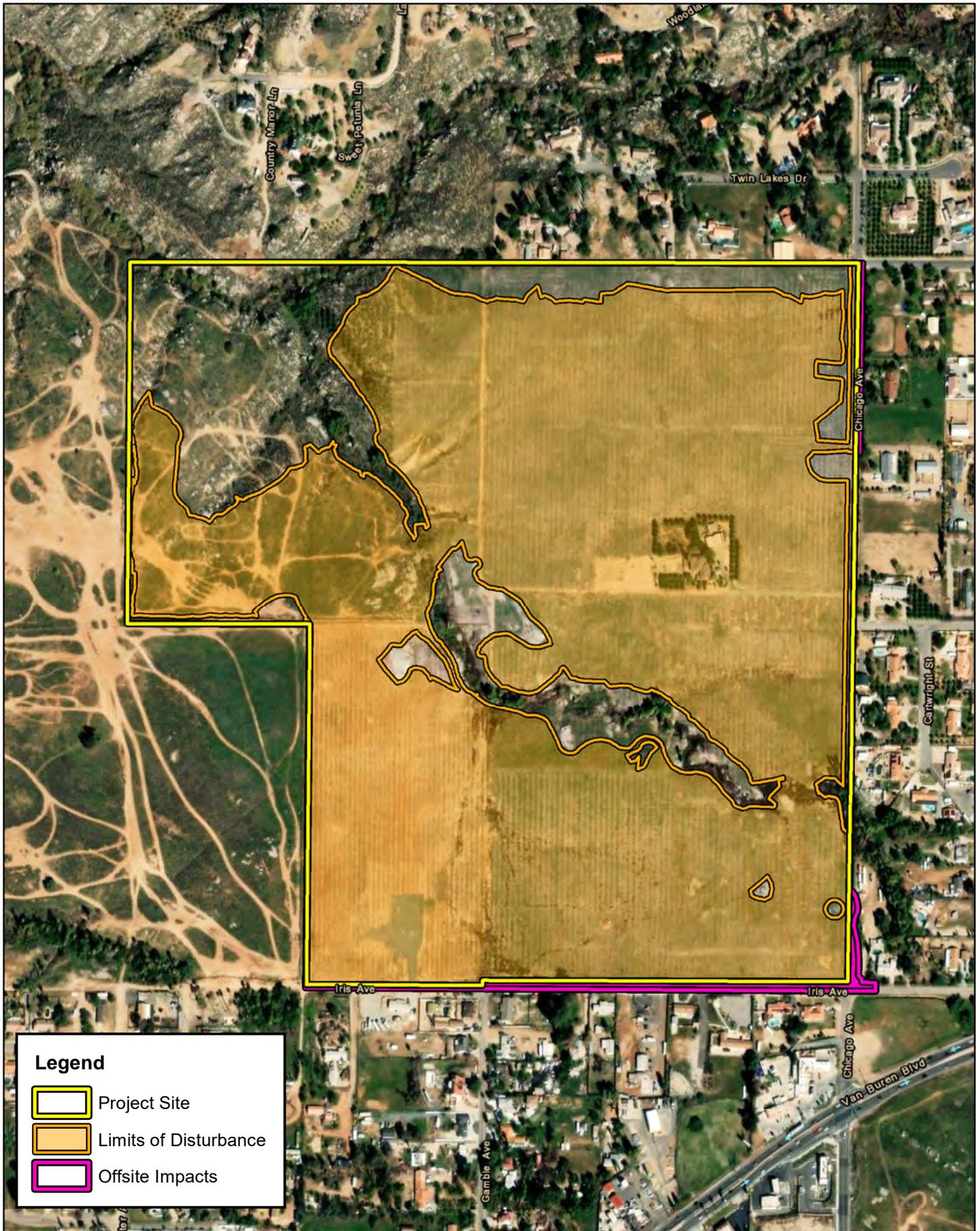
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- Project Site
- Offsite Impacts



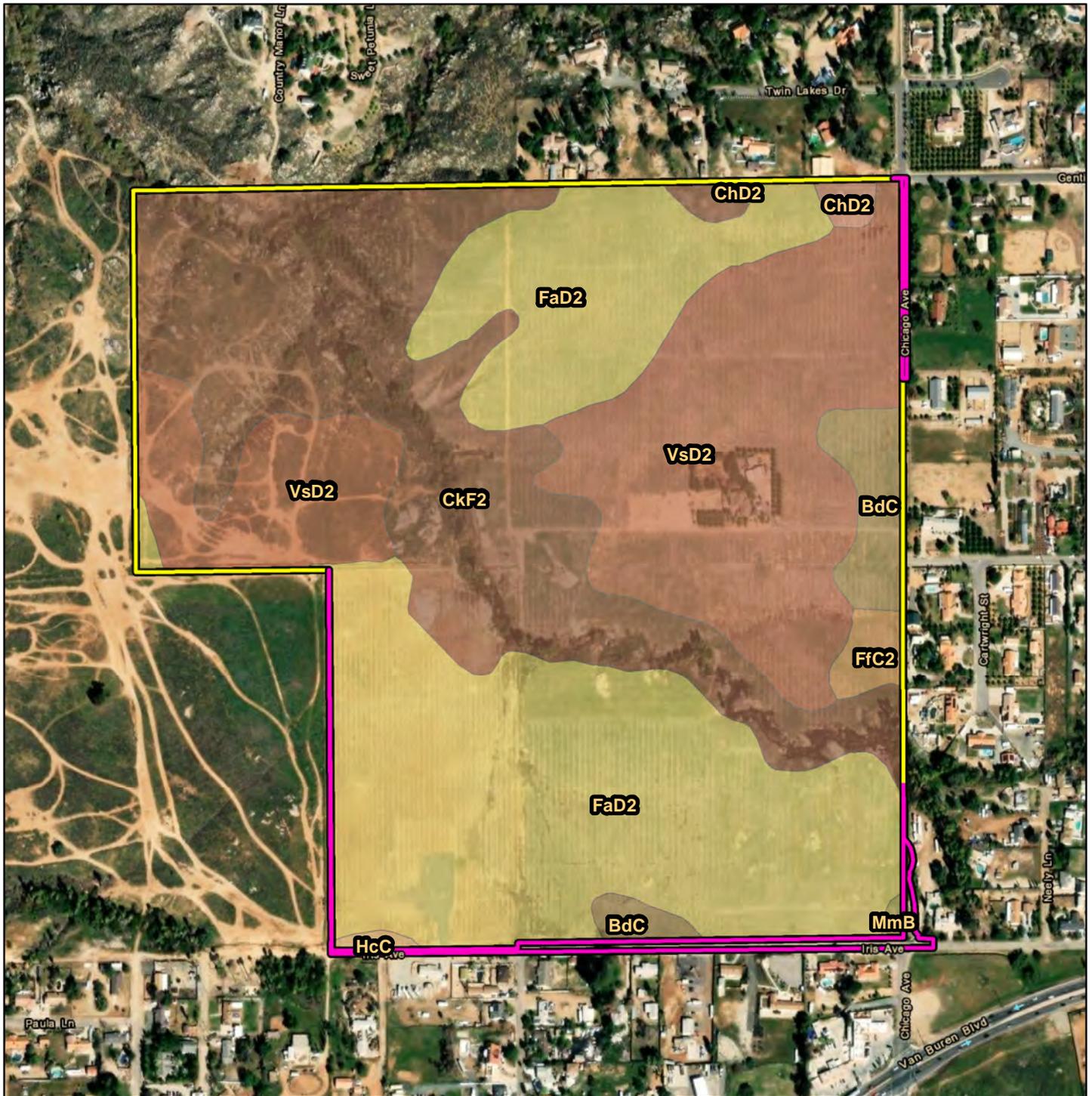
**WOODCREST PROJECT
Site Vicinity**

Source: USA Topographic Map, Riverside County



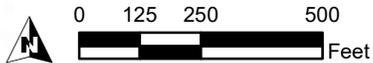
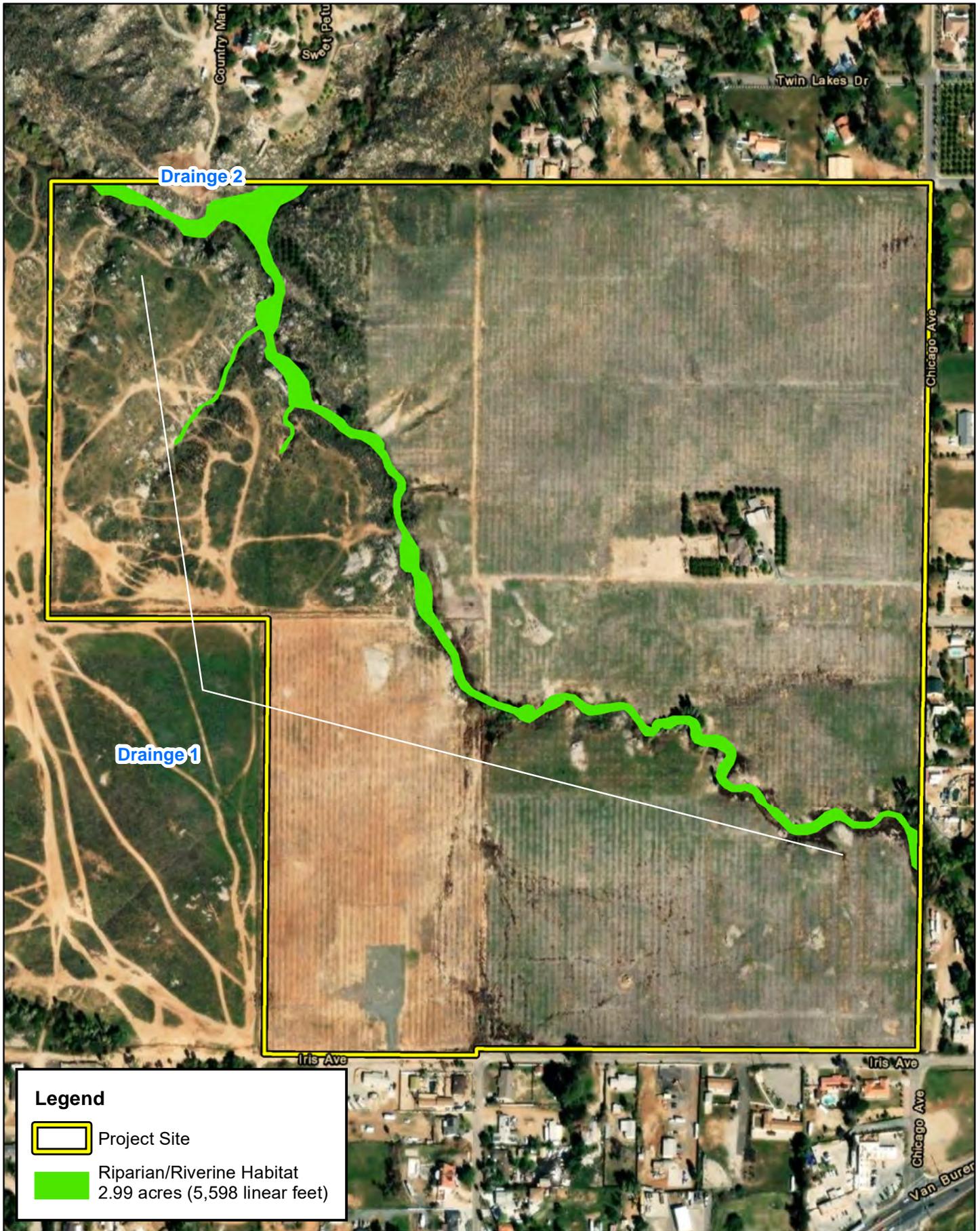
Source: ESRI Aerial Imagery, Riverside County

WOODCREST PROJECT
Project Site



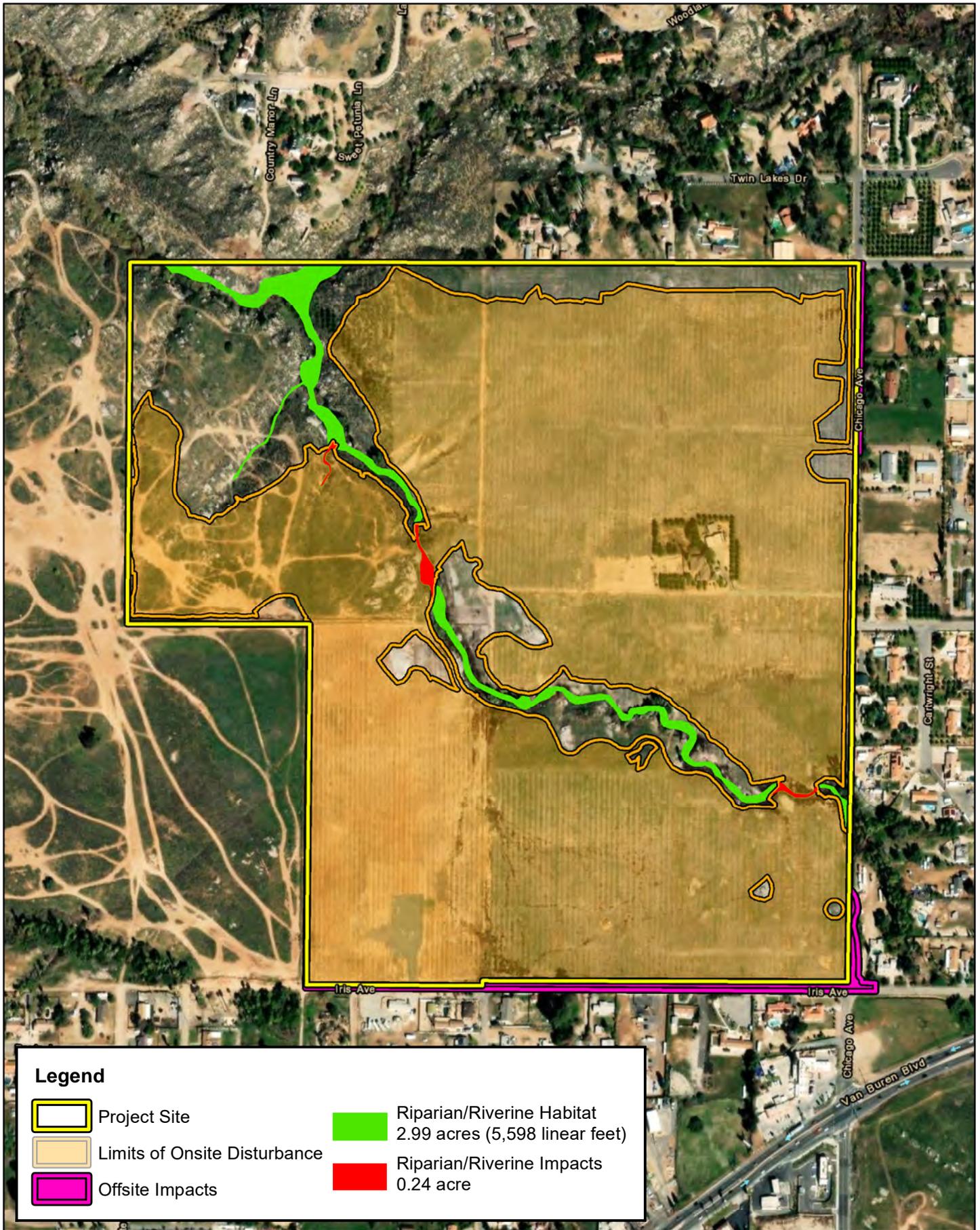
Legend

- | | |
|---|--|
|  Project Site |  Fallbrook sandy loam, 8 to 15% slopes (FaD2) |
|  Offsite Impacts |  Fallbrook fine sandy loam, 2 to 8% slopes (FcC2) |
|  Bonsall fine sandy loam 2 to 8% slopes (BdC) |  Hanford coarse sandy loam, 2 to 8% slopes (HcC) |
|  Cieneba sandy loam, 8 to 15% slopes (ChD2) |  Monserate sandy loam, 0 to 5% slopes (MmB) |
|  Cieneba rocky sandy loam, 15 to 50% slopes (CkF2) |  Vista coarse sandy loam, 8 to 15% slopes (VsD2) |



Source: ESRI Aerial Imagery, Riverside County

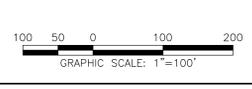
WOODCREST PROJECT
Riparian/Riverine Habitat



Appendix B Site Plan



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RICK
 1770 IOWA AVENUE, SUITE 100
 RIVERSIDE, CA 92507
 951-782-0707
 rickengineering.com

TTLIC CHICAGO AVE
 TENTATIVE TRACT MAP 38510
 CAD BASE FILES

PROJECT NO: 19427-A SCALE: 1"=100'
 DRAWN BY: JMA DATE: 5/13/2024

Appendix C LBVI Survey

RESULTS OF 2024 LEAST BELL'S VIREO & SOUTHWESTERN WILLOW FLYCATCHER SURVEYS RIVERSIDE COUNTY, CALIFORNIA

SURVEYS CONDUCTED MAY 11-JULY 11, 2024

PERFORMED BY:		
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AUGUST 5, 2024

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INTRODUCTION

Kidd Biological, Inc. (KBI) was contracted by to conduct protocol breeding season surveys for the southwestern willow flycatcher (*Empidonax traillii* extimus, SWFL) and least Bell's vireo (*Vireo bellii pusillus*, LBVI) on approximately 20 acres of suitable habitat in Woodcrest, California. The surveys were performed to satisfy requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), under which SWFL and LBVI are considered covered species. In addition, under 6.1.2 of the MSHCP, surveys for these species must be conducted when there is potential for impacts to riparian habitats. The surveys followed protocol established for these species by the U.S. Fish and Wildlife Service (USFWS). Biologists Angela Johnson (ES 59592B-3) conducted three protocol SWFL surveys, and Jill Coumoutso (TE-93824C-0) conducted two protocol SWFL surveys. LBVI surveys were conducted by the above-mentioned biologists and by Jason Berkley. It should be noted a permit is not required to perform LBVI surveys.

PROJECT DESCRIPTION

TTL Management proposes to develop a Tentative Tract Map (No. 38510) with 232 residential lots.

SURVEY LOCATION

The survey area is in an unnamed drainage feature that is southeast of the Woodcrest Dam in the Community of Woodcrest in western Riverside County. It is located in Section 24 of Township 3 South, Range 5 West of the Riverside East, California U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle map (Figure 1). More specifically, the site is located east of Interstate 15, west of Interstate 215, southwest of Highway 91 and northwest of Highway 74 (Ortega Highway), and is northwest of the intersection of Van Buren Boulevard, Iris Avenue and Chicago Avenue (Figure 2).

HABITAT DESCRIPTION

The approximately 20-acre survey area is in a mixed residential area of an unincorporated area known as "Woodcrest". This area supports a mix of equestrian "ranchettes" (rural residential) as well as smaller single-family home parcels. This area was primarily used for citrus groves in the past. In recent years, the area has become more developed with housing tracts being constructed to the south and is now a suburb of the Cities of Riverside, Corona and Moreno Valley. There are

greenbelts between the tracts of homes that support native and naturalized vegetation communities.

The “Project Site” is 115.63 acres. The majority of the site, 104 acres, is comprised of non-native grasslands. The rest of the site supports: Riversidean sage scrub (7.62 acres), and southern willow scrub (2.90 acres). The remaining areas are classified as disturbed and developed.

The drainage feature that bisects the project site primarily supports a southern willow scrub plant community. This plant community is dominated by arroyo willow (*Salix lasiolepis*) and black willow (*S. goodingii*) and supports a variety of other trees and shrubs with an herbaceous understory. Other common species observed in the southern willow scrub plant community include Mexican fan palm (*Washingtonia robusta*), salt cedar (*Tamarix* sp.), giant creek nettle (*Urtica dioica*), mule fat (*Baccharis salicifolia*), elderberry (*Sambucus mexicana* [*S. caerulea*]), bowlesia (*Bowlesia incana*), California bee plant (*Scrophularia californica*), common phacelia (*Phacelia distans*), Douglas' nightshade (*Solanum douglasii*), goldfields (*Lasthenia glabrata*), hairy leaved sunflower (*Helianthus annuus*), London rocket (*Sisymbrium irio*), needle goldfields (*Lasthenia gracilis*), stinknet (*Oncosiphon pilulifer*), virgin's bower (*Clematis pauciflora*), barley (*Hordeum murinum*), and willow baccharis (*Baccharis salicina*).

The presence of riparian vegetation suggests that this habitat has the potential to support both riparian least Bell’s vireo and Southwestern Willow Flycatcher, however the proximity of residential development and the presence of recreational hiking and off-road trails, likely limits the use of this area for nesting by the SWFL which are less tolerant of human disturbance. The site does not support riparian forest habitat that is suitable for the Yellow Billed Cuckoo (*Coccyzus americanus*).

SOUTHWESTERN WILLOW FLYCATCHER

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

The SWFL is a small, insectivorous passerine that migrates north in the spring from South America, Mexico, and Central America, to breed in the southwestern desert riparian habitats of California, Arizona, New Mexico, and Texas. Within western Riverside County there are very few reported occurrences with the majority occurring within the Prado Basin. The most current estimated number of range-wide flycatcher territories is 1,299 (288 breeding pairs) (USFWS 2014, Durst et al. 2008).

The SWFL occurs in riparian woodland habitat that is characterized by a dense growth of willows, mulefat, arrowweed (*Pluchea* sp.), cottonwood, sycamore (*Platanus* sp.), and tamarisk. In

addition to willow riparian woodland, the SWFL also nests in coast live oak woodland on the upper San Luis Rey River, San Diego County, California, in dense stands of tamarisk on the lower Colorado River, Imperial and Riverside Counties, California. Surface water or saturated soils are usually present in or adjacent to nesting thickets. The loss of habitat and parasitism by cowbirds are thought to be the major reasons for the declining numbers of SWFL (Pike et al, 2004, Kus 2002). The southwestern subspecies of willow flycatcher was federally listed as endangered in February 1995 (USFWS 1995). Critical habitat was established in 2005, and then revised in 2013. California Department of Fish and Wildlife (CDFW) determined that all subspecies in California are endangered under the California Endangered Species Act. Determining subspecies is based on the region the flycatcher is found breeding as they are nearly indistinguishable by site or call.

SWFL SURVEY METHODS

Presence/absence surveys were conducted according to the July 11, 2000 revised protocol for project-related surveys and the general guidelines described by Sogge *et al.* (2010). All potential SWFL habitat and riparian areas within the survey area were surveyed five (5) times: one (1) visit during the 1st Survey Period (May 15 to May 31), two (2) visits during the 2nd Survey Period (June 1 to June 24), and two (2) visits during the 3rd Survey Period (June 25 to July 17). Each visit was at least five (5) days apart. Surveys of the sites were conducted during morning hours and when the temperature exceeded 13°C (55°F). Less than 1.9 miles (3 km) of habitat were surveyed per day. Surveys for the SWFL were conducted concurrently with those for the LBVI when schedules allowed, however the survey for each species was done on separate passes (e.g. LBVI was surveyed from the south to north transect, while SWFL were surveyed for during the north to south transect).

Surveys were conducted within all potential habitat patches. If a singing SWFL was not heard in an area after one to two minutes, a permitted biologist played a taped vocalization for 15 to 30 seconds and observed the area for responding SWFLs. This was repeated every 20 to 30 meters. If a SWFL was detected, tape playing was discontinued.

Any SWFL observations would be recorded in a field data form (found in Appendix C), and GPS readings of the locations were taken during the surveys. If this species was observed, their behavior, numbers, and locations of paired or unpaired birds; ages; and sexes of encountered SWFL would be noted. The biologist also checked for leg bands.

LEAST BELL'S VIREO

SPECIES DESCRIPTION, DISTRIBUTION, AND STATUS

The LBVI is a small greenish-gray songbird with a white underbelly, two white wingbars, and white spectacles across the lores. The LBVI was once widespread throughout the Central Valley and other low elevation river valleys of California. Historically, the LBVI's breeding range extended from the interior of northern California to northwestern Baja California (Grinnell and Miller 1944). The LBVI typically prefers riparian areas dominated by willows of mixed age composition. These areas frequently include other trees such as western cottonwood and California sycamore, with a. It has been noted that the most critical structural component of LBVI's habitat in California was the presence of a dense understory of young willows, mulefat, California wild rose (*Rosa californica*), and a variety of other shrubby species (Goldwasser 1981, Franzreb 1989). Territory sizes of LBVI in California have been reported to range from 0.3-1.3 hectares (0.75-3.2 acres) (Kus, et al. 2010). It was noted by Newman (1992) that "variability in territory size was unrelated to vegetation structure, and did not influence reproductive success of pairs in Southern California."

Within western Riverside County the core populations are primarily Prado Basin and the Santa Ana River, with other smaller populations in Temescal Wash (including Alberhill Creek), Mockingbird Canyon, Murrieta Creek, Temecula Creek, Lake Skinner (including Rawson Canyon), Vail Lake, Wilson Creek, and San Timoteo Canyon. According to the MSHCP "other geographic locations that are recorded within the UC Riverside database and by the USFWS include: Lake Elsinore, March Air Reserve Base, Meadowbrook, Canyon Lake, De Luz Creek, Potrero Creek, Bautista Creek, and Reche Canyon (USFWS 1998, CNDDDB 2024)."

Loss and degradation of breeding habitat has been the greatest contributor to the decline of the LBVI and SWWF. Habitat conversion for agricultural purposes has removed much of the original riparian woodland, and flood control measures and channelization have further depleted the riparian habitats used by the LBVI and SWWF as well as other riparian birds. Another major contributing factor to the decline of the LBVI and SWWF was the introduction of the brown-headed cowbird (*Malothrus ater*) to California around 1890. Estimates from a 1989 study concluded that anywhere from 47% to 100% of all LBVI nests contained cowbird eggs (Franzreb 1989). The significant reduction in the population size and range of the vireo resulted in it being listed as a state endangered species in June 1980, and federally listed as endangered in May 1986. Critical Habitat for this species was designated in 1994; however, no critical habitat occurs within the survey areas.

LBVI SURVEY METHODS

Presence/absence surveys were conducted according to the USFWS *Least Bell's Vireo Survey Guidelines* (2001). All potentially suitable LBVI habitat within the survey areas were surveyed seven (7) times between April 11 and July 15, 2024 with at least 10 days between survey visits for each site. The surveys were conducted during the morning hours during appropriate weather conditions. Some survey days continued into the early afternoon if weather conditions and bird activity remained conducive for bird detection. Less than three linear kilometers (km) (1.9 miles) of habitat were surveyed per day. LBVI surveys were conducted passively, listening for vireo songs, calls, whisper songs, scolds and visually looking for adults and juveniles. Any nesting behavior was also noted. Because LBVI were determined to be present in the project area and the surveyors were confident in the territory numbers, a final 8th survey was not performed.

LBVI observations were recorded in a field notebook, and GPS readings of the locations were taken during the surveys. If an exact point could not be taken, estimated points were determined post-survey. Numbers and locations of paired or unpaired territorial males, and the ages and sexes of encountered vireos (when discernible) were noted. Individual LBVI were also checked for colored leg bands.

RESULTS

Surveys for LBVI and SWFL were conducted in all suitable habitat by permitted biologist's Jason Berkley, Angela Johnson and Jill Coumoutso between May 11 and July 11, 2024. Surveys were conducted where it was determined to support suitable habitat. Based on the level of effort and environmental conditions all surveys were considered valid as they followed published protocols. No SWFL were detected during the 2024 season.

A brief description of SWFL/LBVI survey results for the survey area is provided below. Data sheets for each of the SWFL surveys can be found in Appendix C.

TABLE 1. SURVEY CONDITIONS

Survey #	Date	Surveyor	Start Time	Stop Time	Weather	Temp. Range (°F)	# SWFL Detected	# LBVI Detected
1	5/11/24	JB	0730	1030	0-100% CC, wind 1-2 mph	56-67	N/A	3
*2	5/21/24	JC	0600	0945	95-100% CC, wind 0-1 mph	55-61	0	4

*3	5/31/24	AJ	0645	1000	80-100% CC, (fog) wind 1-2 mph	56-62	0	5
*†4	6/10/24	AJ	0655	1100	30-100% CC, Wind 1-2 mph	58-64	0	5
*5	6/21/24	AJ	0609	1015	0% CC, Wind 1-4 mph	63-74	0	5
*6	7/3/24	JC	0557	0906	0% CC, wind 0-1 mph	66-80	0	6
7	7/11/24	AJ	0545	0945	30-50% CC, Wind 1-4 mph	67-80	N/A	5

* Indicates LBVI and SWFL surveys conducted on the same day.

† Indicates SWFL surveys ended at 1030 protocol time, as LBVI surveys continued after

TABLE 2. LBVI LOCATIONS (UTM- ZONE 11S)

LBVI Territory	Easting	Northing
LBVI 1 (off site)	467219	3750459
LBVI 2	467131	3750472
LBVI 3	467155	3750394
LBVI 4	467213	3750281
LBVI 5	467285	3750157
LBVI 6	467389	3750017
When LBVI were detected in multiple locations, only the central point of the polygon is given.		

All three surveyors noted at least 6 territories during the course of the surveys. Figure 2 illustrates the locations of the territories. One territory is just offsite to the north of the project boundaries. The birds from this territory did appear to forage into the subject property boundaries.

There were two other questionable detections, one just to the northwest of the survey area. Here, a male was seen foraging in a small stand of willows, likely a seep or spring. The male was seen

flying to the northeast, back to the mail drainage feature. It could not be determined if this was the male from Territory 2, or a male from a separate, off-site territory.

The second is a male that was detected during more than one survey, but not during all surveys at the southeast portion of the site. This male may have a territory off site to the east, or it may be a male from Territory 6, or it may have been attempting to establish a territory but failed to do so and moved to another area.

OTHER LISTED AND SENSITIVE SPECIES OBSERVED

This survey focused on two species, the LBVI and SWFL; however, incidental observation(s) of all federal listed and state listed/sensitive species were documented. A total of eight (8) sensitive species were observed. Table 3 describes these. Of note, there were three California gnatcatcher territories documented.

There are various definitions of “sensitive” in accordance with State and Federal Agencies. The following is a brief summary of the status of the species that were observed on site (all definitions were taken directly from the CDFW Biogeographic Data Branch’s Special Animals list [July 2024] unless otherwise indicated):

U.S. Fish and Wildlife Service Federally Endangered (FE): The classification provided to an animal or plant in danger of extinction within the foreseeable future throughout all or a significant portion of its range as defined in the Endangered Species Act.

U.S. Fish and Wildlife Service Federally Threatened (FT): Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range as defined in the Endangered Species Act.

CDFW State Endangered (SE): 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. Any species determined by the commission as “endangered” on or before January 1, 1985, is an “endangered species.”

CDFW California Species of Special Concern (SSC): The Department has designated certain vertebrate species as “Species of Special Concern” because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of

designating species as “SSC” is to halt or reverse their decline early enough to secure their long-term viability.

CDFW: Watch List (WL): The birds on this Watch List are 1) not on the current Special Concern list but were on previous lists and they have not been state listed under CESA; 2) were previously state or federally listed and now are on neither list; or 3) are on the list of “Fully Protected” species.

TABLE 3. OTHER LISTED OR SENSITIVE SPECIES OBSERVED

Common Name	Scientific Name	Status
Bell’s sparrow	<i>Artemisiospiza belli belli</i>	WL
California gnatcatcher	<i>Polioptila californica</i>	FT, SSC
California horned lark	<i>Eremophila alpestris</i>	WL
Cooper’s hawk	<i>Accipiter cooperi</i>	WL
So. California Rufous-crowned sparrow	<i>Aimophila ruficeps canescens</i>	WL
Yellow warbler	<i>Setophaga petechial</i>	SSC
San Diego Black-tailed Jackrabbit	<i>Lepus californicus bennettii</i>	SSC

BROWN-HEADED COWBIRDS AND INVASIVE SPECIES

Brown-headed cowbirds (*Molothrus ater*) (BHCO) were detected during three (3) of the surveys in 2024. They were observed on 5/31, 6/10, on 6/21 with juvenile BHCO being observed on the 6/21 survey. No cowbird traps were noted at the survey site. Nest searches were not performed, so it is not known if the BHCOs parasitized LBVI nests.

There were five invasive plant species within the survey area: Arundo (*Arundo donax*), salt cedar (*Tamarisk* sp.), Peruvian pepper (*Schinus molle*), tree tobacco (*Nicotiana glauca*) and Mexican fan palms (*Washingtonia robusta*). None of these species was found to be heavily abundant in the survey area except for a grove of Mexican fan palms at the south end of the survey area. Salt

cedar was found scattered throughout the survey area, and although an invasive plant, it is regularly used by SWFLs and other riparian birds for foraging and nesting.

Although this species out-competes native plant species, the small extent of salt cedar in this area does not likely have a significant impact on the population of sensitive birds in the area. However, if salt cedar should spread and dominate a substantial portion of the southern willow scrub in the surrounding area, the diversity of invertebrates in the willow riparian habitat may decline. The result of decreased abundance and diversity of invertebrates likely affects species at higher trophic levels (Baily et al 2001).

CONCLUSION

No SWFL were detected during the 2024 surveys. A total of six (6) LBVI territories were found within the study area. At least four fledglings were observed during the surveys indicating that this riparian habitat is substantial enough and productive enough to support breeding and is possibly valuable for the species in the region. Additionally, the biologists detected three California gnatcatcher territories in the sage scrub habitat immediately surrounding the survey area.

Other sensitive species detected included Cooper's hawk, yellow warbler, Bell's sparrow, California horned lark, southern California rufous-crowned sparrow, California gnatcatcher, and black-tailed jackrabbit.

CERTIFICATION

I certify that the information in this survey report and attached exhibits, fully and accurately represent my work.

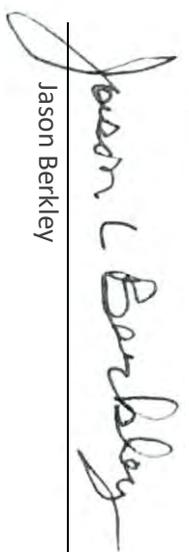
Date: August 5, 2024 Signed: _____


Angela Johnson ES 59592B-3

Date: August 5, 2024 Signed: _____


Jill Koumoutso TE 93824C-0

Date: August 5, 2024 Signed: _____


Jason Berkeley

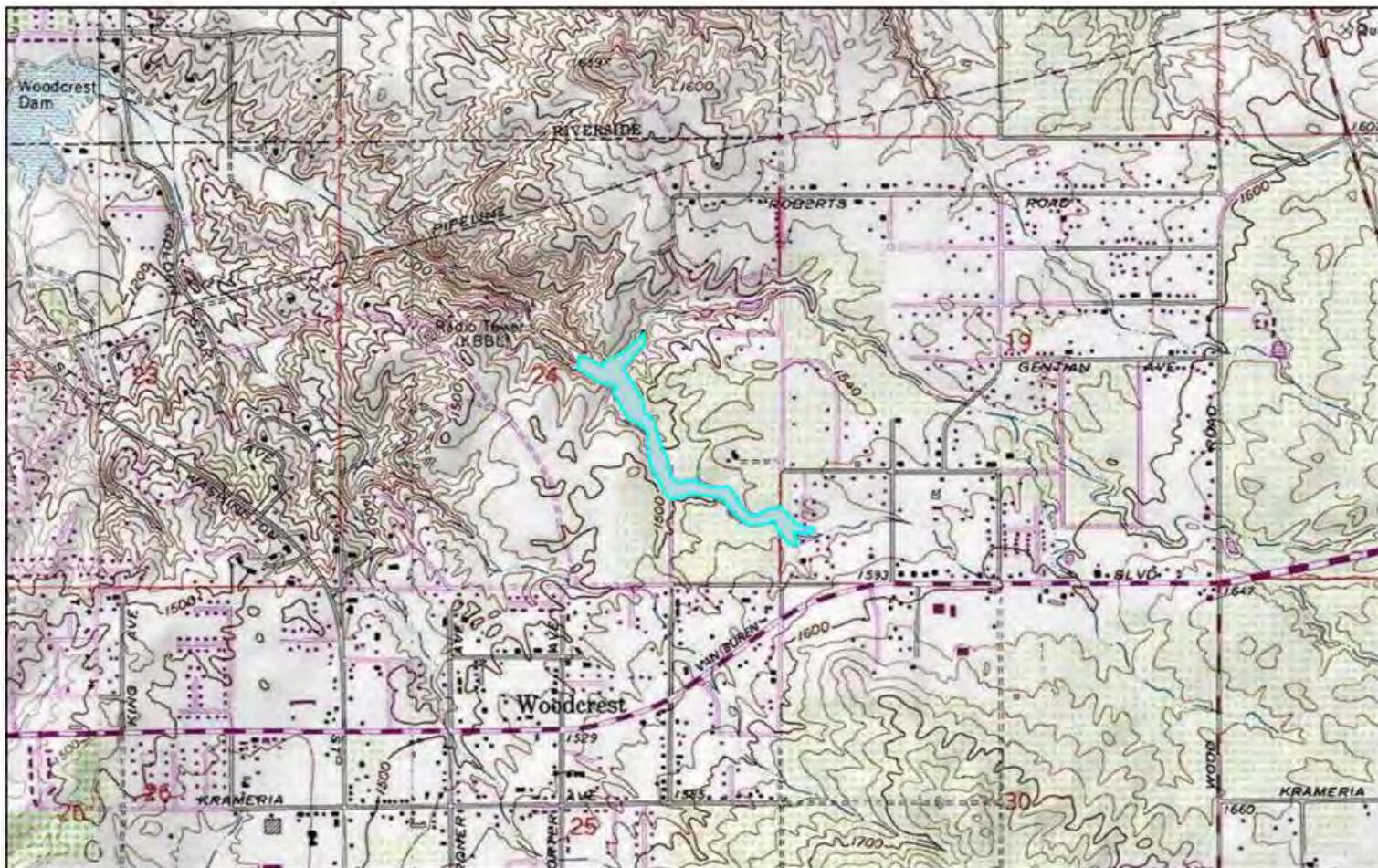
References

- Baily, J.K., J.A. Schweitzer, T.G. Whitman. 2001. *Note- Salt Cedar Negatively Affects Biodiversity of Aquatic Macroinvertebrates*. Wetlands (Society of Wetland Scientists) Vol. 21, No. 3. Pp 442-447
- Browning, M.R. 1993. Comments on the taxonomy of *Empidonax traillii* (Willow Flycatcher). Western Birds 24: 241-257
- Busch, D.E. and S.D. Smith. 1995. Mechanisms associated with decline of woody species in riparian ecosystems of the southwestern US. Journal of Ecological Monographs Vol. 65, No. 3. Pp 347-370
- California Department of Fish and Wildlife (CDFW)- Biogeographic Data Branch. Special Animals List July 2024
- Durst, S.L., M.K. Sogge, H.C. English, H.A. Walker, B.E. Kus, and S.J. Sferra. 2008. Southwestern willow flycatcher breeding site and territory summary – 2007. U.S. Geological Survey, Colorado Plateau Research Station, Flagstaff, AZ.
- Grinnell, J., and Miller, A. H. 1944. *The Distribution of the Birds of California*. Pacific Coast Avifauna No. 27. Cooper Ornithological Club. Berkeley, CA
- Holland, R.F. 1986. Preliminary Descriptions of the Terrestrial Natural Communities of California. Nongame-Heritage Program. California Department of Fish and Game, Sacramento, California.
- Halterman, M.D. 1999. Draft Western Yellow-billed Cuckoo Natural History Summary and Survey Methodology. Southern Sierra Research Station, Weldon, CA.
- Halterman, M.D., M.J. Johnson, J.A. Holmes and S.A. Laymon. 2015. A Natural History Summary and Survey Protocol for the Western Distinct Population Segment of the Yellow-billed Cuckoo: U.S. Fish and Wildlife Techniques and Methods, 45 p.
- Laymon, S.A., P.L Williams, and M.D. Halterman. 1997. Breeding status of the yellow-billed cuckoo in the South Fork Kern River Valley, Kern County, California: Summary Report 1985-1996. Admin. Report USDA Forest Service, Sequoia National Forest, Cannell Meadow Ranger District, Challenge Cost-share Grant #92-5-13.
- Laymon, S.A. 1998. Yellow-billed Cuckoo survey and Monitoring Protocol for California. Unpublished.
- Parris, K. M., and A. Schneider 2008. Impacts of traffic noise and traffic volume on birds of roadside habitats. Ecology and Society 14(1): 29.
- Paxton, E.H. 2000. Molecular Genetic Structuring and Demographic History of the Willow Flycatcher. Masters Thesis, Northern Arizona University.

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- Pike, J.E., D. Pellegrini, L. Hays and R. Zembal. 2004. *Least Bell's Vireos and Southwestern Willow Flycatchers in Prado Basin of the Santa Ana River Watershed, CA*. (130 kb). This document was produced by the Orange County Water District and U.S. Fish and Wildlife Service
- Riverside County (Calif.). Transportation and Land Management Agency, Dudek & Associates. 2003. Final MSHCP: Western Riverside County Multi Species Habitat Conservation Plan (MSHCP).
- Sogge, M.K., Ahlers, Darrell, and S.J. Sferra. 2010. A natural history summary and survey protocol for the southwestern willow flycatcher. U.S. Geological Survey Techniques and Methods 2A-10.
- Sogge, M.K., Tibbitts, T.J., van Riper, C., and May, T., 1995, Status of the Southwestern Willow Flycatcher along the Colorado River in Grand Canyon National Park—1995, Summary report: National Biological Service Colorado Plateau Research Station/Northern Arizona University, 26 p.
- Unitt, P. 1987. *Empidonax traillii* extimus: an endangered subspecies. *Western Birds* 18: 137-162
- U.S. Fish and Wildlife Service. 1995. Final Rule Determining Endangered Status for the Southwestern Willow Flycatcher: Federal Register 60:10694 (February 27, 1995).
- U.S. Fish and Wildlife Service. 2002. Southwestern Willow Flycatcher Recovery Plan, Region 2, Albuquerque, NM.
- U.S. Fish and Wildlife Service. 2015. *Endangered Species Glossary* Accessed August 25, 2015. <http://www.fws.gov/Midwest/Endangered/glossary/index.html>
- U.S. Geological Survey (USGS). 2014. Southwestern willow flycatcher web site. <Http://sbsc.wr.usgs/cprs/research/projects/SWFL/cprsmain.asp>. U.S. Geological Survey, Colorado Plateau Research Station, Flagstaff, AZ.
- Whitfield, M.J., and Enos, K., 1996, A Brown-headed Cowbird control program and monitoring for the Southwestern Willow Flycatcher, South Fork Kern River, California, 1996: Report to the U.S. Army Corps of Engineers, Sacramento District and the California Department of Fish and Game.
- Zembal, R. 2015. Personal communication between R. Zembal, Natural Resources Director of the Orange County Water District regarding 2014 and 2015 observations of SWFL at Prado Basin. Email dated September 1, 2015

APPENDIX A- FIGURES

FIGURE 1. SURVEY LOCATION ON RIVERSIDE EAST, CA USGS TOPOGRAPHIC MAP (1:24,000 SCALE)



5/7/2024, 3:48:36 PM

 Survey Area

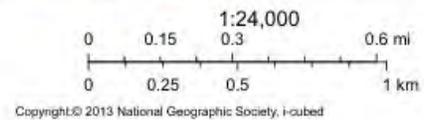
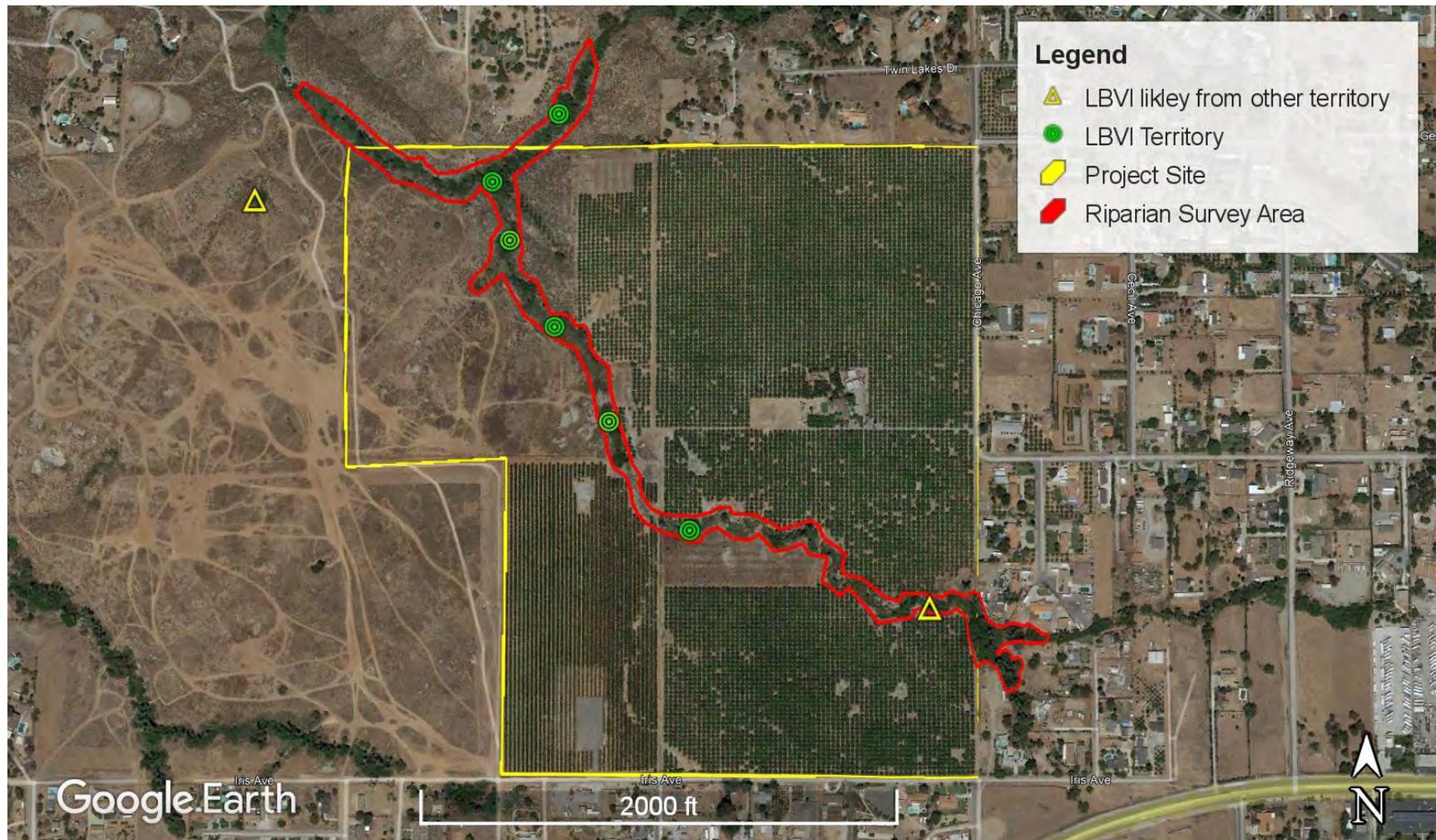


FIGURE 2. AERIAL PHOTO OF SURVEY LOCATION AND LBVI OBSERVATIONS



APPENDIX B- FAUNAL COMPENDIUM

AVES

- Allen's Hummingbird (*Selasphorus sasin*)
- American Crow (*Corvus brachyrhynchos*)
- American Goldfinch (*Spinus tristis*)
- American Kestrel (*Falco sparverius*)
- American Robin (*Turdus migratorius*)
- Anna's Hummingbird (*Calypte anna*)
- § Bell's Sparrow (*Artemisiospiza belli belli*)
- § Bell's Vireo (Least) (*Vireo bellii pusillus*)
- Bewick's Wren (*Thryomanes bewickii*)
- Black-chinned Hummingbird (*Archilochus alexandri*)
- Black-headed Grosbeak (*Pheucticus melanocephalus*)
- Black Phoebe (*Sayornis nigricans*)
- Brown-headed Cowbird (*Molothrus ater*)
- Blue Grosbeak (*Passerina caerulea*)
- Bushtit (*Psaltriparus minimus*)
- § California Gnatcatcher (*Polioptila californica*)
- § California Horned Lark (*Eremophila alpestris actia*)
- California Quail (*Callipepla californica*)
- California Scrub-Jay (*Aphelocoma californica*)
- California Thrasher (*Toxostoma redivivum*)
- California Towhee (*Melospiza crissalis*)
- Cassin's Kingbird (*Tyrannus vociferans*)
- Cliff Swallow (*Petrochelidon pyrrhonota*)
- Common Raven (*Corvus corax*)
- Common Yellowthroat (*Geothlypis trichas*)
- § Cooper's Hawk (*Accipiter cooperii*)

- Great Horned Owl (*Bubo virginianus*)
- Greater Roadrunner (*Geococcyx californianus*)
- Hooded Oriole (*Icterus cucullatus*)
- House Finch (*Haemorhous mexicanus*)
- * House Sparrow (*Passer domesticus*)
- House Wren (*Troglodytes aedon*)
- Killdeer (*Charadrius vociferus*)
- Lesser Goldfinch (*Spinus psaltria*)
- Mourning Dove (*Zenaida macroura*)
- Northern Flicker (Red-shafted) (*Colaptes auratus* [cafer Group])
- Northern Mockingbird (*Mimus polyglottos*)
- Northern Rough-winged Swallow (*Stelgidopteryx serripennis*)
- Nuttall's Woodpecker (*Dryobates nuttallii*)
- Phainopepla (*Phainopepla nitens*)
- Red-shouldered Hawk (*Buteo lineatus*)
- Red-tailed Hawk (*Buteo jamaicensis*)
- § Rufous-crowned Sparrow (*Aimophila ruficeps*)
- Say's Phoebe (*Sayornis saya*)
- * Scaly-breasted Munia (*Lonchura punctulata*)
- Song Sparrow (*Melospiza melodia*)
- Spotted Towhee (*Pipilo maculatus*)
- White-throated Swift (*Aeronautes saxatalis*)
- Wrentit (*Chamaea fasciata*)
- § Yellow Warbler (*Setophaga petechia*)

MAMMALIA

- § San Diego black-tailed jackrabbit (*Lepus californicus bennettii*)
- California Ground Squirrel (*Otosperophilus beecheyi*)

Coyote (<i>Canis latrans</i>)
Desert Cottontail (<i>Sylvilagus audubonii</i>)
<u>REPTILIA</u>
Granite Spiny Lizard (<i>Sceloporus orcutii</i>)
Western Fence Lizard (<i>Sceloporus occidentalis</i>)
Western Side-blotched Lizard (<i>Uta stansburiana elegans</i>)

*Introduced Species

§ Sensitive- Watch List Species

Taxonomic nomenclature follows American Ornithologists 'Union 1998 and all updates for birds, and California Department of Fish and Wildlife's, Natural Diversity Database, April 2024 for special-status.

APPENDIX C- SWFL SURVEY DETECTION FORMS

Appendix 1. Willow Flycatcher Survey and Detection Form

Always check the U.S. Fish and Wildlife Service Arizona Ecological Services Field Office web site (<http://www.fws.gov/southwest/es/arizona/>) for the most up-to-date version.

Willow Flycatcher (WFL) Survey and Detection Form (revised April 2010)

Site Name SE of Woodcrest Dam State CA County Riverside
 USGS Quad Name Riverside East Elevation 455 (meters)
 Creek, River, Wetland, or Lake Name Unnamed Drainage
 Is copy of USGS map marked with survey area and WFL sightings attached (as required)? Yes No

Survey Coordinates: Start: E: 466878 N: 3750556 UTM Datum 11 (See instructions)
 Stop: E: 467843 N: 3749880 UTM Zone 5

If survey coordinates changed between visits, enter coordinates for each survey in comments section on back of this page.

**** Fill in additional site information on back of this page ****

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WFLs	Estimated Number of Territories	Nest(s) Found? Y or N If Yes, number of nests	Comments (e.g., bird behavior; evidence of pairs or breeding; potential threats (livestock, cowsbirds, <i>Dryobates</i> spp.); if <i>Dryobates</i> found, contact USFWS and State WFL coordinator	GPS Coordinates for WFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
						# Birds	Sex	UTM E	UTM N
Survey # 1 Observer(s) A. Johnson	Date <u>6/10/24</u> Start <u>0645</u> Stop <u>1050</u> Total hrs <u>3.6</u>	<u>0</u>			<u>2 BHCO present. 1 Adult and 1 juvenile</u>				
Survey # 2 Observer(s) A. Johnson	Date <u>6/21/24</u> Start <u>0609</u> Stop <u>0950</u> Total hrs <u>3.7</u>	<u>0</u>			<u>3 BHCO present. 2 Adults and 1 juvenile.</u>				
Survey # 3 Observer(s) A. Johnson	Date <u>7/11/24</u> Start <u>0545</u> Stop <u>0930</u> Total hrs <u>3.75</u>	<u>0</u>			<u>NO BHCO</u>				
Survey # 4 Observer(s)	Date Start Stop Total hrs								
Survey # 5 Observer(s)	Date Start Stop Total hrs								
Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestings, and fledglings. Be careful not to double count individuals. Total Survey Hrs <u>11.05</u>		Total Adult Residents <u>0</u>	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, report color combination(s) in the comments section on back of form and report to USFWS.			

Reporting Individual Angela Johnson Date Report Completed 7/30/2024
 US Fish and Wildlife Service Permit # 51572B-3 State Wildlife Agency Permit # 5-200390007
 Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

32 A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher

Fill in the following information completely. Submit form by September 1st. Retain a copy for your records.

Reporting Individual Angela Johnson Phone # 970-410-4777
 Affiliation Kidd Biological Inc. E-mail angela@kiddbiologic.com
 Site Name SE of Woodcrest Dam Date Report Completed 7/30/24
 Was this site surveyed in a previous year? Yes ___ No ___ Unknown
 Did you verify that this site name is consistent with that used in previous years? Yes ___ No ___ Not Applicable
 If site name is different, what name(s) was used in the past? _____
 If site was surveyed last year, did you survey the same general area this year? Yes No ___ If no, summarize below.
 Did you survey the same general area during each visit to this site this year? Yes No ___ If no, summarize below.
 Management Authority for Survey Area: Federal ___ Municipal/County ___ State ___ Tribal ___ Private
 Name of Management Entity or Owner (e.g., Tonto National Forest) _____

Length of area surveyed: 1.8 (km)

Vegetation Characteristics: Check (only one) category that best describes the predominant tree/shrub foliar layer at this site:

- Native broadleaf plants (entirely or almost entirely, > 90% native)
- Mixed native and exotic plants (mostly native, 50 - 90% native)
- Mixed native and exotic plants (mostly exotic, 50 - 90% exotic)
- Exotic/introduced plants (entirely or almost entirely, > 90% exotic)

Identify the 2-3 predominant tree/shrub species in order of dominance. Use scientific names.

Salix lasiolepis, Salix goodingii, Baccharis salicifolia

Average height of canopy (Do not include a range): 6 (meters)

Attach the following: 1) copy of USGS quad/topographical map (REQUIRED) of survey area, outlining survey site and location of WIFL detections; 2) sketch or aerial photo showing site location, patch shape, survey route, location of any detected WIFLs or their nests; 3) photos of the interior of the patch, exterior of the patch, and overall site. Describe any unique habitat features in Comments.

Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

Territory Summary Table. Provide the following information for each verified territory at your site.

Territory Number	All Dates Detected	UTM E	UTM N	Pair Confirmed? Y or N	Nest Found? Y or N	Description of How You Confirmed Territory and Breeding Status (e.g., vocalization type, pair interactions, nesting attempts, behavior)

Attach additional sheets if necessary

Willow Flycatcher Survey and Detection Form (revised April, 2004)

Site Name Woodcrest State CA County Riverside
 USGS Quad Name Riverside East Elevation _____ feet / meters (circle one)

Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? Yes No

Site Coordinates: Start: N 466878 E 3750556 UTM Datum 11 (NAD27 preferred)
 Stop: N 467843 E 3749880 UTM Zone S

**** Fill in additional site information on back of this page ****

Survey # Observer(s) (Full Name)	Date (m/d/y) Survey time	Number of Adult WIFLs	Estimated Number of Pairs	Estimated Number of Territories	Nest(s) Found ? Y or N	Cowbirds Detected? Y or N	Presence of Livestock, Recent sign, If Yes, Describe Y or N	Comments about this survey (e.g., bird behavior, evidence of pairs or breeding, number of nests, nest contents or number of fledges seen; potential threats)
1 <u>Jill Coumoutso</u> _____ _____ _____	Date <u>5/21/24</u> Start <u>0600</u> Stop <u>0945</u> Total hrs <u>3.75</u>	0	0	0	0	N	N	
2 _____ _____ _____ _____	Date _____ Start _____ Stop _____ Total hrs _____							
3 _____ _____ _____ _____	Date _____ Start _____ Stop _____ Total hrs _____							
4 _____ _____ _____ _____	Date _____ Start _____ Stop _____ Total hrs _____							
5 <u>Jill Coumoutso</u> _____ _____ _____	Date <u>7/3/24</u> Start <u>0557</u> Stop <u>0906</u> Total hrs <u>3.0</u>	0	0	0	0	N	N	
Overall Site Summary (Total resident WIFLs only) Total survey hrs _____		Adults	Pairs	Territories	Nests	Were any WIFLs color-banded? Yes No If yes, report color combination(s) in the comments section on back of form		

Reporting Individual _____ Date Report Completed _____
 US Fish and Wildlife Service Permit # _____ AZ Game and Fish Department (or other state) Permit # _____

Submit original form by August 1st. Retain a copy for your records.

Fill in the following information completely. Submit original form by August 1st. Retain a copy for your records.

Reporting Individual Jill Counoutso Phone # _____
 Affiliation Kidd Biological, Inc E-mail JCBiological@gmail.com
 Site Name Woodcrest TTLC Date Report Completed 7/1/2024

Did you verify that this site name is consistent with that used in previous years? Yes No (circle one)
 If name is different, what name(s) was used in the past? _____
 If site was surveyed last year, did you survey the same general area this year? Yes / No If no, summarize in comments below.
 Did you survey the same general area during each visit to this site this year? Yes No If no, summarize in comments below.

Management Authority for Survey Area (circle one): Federal Municipal/County State Tribal Private
 Name of Management Entity or Owner (e.g., Tonto National Forest) TTLC Management Company

Length of area surveyed: 1.8 km (specify units, e.g., miles – mi, kilometers – km, meters – m)

Vegetation Characteristics: Overall, are the species in tree/shrub layer at this site comprised predominantly of (check one):

- Native broadleaf plants (entirely or almost entirely, includes high-elevation willow)
- Mixed native and exotic plants (mostly native)
- Mixed native and exotic plants (mostly exotic)
- Exotic/introduced plants (entirely or almost entirely)

Identify the 2-3 predominant tree/shrub species: Salix lasiolepis, S. goodingi, Baccharis salicifolia

Average height of canopy (Do not put a range): 6 meters (specify units)

Was surface water or saturated soil present at or adjacent to site? Yes / No (circle one)
 Distance from the site to surface water or saturated soil: _____ (specify units)

Did hydrological conditions change significantly among visits (did the site flood or dry out)? Yes No (circle one)
 If yes, describe in comments section below.

Remember to attach a copy of a USGS quad/topographical map (REQUIRED) of the survey area, outlining the survey site and location of WIFL detections. Also include a sketch or aerial photograph showing details of site location, patch shape, survey route in relation to patch, and location of any willow flycatchers or willow flycatcher nests detected. Such sketches or photographs are welcomed, but DO NOT substitute for the required USGS quad map. Please include photos of the interior of the patch, exterior of the patch, and overall site and describe any unique habitat features.

Comments (attach additional sheets if necessary)

WIFL Detection Locations:

Date Detected	N UTM	E UTM	Date Detected	N UTM	E UTM

APPENDIX D- SITE PHOTOS

1. Northern survey area



2. Northern survey area



3. Central survey area



4. Central Survey area



5. Southern survey area



6. Southern survey area



**Appendix D Fence and Wall Plan with
Riparian/Riverine Habitat Setbacks**



LEGEND

- RIPARIAN/RIVERINE HABITAT
- 100-YR WATER SURFACE ELEVATION (WSE)

AVERAGE SETBACK: ±98'
(BETWEEN RIPARIAN/RIVERINE AND LOT WALL/FENCE)

SYMBOL	DESCRIPTION	DETAIL
	6' TYPICAL PRIVACY VINYL FENCE (LAST 5' NON-COMBUSTIBLE)	
	6' TUBULAR STEEL VIEW FENCE	4
	4' TUBULAR STEEL VIEW FENCE	8
	6" HIGH MASONRY WALL (SOLID NON-COMBUSTIBLE - PER FUEL MOD. REQUIREMENTS)	1
	3' SPLIT RAIL WOOD FENCE	9
	RETAINING WALL PER PLANS BY CIVIL ENGINEER	
	SOLID CMU WALL OR MATERIAL APPROVED OTHERWISE BY RCFD/CAL FIRE	1
	6' DOUBLE PICKET TUBULAR STEEL FENCE	3
	4' SPLIT RAIL WOOD FENCE WITH WIRE MESH	6
	6"-6" HIGH MASONRY PILASTER	1
	FIRE ACCESS GATE	5
	VINYL OR WROUGHT IRON VIEW FENCE OPTION	2 OR 4
	MAINTENANCE ACCESS POINT	
	TUBULAR STEEL MAINTENANCE GATE	10
	VINYL MAINTENANCE GATE	7
	TUBULAR STEEL VIEW FENCE GATE	11



RICK
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ARROYO VISTA TTM 38510
RIPARIAN/RIVERINE HABITAT SETBACKS

PROJECT NO: 19427 SCALE: 1"=100'
DRAWN BY: JMA DATE: 1/9/2025

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