Skyview Road Pedestrian Bridge Project

Determination of Biologically Equivalent or Superior Preservation Report

Riverside County
California

Discussion of Biological Resources and Project Impacts

April 2023

Table of Contents

List of Tables

Appendices

Acronyms

Act	Endangered Species Act
APN	Assessor's Parcel Number
BMP	Best Management Practices
CASSA	Criteria Area Species Survey Area
CDFG	California Department of Fish and Game
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CNPS	California Native Plant Society
County	County of Riverside
CWA	Clean Water Act
DBESP	Determination of Biologically Equivalent or Superior Preservation
ESA	Environmentally Sensitive Area
HMMP	Habitat Mitigation and Monitoring Plan
ILF	In-Lieu Fee
LBV	Least Bell's Vireo
MSHCP	Western Riverside County Multiple Species Habitat Conservation Plan
NEPSSA	Narrow Endemic Plant Species Survey Area
OHWM	Ordinary High Water Mark
PQP	Public or Quasi-Public
Project	Skyview Road Pedestrian Bridge Project
RCA	Western Riverside County Regional Conservation Authority
ROW	Right-of-way
RWQCB	Regional Water Quality Control Board
SWFL	Southwestern Willow Flycatcher
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWIG	Urban Wildlands Interface Guidelines
WOS	Waters of the State
WOUS	Waters of the United States
YBCU	Yellow-billed Cuckoo

1 EXECUTIVE SUMMARY

The County of Riverside (County) is proposing to construct a pedestrian bridge along Skyview Road to traverse the gap over French Valley Creek as part of the Skyview Road Pedestrian Bridge Project (Project). The purpose of the Project is to provide pedestrian connectivity between the local elementary school, the French Valley Library, nearby residential communities, and the overall French Valley trail system. This report contains the results of a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Determination of Biologically Equivalent or Superior Preservation (DBESP) for the Skyview Road Pedestrian Bridge Project.

Literature research and habitat assessments were conducted to assess the biological resources present within the Project area that potentially could be impacted by the Project activities. French Valley Creek contains emergent wetlands, alkali salt marshes, and willow riparian scrub habitat, which are jurisdictional habitat types regulated by the California Department of Fish and Wildlife (CDFW), and the United States (U.S.) Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) pursuant to the Clean Water Act (CWA). The Project's impacts to emergent wetland are anticipated to be approximately 0.177 acres of temporary impacts due to construction access, 0.007 acres of permanent impacts due to the installation of bridge piers, and 0.152 acres of shade impacts due to the new bridge spanning the channel. The Project is also anticipated to have 0.286 acres of temporary impacts to willow scrub riparian habitat, as well as 0.029 acres of permanent impacts due to abutments and stormwater drain improvements, and 0.077 acres of shade impacts to willow scrub riparian habitat. Finally, the Project would have impacts to alkali salt marsh habitat totaling in approximately 0.067 acres of temporary impacts, 0.009 acres of permanent impacts, and 0.091 acres of shade impacts. Approximately 0.179 acres of the temporary impacts described would occur on conservation easement land.

A total of ten special status species were determined to have the potential to occur within the Project area (Table 1. Potential for Occurrence of Special Status Species). During biological surveys, three special status species were observed in the vicinity of the Project area: Least Bell's vireo (*Vireo bellii pusillus*), yellow warbler (*Setophaga petechia*), and southwestern willow flycatcher (*Empidonax traillii extimus*; Appendix A – Busby Biological Services Protocol Survey Results). Additionally, Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*), smooth tarplant (*Centromadia pungens ssp. laevis*), and tricolored blackbird (*Agelaius tricolor*) were considered to have a high potential to occur within the Project area due to the presence of suitable habitat features as well as local occurrences. The remaining four species – coast horned lizard (*Phyronosoma blainvillii*), spreading navarettia (*Navarettia fossalis*), white rabbit-tobacco (*Pseudognaphalium leucocephalum*), and woven-spored lichen (*Texosporium sancti-jacobi*) – are considered to have a low to moderate potential of occurring within the Project area. This determination is based on the marginal value of habitat for these species within the Project area or a lack of recent documented occurrences of these species near the Project area.

The Project area is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Area within Criteria Cell 5477. The proposed Project is a Covered Activity under the trail provisions in Section 7.4.2 of the Western Riverside County MSHCP, as coordinated with the Western Riverside County Regional Conservation Authority (RCA) and wildlife agencies and documented in the MSHCP Consistency Analysis. The Project is utilizing coverage from a 12,198-foot segment of proposed trail located approximately 1 mile northeast of the Project area.

Table 1. Potential for Occurrence of Special Status Species

Special Status Species	Potential for Occurrence	MSHCP Coverage
Coast horned lizard (*Phyronosoma blainvillii*)	Low to Moderate	No
Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*)	High	Yes
Least Bell's vireo (*Vireo bellii pusillus*)	Present	Yes
Smooth tarplant (*Centromadia pungens ssp. laevis*)	High	Yes
Southwestern willow flycatcher (*Empidonax traillii extimus*)	High	Yes
Spreading navarettia (*Navarettia fossalis*)	Low to Moderate	Yes
Tricolored blackbird (*Agelaius tricolor*)	High	Yes
White rabbit-tobacco (*Pseudognaphalium leucocephalum*)	Low to Moderate	No
Woven-spored lichen (*Texosporium sancti-jacobi*)	Low to Moderate	No
Yellow warbler (*Setophaga petechia*)	High	Yes

Due to the proposed Project's anticipated impacts within sensitive habitat resources, a DBESP is required as outlined in Section 6.1.2 (Vol. I) of the MSHCP. Consistent with Section 6.1.2 (Vol. I) of the MSHCP, the Project will provide biologically equivalent or superior preservation of riparian/riverine resources, including alkali salt marsh, emergent wetland, and willow riparian scrub. The County will be implementing a permittee responsible mitigation project to establish/create willow riparian scrub, emergent wetland, and alkali salt marsh habitats in kind at a nearby off-site location, ensuring the replacement of any lost functions and values of sensitive habitat communities as they relate to special status species covered under the MSHCP. Mitigation efforts are designed with the objective of providing benefits that are equivalent or superior to that which would occur if effects to the riparian/riverine resource were avoided. The location of the off-site mitigation project is anticipated to be approximately 200 feet north (upstream) of the proposed pedestrian bridge within French Valley Creek. Preliminary details surrounding the mitigation site are outlined in Chapter 3.3.1.2 of this report.

In addition, approximately 0.530 acres of habitat would be re-established on-site following construction. The 0.530 acres of on-site re-establishment would be composed of 0.286 acres of willow riparian scrub habitat, 0.177 acres of emergent wetland, and 0.067 acres of alkali salt marsh (Table 2. Project Impacts

and Mitigation Summary). This work would consist of site preparation, seeding with a native seed palette, planting native cuttings and container plants, regular irrigation for three years following plant installation, and weeding maintenance. Due to the narrow area of impacts and the placement of the new bridge, adjacent willows would be protected in place and natural recruitment is expected to be high.

In order to mitigate for permanent impacts to WOS and WOUS, the County proposes payment of an in-lieu fee (ILF) or purchase of credit for 0.048 acres of WOS and WOUS to compensate for impacts (Table 2).

Table 2. Project Impacts and Mitigation Summary

Land Cover Type	Impact Type	Impact Area (acres)	Mitigation Ratio	Required Mitigation (acres)	Mitigation Location	Agency Jurisdiction
Non-Sensitive Land Cover Types						
Development	Permanent	0.225	-	-	-	-
	Temporary	4.250	-	-	-	-
	Total:	4.475	-	-	-	-
Riparian/Riverine Resources						
Emergent Wetland	Permanent	0.007	3:1	0.021	ILF/Mitigation Bank & Off-Site	USACE, RWQCB
	Shade	0.152	3:1	0.456	Off-Site	RCA, CDFW
	Temporary	0.127	1:1	0.127	On-Site	RCA, CDFW
	Temporary (Conservation Easement Land)	0.050	2:1	0.100	On-Site (0.050 acres) & Off-Site (0.050 acres)	RCA, CDFW
	Total:	0.336	-	0.704	-	-
Willow Scrub Riparian	Permanent	0.029	3:1	0.087	Off-Site	RCA, CDFW
	Shade	0.077	3:1	0.231	Off-Site	RCA, CDFW
	Temporary	0.192	1:1	0.192	On-Site	RCA, CDFW
	Temporary (Conservation Easement Land)	0.094	2:1	0.188	On-Site (0.094 acres) & Off-Site (0.094 acres)	RCA, CDFW
	Total:	0.392	-	0.698	-	-
Alkali Salt Marsh	Permanent	0.009	3:1	0.027	ILF/Mitigation Bank & Off-Site	USACE, RWQCB
	Shade	0.091	3:1	0.273	Off-Site	RCA, CDFW
	Temporary	0.032	1:1	0.032	On-Site	RCA, CDFW

Land Cover Type	Impact Type	Impact Area (acres)	Mitigation Ratio	Required Mitigation (acres)	Mitigation Location	Agency Jurisdiction
	Temporary (Conservation Easement Land)	0.035	2:1	0.070	On-Site (0.035 acres) & Off-Site (0.035 acres)	RCA, CDFW
	Total:	0.167	-	0.402	-	-
Riparian/Riverine Resources Total:		0.895	-	1.804	-	-
	Grand Total:	***5.370***	-	***1.804***	-	-

The compensatory mitigation proposed for impacts meets the MSHCP's definition of a Biologically Equivalent Preservation Alternative. As such, the Project will not result in a loss of function and services to the riparian/riverine resources, including alkali salt marsh, emergent wetland, and willow riparian scrub, as a result of the conservation measures and compensatory mitigation incorporated into its design.

2 INTRODUCTION

The County proposes the development of a new pedestrian bridge crossing along Skyview Road to traverse the gap over French Valley Creek, providing a pedestrian linkage between the communities east and west of the channel. As a Permittee to the MSHCP, the County's projects in the MSHCP area must comply with the following:

1. Section 6.1.2: Protection of Species Associated with Riparian/riverine Areas and Vernal Pools
2. Section 6.1.3: Protection of Narrow Endemic Plant Species;
3. Section 6.1.4: Guidelines Pertaining to the Urban/Wildlands Interface;
4. Section 6.3.2: Additional Survey Needs and Procedures;
5. Section 7.5.1: Guidelines for the Siting and Design of Planned Roads;
6. Section 7.5.2: Guidelines for Construction of Wildlife Crossings Within Criteria Area and Public/Quasi-Public Lands;
7. Section 7.5.3: Construction Guidelines; and
8. Standard Best Management Practices in Appendix C of the MSHCP

For a detailed discussion of the proposed Project's compliance with the outlined sections of the MSHCP, refer to the Project's associated Consistency Analysis Report. The specific purpose of this DBESP Report is to document the Project's adherence with Section 6.1.2 (Vol. I) of the MSHCP, which requires the replacement of any lost functions and values of sensitive habitat communities as they relate to Covered Species.

2.1 PROJECT AREA

The Project is located directly east of Highway 79 (Winchester Road) and approximately 0.5 miles north of Thompson Road in unincorporated Riverside County, California (Appendix B – Figure 1. Project Vicinity; Figure 2. Project Location). The entirety of the Project is located within Criteria Cell 5477 in Township 6 North, Range 2 West of the San Bernardino Base Meridian in the U.S. Geological Survey (USGS) 7.5-minute topographic maps.

Prior to field surveys, the Project area was defined as the area required for Project activities including staging, access, and construction. From northwest to southeast, the Project area measures approximately 1,390 feet and is approximately 330 feet at its widest point. The total area of the Project area is approximately 5.298 acres (Appendix B – Figure 3. Project Features).

The Project is within the Southwest Area Region of the MSHCP. The Project exists primarily in the County's Right-of-Way (ROW), but includes the following Assessor Parcel Numbers (APNs):

Table 3. Project Assessor Parcel Numbers

Assessor Parcel Number	Owner	Conserved Land	Temporary Construction Easement
480-160-021	County of Riverside	No	Required
480-160-024	Flood Control District	Yes	Required
480-160-025	Bellacap	Yes	Required
480-320-033	Flood Control District	No	Required
480-320-037	Ryland Homes of California	No	Required
480-320-038	Flood Control District	No	Required
480-620-007	Bellacap	Yes	Required

Land use and habitat types within the Project area are a mix of development, emergent wetland, willow scrub riparian, and alkali salt marsh habitat. The Project would temporarily impact 4.250 acres of developed land and permanently impact 0.225 acres of developed land. The Project would have impacts to emergent wetland totaling in approximately 0.177 acres of temporary impacts due to construction access, 0.007 acres of permanent impacts due to the installation of bridge piers, and 0.152 acres of shade impacts due to the new bridge spanning the channel. Additionally, the Project is anticipated to have 0.286 acres of temporary impacts to willow scrub riparian habitat, as well as 0.029 acres of permanent impacts due to abutments and stormwater drain improvements, and 0.077 acres of shade impacts to willow scrub riparian habitat. Finally, the Project would have impacts to alkali salt marsh habitat totaling in approximately 0.067 acres of temporary impacts, 0.009 acres of permanent impacts, and 0.091 acres of shade impacts (Table 4. Impacts to Riparian/Riverine Resources). Approximately 0.179 acres of the temporary impacts described would occur on conservation easement lands owned by Bellacap and Ryland Homes of California.

Table 4. Impacts to Riparian/Riverine Resources

Impact Type	Conservation Easement	Impact to Riparian/Riverine Resource (acres)			Total
		Emergent Wetland	Willow Scrub Riparian	Alkali Salt Marsh	
Temporary	No	0.127	0.192	0.032	0.351
	Yes	0.050[1]	0.094[2]	0.035[2]	0.179
Total Temporary Impacts:		*0.177*	*0.286*	*0.067*	*0.530*
Permanent	No	0.007	0.029	0.009	0.045
Shade	No	0.152	0.077	0.091	0.320
Grand Total:		**0.336**	**0.392**	**0.167**	**0.895**

[1]*Ryland Conservation Easement*

[2]*Bellacap Conservation Easement*

Due to the Project's proposed impacts to sensitive natural communities and the absence of local mitigation programs, the County will be implementing a permittee responsible mitigation project to re-establish and establish/create riparian/riverine resources on-site and at a nearby offsite location. Mitigation efforts are designed with the objective of providing benefits that are equivalent or superior to that which would occur if effects to the riparian/riverine resource were avoided. General temporary impacts to riparian/riverine habitat will be mitigated for at a 1:1 ratio, temporary impacts to riparian/riverine habitat on conservation easement lands will be mitigated for at a 2:1 ratio, and permanent and shade impacts will be mitigated at a 3:1 ratio. It is anticipated that the Project will require a total of approximately 1.804 acres of mitigation (Table 2. Project Impacts and Mitigation Summary). The location of the off-site mitigation project is anticipated to be approximately 200 feet upstream the proposed pedestrian bridge within French Valley Creek. The mitigation project would mitigate for 1.804 acres of the channel currently identified as an RCA MSHCP Conservation Easement within APN 480-160-022 to establish/create habitat to offset the permanent and temporary impacts associated with the proposed pedestrian bridge in kind (Appendix B – Figure 7. Proposed Mitigation Site). This stretch of the creek has been channelized during development and construction of flood control levees, and currently is a narrow stream channel and a confined riparian area unlike upstream and downstream where riparian vegetation is broad and across the entire channel floor. Based on the site visit conducted on February 2, 2022, the habitat mitigation activities would consist of initial invasive and non-native species removal, seeding with a native seed palette, planting native cuttings and container plants, regular irrigation for three years following plant installation, and weeding maintenance. These mitigation activities would decrease non-native cover, allow native recruitment, and establish/create emergent wetland, riparian scrub riparian, and alkali salt marsh habitat types within the degraded and disturbed floodplain of the mitigation site. A preliminary description of the proposed mitigation plan can be found in Chapter 3.3.1.2 of this report.

In addition, approximately 0.530 acres of habitat would be re-established on-site following construction. The 0.530 acres of on-site re-establishment would be composed of 0.286 acres of riparian habitat, 0.177 acres of wetland, and 0.067 acres of alkali salt marsh. This work would consist of site preparation, seeding with a native seed palette, planting native cuttings and container plants, regular irrigation for three years following plant installation, and weeding maintenance. Due to the narrow area of impacts and the placement of the new bridge, adjacent willows would be protected in place and natural recruitment is expected to be high. On-site re-establishment activities would provide benefits to the temporarily impacted areas that are equivalent or superior to that which would occur if effects to the riparian/riverine resources in these areas were avoided.

2.2 PROJECT DESCRIPTION

The County proposes to construct a pedestrian bridge to traverse the gap along Skyview Road at French Valley Creek in the Community of French Valley in the County's unincorporated Southwest Area.

Skyview Road is designated as a collector street that connects Highway 79 (Winchester Road) and Pourroy Road in the French Valley community in unincorporated Riverside County, California. Approximately 800 feet east of Highway 79 is French Valley Creek. There is a gap in Skyview Road where there is no road crossing at French Valley Creek. The County has determined a need to provide continuity on Skyview Road over French Valley Creek. The bridge will serve as a multipurpose pedestrian and bicyclist bridge with no vehicular travel. A new library, the French Valley Library, has been recently constructed at the northwest quadrant of the proposed pedestrian bridge in a separate project by the County. The proposed bridge will provide a trail path between the French Valley Library and the Susan LaVorgna Elementary School located at the southeast corner of the intersection of Skyview Road and Via Santiago/Algarve Avenue.

The proposed bridge will consist of an 18-foot-wide walkway width and will be approximately 370 feet long and 22 feet tall from the bottom of the river channel to the top of the handrailing at its highest point. The bridge will consist of four spans and three single-column piers. Two 100-foot-long interior spans and 85-foot-long end spans in a structure depth of 4 feet are proposed. It is anticipated the single column piers will be approximately 4 feet in diameter supported on 4'-6" diameter Type I Cast-In-Drilled-Hole (CIDH) concrete piles. Single column piers on CIDH pile shafts instead of conventional pile footings were considered to minimize channel excavation and reduce the permanent impacts within the channel.

In anticipation of construction, the Project requires geotechnical investigations to be conducted within French Valley Creek. Three geotechnical borings will be taken within the channel at the location of each pier (Appendix B – Figure 6. Geotechnical Survey Map). Each boring will be approximately 8 inches wide and go to a depth of approximately 70 feet. The boreholes will be excavated using a truck-mounted rotary-wash drill rig and will be backfilled according to industry standard practice to protect groundwater resources. Soil cuttings from borings will be temporarily stored onsite in 55-gallon drums, tested for contaminants, and then disposed of off-site. Onsite geotechnical investigations are anticipated to have temporary impacts to vegetation communities within the Project site for access to the boring locations; however, these impacts are located entirely within the temporary and shade impact areas anticipated during construction of the proposed Skyview Road Pedestrian Bridge Project. Mitigation for temporary impacts associated with the geotechnical investigations will be compensated for with the Project mitigation; as such, no additional compensatory mitigation for the geotechnical investigation is proposed.

Architectural treatments will be implemented on the railings along the edges of the bridge deck, deck surface, exterior faces of the bridge girder, piers, and abutments to enhance the bridge aesthetics. The bridge railings will be installed with low-profile LED light with a color temperature of 2200K or lower to enhance safety without light intrusion onto the biologically sensitive channel bed.

The proposed bridge deck is anticipated to be slightly raised from the existing riverbanks, which will require a geometric transition at the road approaches. The approach transition may require retaining walls and bridge wingwalls to accommodate the road transition. The proposed bridge will be designed to allow emergency vehicle access.

There will be improvements to the channel slopes to accommodate the bridge abutments and reconstruction of storm drains. This work will occur within existing hardscape areas, such as the unvegetated riprap and concrete areas on either side of the channel at the bridge location. Minimal grading is anticipated associated with the reconstruction of the storm drains within the footprints of existing facilities, all other grading will be within the abutment and pier footprints. There will be no new Project components within the channel other than the installation of the bridge piers/columns.

2.3 EXISTING CONDITIONS

Prior to field surveys, the Project area was defined as the area required for Project activities including staging, access, and construction. From northwest to southeast, the Project area measures approximately 1,490 feet and is approximately 385 feet at its widest point. The total area of the Project area is approximately 5.298 acres (Appendix B – Figure 3). The Project area is located along Skyview Road, directly east of Highway 79 and approximately 0.5 miles north of Thompson Road in unincorporated Riverside County, California. The Project is within the Southwest Area Region of the MSHCP in Criteria Cell 5477 (Appendix B – Figure 8. MSHCP Criteria Cell Features).

The approximate elevation range within the Project area is 1,350 feet to 1,375 feet above mean sea level (amsl). The topography within the Project area is relatively flat; however, French Valley Creek runs north to south through the center of the Project area and slopes are present on both sides of the channel. The region receives an average annual of 12 inches of precipitation in the form of rain. The average annual high temperature is 76 degrees Fahrenheit (°F), and average annual low temperature is 53°F (U.S. Climate Data 2021).

During the habitat assessment, it was determined that land cover within the proposed Project site contains a mixture of a mix of development, emergent wetland, willow scrub riparian, and alkali salt marsh habitat (Appendix B – Figure 4. Vegetation Communities).

Emergent Wetland

Emergent wetlands are characterized by herbaceous hydrophytes that are usually perennial and present for most of the growing season (USFWS 2021). This habitat type is present within the section of French

Valley Creek that passes through the Project area and is composed of species such as cattail (*Typha sp*.), mugwort (*Artemisia douglasiana*), and willowherb (*Epilobium brachycarpum*). Emergent wetland comprises approximately 0.336 acres of the Project area.

Willow Scrub Riparian

Willow scrub riparian is a vegetation community that is dominated by young willow trees and shrubs and serves as an early successional stage of riparian woodland (Holly 2011). This habitat type is present within the section of French Valley Creek that passes through the Project area and is dominated by arroyo willow (*Salix lasiolepis*), silver wattle (*Acacia dealbata*), tamarisk (*Tamarix ramosissima*) and mulefat. Willow scrub riparian comprises approximately 0.328 acres of the Project area.

Alkali Salt Marsh

Alkali salt marsh is a seasonally flooded vegetation community that occurs in open stands in arid, low-elevation environments and is characterized by plant assemblages that are xerophytic and halophytic (CDFG 2021). This habitat type is present within the section of French Valley Creek that passes through the Project area and is composed of species such as big saltbush (*Atriplex lentiformis*), broad-leafed pepperweed (*Lepidium latifolium*), mulefat (*Baccharis salicifolia*), telegraph weed (*Heterotheca grandiflora*), and alkali heliotrope (*Heliotropium curassavicum var. oculatum*). Alkali salt marsh comprises approximately 0.167 acres of the Project area.

2.4 AVOIDANCE AND MINIMIZATION MEASURES

Avoidance and minimization measures BIO-1 through BIO-27 would be implemented throughout the Project to avoid and minimize impacts to sensitive biological resources. Measures BIO-9 through BIO-27 have been adapted from the standard BMPs described in Volume 1, Appendix C of the MSHCP and are included to maintain Project consistency with the MSHCP.

Avoidance/Minimization Measures:

BIO-1: BMPs will be incorporated into Project construction to minimize impacts on the environment including erosion and the release of pollutants (e.g. oils, fuels):

- Exposed soils and material stockpiles would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities;
- All construction roadway areas would be properly protected to prevent excess erosion, sedimentation, and water pollution;
- All vehicle and equipment fueling/maintenance would be conducted outside of any surface waters;
- Equipment used in and around jurisdictional waters must be in good working order and free of dripping or leaking contaminants;

- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering jurisdictional waters;
- All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state;
- All construction materials would be hauled off-site after completion of construction;
- Upon completion of construction activities, any temporary barriers to surface water flow must be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

BIO-2: If any wildlife is encountered during the course of construction, said wildlife will be allowed to leave the construction area unharmed. If a special status species is encountered on the Project site, work will halt until said species is outside of the Project area. Any special status species occurrences during construction will be reported to the appropriate resource agency.

BIO-3: Removal of riparian vegetation will occur prior to construction and between October 1 and February 28 to avoid least Bell's vireo breeding season, as well as the general breeding season for other nesting birds. If vegetation removal is desired to occur during the breeding season, a qualified biologist(s) will conduct a pre-construction survey for least Bell's vireo and other migratory bird species within three days of the start of construction during the least Bell's vireo breeding season (March 1 through September 30). If active least Bell's vireo nests are identified within the Project Area or within 300 feet of the Proposed Project Area, no willow scrub or other riparian trees or shrubs will be removed until after the end of the least Bell's vireo breeding season (September 30). If active nests of other migratory birds are identified within the Project Area or within 300 feet of the Proposed Project Area, no willow scrub or other riparian trees or shrubs will be removed until after the end of the general nesting season (June 30).

BIO-4: Plastic mono-filament netting (erosion control matting) or similar material that could trap coast horned lizards or other wildlife must not be used. Acceptable substitutes include jute, coconut coir matting or tackified hydroseeding compounds.

BIO-5: To avoid inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches greater than 6 inches deep must be covered at the end of the day or contain at least one escape ramp made of earth fill or wooden planks. All holes must be inspected by the Project biologist or on-site inspector at the beginning of each workday and before the holes and trenches are filled.

BIO-6: Prior to construction-related activities, a protocol level botanical survey will be conducted by the Project biologist to detect if NEPSSA 4 plant species (San Diego ambrosia, spreading navarretia, and Wright's trichocoronis), local Criteria Area plants (smooth tarplant, Coulter's

goldfields) and other special status plants (white rabbit-tobacco, woven-spored lichen) are present within the Project area. The survey will be conducted during the appropriate blooming season when special status plants are more likely to be encountered. If any special status plant species are discovered within the Project footprint prior to construction, the RCA shall be notified and the County will determine if the population can be avoided.

BIO-7: Prior to arrival at the Project site and prior to leaving the Project site, construction equipment that may contain invasive plants and/or seeds will be cleaned to reduce the spreading of noxious weeds.

BIO-8: All hydroseed and plant mixes must not contain *any species* identified as being invasive by Cal-IPC.

BIO-9: A qualified biologist will be required to conduct a training session for project personnel prior to construction. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the Project, and the access routes to and Project site boundaries within which the Project activities must be accomplished.

BIO-10: Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.

BIO-11: The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

BIO-12: The upstream and downstream limits of the Project's disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.

BIO-13: Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.

BIO-14: Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian identified in MSHCP Global Species Objective No. 7.

BIO-15: When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing or other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be

exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.

BIO-16: Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, USFWS, and CDFW, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

BIO-17: Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

BIO-18: The qualified Project biologist shall monitor construction activities for the duration of the Project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the Project footprint.

BIO-19: The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.

BIO-20: Exotic species that prey upon or displace target species of concern should be permanently removed from the site to the extent feasible.

BIO-21: To avoid attracting predators of the species of concern, the Project site shall be kept as clean of debris as possible. All food related trash items shall be enclosed in sealed containers and regularly removed from the site(s).

BIO-22: Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed Project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the Project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

BIO-23: The Permittee shall have the right to access and inspect any sites of approved projects including any restoration/enhancement area for compliance with project approval conditions including these BMPs.

BIO-24: If construction for the Skyview Road Bridge Project does not commence within two years of geotechnical borings, on-site restoration of temporary impacts associated with geotechnical

borings will be performed. This will include weeding, soil decompaction, and potentially re-seeding, if determined necessary in coordination with the wildlife agencies.

BIO_25: Compacted soils within the Project area will be decompacted following the completion of construction. This will include any compacted soils within the permanent shade impact areas.

BIO-26: Any lighting features installed as a part of the Project will have a color temperature of 2200K or lower, in order to be wildlife friendly.

BIO-27: A Western Pond Turtle Avoidance and Minimization Plan will be developed and implemented as part of the project to ensure further conservation of the species. This plan will include but is not limited to the installation of exclusionary fencing, contractor education, biological monitoring, relocation measures (relocation areas shall be preapproved by the Californian Department of Fish and Wildlife prior to construction), and pond turtle trapping if needed.

3 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

In adherence with the MSHCP, projects are required to assess their sites for the presence of Section 6.1.2 resources, including riparian/riverine resources, vernal pools, fairy shrimp, and riparian birds. The Project area intersects French Valley Creek, a seasonal stream channel originating in the hills north of Bachelor Mountain, about 4 miles east of the Project area, and terminating as a tributary to Warm Springs Creek, about 2.5 miles southwest of the Project area. The willow riparian scrub, emergent wetlands, and alkali salt marsh associated with French Valley Creek are the riparian/riverine resources found within the Project area.

3.1 METHODS

3.1.1 Riparian/Riverine Resources

A general biological survey was completed by Dokken Engineering (Dokken) biologist Scott Salembier on July 24, 2019. During this survey, general habitat types and dominant species within the creek corridor were observed, recorded, and photographed. A second biological survey to determine if any site conditions have changed and to survey the potential mitigation site was conducted by Dokken biologists Scott Salembier and Clare Favro on February 2, 2022. No significant changes to the site conditions were noted.

Additionally, field investigations were conducted on April 22 and June 9, 2020 by POWER Engineers' biologists and identified the presence of potential jurisdictional wetlands and waterways within and in the vicinity of the Project area. USACE and CDFW guidance were used to determine the jurisdictional boundaries of waters of the U.S. (WOUS) and State (WOS) within the Project area. Guidance documents are outlined below:

- "Routine Onsite Determination Method" described in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987)
- A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008a)
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008b)
- Updated Datasheet for the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2010)
- A Review of Stream Processes and Forms in Dryland Watersheds (CDFW 2010)

Wetland boundaries were identified via a three-parameter approach that evaluates hydrophytic vegetation, hydric soils, and hydrology as wetland indicators. Wetland boundaries were defined during

field investigations and mapped using aerial photography. Similarly, waterways observed within the Project area were classified based on their observed flow and channel characteristics. These features, along with the Ordinary High-Water Mark (OHWM), were used to characterize the existence of WOUS and WOS within the Project area.

The field investigation identified an intermittent stream with an adjacent wetland complex within French Valley Creek. The wetland boundaries and the stream's OHWM were mapped aerially and are depicted in the *Wetland and Waterway Delineation Report* produced by Power Engineers, Inc. (see Appendix C. Wetland and Waterway Delineation Report).

Willow scrub riparian, alkali salt marsh, and emergent wetland are the specific habitat types mapped within the Project area that are considered riparian/riverine resources for the purposes of this report.

3.1.1 Vernal Pools

Dokken's June 24, 2019 survey and POWER Engineers' April 22 and June 9, 2020 surveys included wetland delineations and habitat assessments to classify habitats within the Project area. Wetland delineations may also serve as an investigation of vernal pool indicators. In addition, POWER Engineers' field investigations included focused botanical surveys. Surveys were conducted within the Project area plus an additional approximate 50-foot buffer to account for all habitat types within and adjacent to the Project.

The biological surveys conducted in 2019 and 2020 by Dokken and POWER Engineers did not identify any vernal pools within or in the vicinity of the Project site. The soil type found within the Project site is drained Chino silt loam, which is a saline-alkali soil type that does not create suitable conditions for vernal pool formation. In addition, the majority of herbaceous cover indicated within the Project area was indicative of a scrub riparian habitat, and vernal pool indicator plant species were not observed. Vernal pools are presumed absent from the Project area. No direct effects to vernal pools are expected as a result of the construction of this Project.

3.1.2 Fairy Shrimp

No vernal pools were observed within the Project area; the soil type found within the Project site is drained Chino silt loam, which is a saline-alkali soil type that does not create suitable conditions for vernal pool formation. In addition, the majority of herbaceous cover indicated within the Project area was indicative of a scrub riparian habitat, and vernal pool indicator plant species were not observed. Additionally, no indicators of ponding or other habitat types were identified within the Project area that would potentially suit the habitat requirements for fairy shrimp. Fairy shrimp are presumed absent from the Project area. No direct effects to these species are expected as a result of the construction of this Project.

3.1.3 Riparian Birds

In addition to the general biological surveys conducted on-site, Busby Biological Services conducted a focused protocol survey in accordance with the MSHCP to identify occurrences of least Bell's vireo (LBV; *Vireo bellii pusillus*), southwestern willow flycatcher (SWFL; *Empidonax traillii extimus*), yellow-billed cuckoo (YBCU; *Coccyzus americanus*), and riparian habitat resources within the Project area. Surveys were conducted according to accepted USFWS protocols specific for each species (LBV—USFWS 2001; SWFL—USFWS 2000; YBCU—USFWS 2015). Furthermore, the survey area included a 500-foot buffer from the proposed Project site in order to capture and evaluate suitable off-site habitat conditions. Due to the recent residential development of adjacent plots, suitable riparian habitat was limited to within French Valley Creek. Suitable willow riparian and emergent wetland communities were observed within French Valley Creek as it passes through the center of the Project area. Dense stands of arroyo willow (*Salix lasiolepis*) and cattail (*Typha sp.*) within and in the vicinity of the Project area provide potential nesting sites and foraging habitat for migratory birds. Riparian habitat within the Project area is considered suitable nesting and foraging habitat, and emergent wetland is considered foraging habitat. No other habitat types within the Project area are considered suitable nesting or foraging habitat for these riparian bird species. Riparian and wetland communities comprise approximately 0.664 acres (13%) of the Project area.

During habitat assessments and protocol-level surveys conducted in the spring and summer of 2020, Busby Biological Services identified the willow scrub riparian and emergent wetland habitats as suitable LBV habitat types within the Project area. No breeding LBV were detected during the 2020 focused, protocol-level surveys. However, a single LBV was detected during the eighth survey conducted on July 13, 2020. The LBV was detected within the 500-foot buffer area north of the proposed Project area. The individual, which appeared to be an adult, was observed foraging and singing sporadically for approximately 25 minutes. A follow-up visit to the site was conducted on July 22, 2020, to further investigate the LBV detected on July 13, 2020; however, LBV was not detected during this survey. It is likely that this individual was only using the survey area as foraging habitat. No other LBV were detected in the survey area at any other time during surveys (Appendix A).

During protocol-level surveys for SWFL conducted by permitted Busby Biological Services biologists on June 1, 2020, two willow flycatchers were detected responding to a call playback. The willow flycatcher sightings occurred early in the second survey window, the time of year when SWFL are establishing breeding territories but also the time of year when subspecies *E.t. brewsterii* or *E.t. edastus* may still be present and singing while migrating through southern California (Sogge 2010). Because no willow flycatchers were detected during the subsequent three surveys, the two flycatchers detected during the second survey were likely one of the other migrant willow flycatcher subspecies and not breeding SWFL. No other willow flycatchers were detected within or adjacent to the survey area during the 2020 focused, protocol-level presence/absence surveys (Appendix A).

Due to the presence of suitable habitat and with local observations of LBV near the Project site, LBV and SWFL are presumed to have a high potential of occurring within the Project area. Additionally, the tricolored blackbird (*Agelaius tricolor*), another riparian bird, was determined to have a high potential for occurrence due to local occurrences as well as the presence of suitable habitat features within the Project area. Due to a lack of a dense riparian jungle, and specific riparian habitat elements preferred by the species such as a cottonwood-dominated canopy, and with no local CNDDB occurrences, the YBCU was presumed to be absent from the Project area.

3.2 RESULTS/IMPACTS

Geotechnical investigations for the Project are anticipated to have temporary impacts to approximately 0.076 acres of alkali marsh habitat, 0.063 acres of emergent wetland habitat and 0.055 acres of willow scrub riparian habitat (Appendix B – Figure 6). However, these impacts are located entirely within the temporary impact and shade impact areas for the pedestrian bridge proposed by the Project. Mitigation for temporary impacts associated with the geotechnical investigations will be adequately compensated for with the Project mitigation; as such, no additional compensatory mitigation for geotechnical investigation is proposed.

Project impacts to riparian/riverine resources will include permanent impacts of approximately 0.009 acres to alkali salt marsh, 0.029 acres to willow scrub riparian, and 0.007 acres to emergent wetland habitat. Furthermore, there will be permanent shade impacts of approximately 0.091 acres to alkali salt marsh, 0.152 acres to emergent wetland, and 0.077 acres to willow scrub riparian due to the angle and size of the resulting bridge. Shade impacts were calculated using sun path and shadow data (available on sunearthtools.com). This methodology accounts for the angle of the sun in the summer peak of the growing season as well as the bridge height to determine areas that will receive less than 6 hours of direct sunlight throughout the day. Additionally, there will be approximately 0.530 acres of total temporary impacts to riparian/riverine habitat – 0.067 acres to alkali salt marsh, 0.177 acres to emergent wetland, and 0.286 acres to willow riparian – to allow for geotechnical borings and construction equipment access to within the channel (Table 4; Appendix B – Figure 5. Project Impacts). The temporary impacts proposed within French Valley Creek include vegetation clearing and light grading and soil compaction which will allow for equipment access within the creek during construction. Equipment access is needed to install bridge piers and abutments. No other impacts to riparian/riverine resources are anticipated as a result of this Project.

Temporary Project impacts to riparian/riverine habitats are partially within two existing non-RCA conservation easements owned by Bellacap and Ryland Homes of California (Table 4; Appendix B – Figure 5. Project Impacts). Approximately 0.094 acres of willow scrub riparian, 0.050 acres of emergent wetland, and 0.067 acres of alkali salt marsh habitat within conservation easements will be temporarily impacted within the Project area. Total Project impacts to conservation easement land are approximately 0.179 acres. There will be no permanent impacts to conservation easement lands. The

impacts to conservation easement land are included in the calculation of total Project impacts discussed previously.

3.3 MITIGATION AND EQUIVALENCY

Avoidance and minimization measures will be implemented to avoid and minimize impacts to the existing emergent wetland, alkali salt marsh, and willow scrub riparian habitat communities resulting from the execution of this Project, both within and outside of conservation easement land. Refer to Chapter 2.4 for a complete list of the avoidance and minimization measures proposed for this Project. Permanent impacts associated with this Project are projected to be limited, and temporary impacts within the Project area will be re-established to pre-construction conditions. Therefore, the Project is not anticipated to notably impact the overall function of the riparian corridor. Due to the Project's proposed impacts to sensitive natural communities and the absence of local mitigation programs, the County will be implementing a permittee responsible mitigation project to re-establish temporary impacts to willow scrub riparian, emergent wetland, and alkali salt marsh on-site, and to establish/create willow scrub riparian, emergent wetland, and alkali salt marsh at the nearby off-site location. Mitigation activities include a native seed revegetation effort in order to maintain the populations of native riparian plant communities and provide continuing habitat for these riparian bird species. Therefore, with mitigation, the Project is not anticipated to notably impact the provision of suitable habitat for riparian birds.

The Project does require the temporary removal of riparian vegetation. This temporal loss has been considered in determining mitigation ratios, reducing the Project footprint, and protecting riparian vegetation in place to the extent feasible in order to maintain as much riparian vegetation in place for riparian bird use. In addition, in accordance with the MSHCP, a pre-construction survey is necessary prior to construction in order to document nesting behavior, identify existing nests, and determine the distance of any potential exclusion buffers. A description of pre-construction survey procedures is outlined in the Project's avoidance and minimization measures (see Chapter 2.4). Impacts to occupied habitat during breeding season are prohibited.

Finally, mitigation for the Project as described later in Section 3.3.1.2 includes high mitigation ratios of 2:1 for temporary impacts to conservation easement lands and 3:1 for all permanent impacts. It is anticipated that these mitigation ratios would effectively mitigate for all impacts to conservation easement land within the Project area. Furthermore, the proposed off-site mitigation project is located on APN 480-160-022, which is a parcel of land within the channel that is currently identified as an RCA MSHCP Conservation Easement. With mitigation occurring on an existing conservation easement land, no net loss of conservation easement land is anticipated.

3.3.1 Direct Effects

3.3.1.1 Avoidance/Minimization Measures for Direct Effects

The avoidance and minimization measures included in Chapter 2.4 would be implemented throughout the Project to avoid and minimize impacts to sensitive biological resources. Of those measures, BIO-9 through BIO-27 have been adapted from the standard BMPs described in Volume 1, Appendix C of the MSHCP. The following avoidance and minimization measures would specifically avoid and minimize direct effects to riparian/riverine resources.

BIO-1: BMPs will be incorporated into Project construction to minimize impacts on the environment including erosion and the release of pollutants (e.g. oils, fuels):

- Exposed soils and material stockpiles would be stabilized, through watering or other measures, to prevent the movement of dust at the Project site caused by wind and construction activities such as traffic and grading activities;
- All construction roadway areas would be properly protected to prevent excess erosion, sedimentation, and water pollution;
- All vehicle and equipment fueling/maintenance would be conducted outside of any surface waters;
- Equipment used in and around jurisdictional waters must be in good working order and free of dripping or leaking contaminants;
- Raw cement, concrete or concrete washings, asphalt, paint or other coating material, oil or other petroleum products, or any other substances that could be hazardous to aquatic life shall be prevented from contaminating the soil or entering jurisdictional waters;
- All erosion control measures and storm water control measures would be properly maintained until the site has returned to a pre-construction state;
- All construction materials would be hauled off-site after completion of construction;
- Upon completion of construction activities, any temporary barriers to surface water flow must be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

BIO-9: A qualified biologist will be required to conduct a training session for project personnel prior to construction. The training shall include a description of the species of concern and its habitats, the general provisions of the Endangered Species Act (Act) and the MSHCP, the need to adhere to the provisions of the Act and the MSHCP, the penalties associated with violating the provisions of the Act, the general measures that are being implemented to conserve the species of concern as they relate to the project, and the access routes to and project site boundaries within which the project activities must be accomplished.

BIO-10: Water pollution and erosion control plans shall be developed and implemented in accordance with RWQCB requirements.

BIO-11: The footprint of disturbance shall be minimized to the maximum extent feasible. Access to sites shall be via pre-existing access routes to the greatest extent possible.

BIO-12: The upstream and downstream limits of the Project's disturbance plus lateral limits of disturbance on either side of the stream shall be clearly defined and marked in the field and reviewed by the biologist prior to initiation of work.

BIO-13: Projects should be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by target species of concern.

BIO-14: Projects that cannot be conducted without placing equipment or personnel in sensitive habitats should be timed to avoid the breeding season of riparian identified in MSHCP Global Species Objective No. 7.

BIO-15: When stream flows must be diverted, the diversions shall be conducted using sandbags or other methods requiring minimal instream impacts. Silt fencing of other sediment trapping materials shall be installed at the downstream end of construction activity to minimize the transport of sediments offsite. Settling ponds where sediment is collected shall be cleaned out in a manner that prevents the sediment from reentering the stream. Care shall be exercised when removing silt fences, as feasible, to prevent debris or sediment from returning to the stream.

BIO-16: Equipment storage, fueling, and staging areas shall be located on upland sites with minimal risks of direct drainage into riparian areas or other sensitive habitats. These designated areas shall be located in such a manner as to prevent any runoff from entering sensitive habitat. Necessary precautions shall be taken to prevent the release of cement or other toxic substances into surface waters. Project related spills of hazardous materials shall be reported to appropriate entities including but not limited to applicable jurisdictional city, USFWS, and CDFW, RWQCB and shall be cleaned up immediately and contaminated soils removed to approved disposal areas.

BIO-17: Erodible fill material shall not be deposited into water courses. Brush, loose soils, or other similar debris material shall not be stockpiled within the stream channel or on its banks.

BIO-18: The qualified Project biologist shall monitor construction activities for the duration of the Project to ensure that practicable measures are being employed to avoid incidental disturbance of habitat and species of concern outside the Project footprint.

BIO-19: The removal of native vegetation shall be avoided and minimized to the maximum extent practicable. Temporary impacts shall be returned to pre-existing contours and revegetated with appropriate native species.

BIO-22: Construction employees shall strictly limit their activities, vehicles, equipment, and construction materials to the proposed Project footprint and designated staging areas and routes of travel. The construction area(s) shall be the minimal area necessary to complete the Project and shall be specified in the construction plans. Construction limits will be fenced with orange snow screen. Exclusion fencing should be maintained until the completion of all construction activities. Employees shall be instructed that their activities are restricted to the construction areas.

3.3.1.2 Mitigation for Direct Effects

Due to the Project's proposed impacts to riparian/riverine resources and the absence of local mitigation programs, the County will be implementing a permittee responsible mitigation project to re-establish temporary impacts to willow scrub riparian, emergent wetland, and alkali salt marsh on-site, and establish willow scrub riparian, emergent wetland, and alkali salt at a nearby off-site location (Table 5. Proposed Mitigation and Habitat Types; Appendix B – Figure 7). The on- and off-site mitigation efforts would provide compensation for 1.804 acres of riparian/riverine resources to satisfy MSHCP and CDFW mitigation requirements. In addition, to mitigate for permanent impacts to WOS and WOUS, the County proposes payment of an in-lieu fee (ILF) or purchase of credit for 0.048 acres of WOS and WOUS to compensate for impacts, as indicated in Table 5. A Habitat Mitigation and Monitoring Plan (HMMP) detailing the proposed mitigation will be prepared for the on- and off-site mitigation areas and will be reviewed and approved by the RCA and wildlife agencies (including USFWS and CDFW) prior to Project implementation (including vegetation removal, staging equipment, and ground disturbance). A preliminary mitigation proposal is included in this section; further details will be included in the final HMMP developed during the permitting phase of the project.

Mitigation efforts are designed with the objective of providing benefits that are biologically equivalent or superior to that which would occur if effects to the riparian/riverine resources were avoided. Impacts to all riparian/riverine habitat (which includes alkali salt marsh, emergent wetland, and willow scrub riparian habitat) within the Project area will be mitigated as indicated in Table 2 and Table 5. Table 2 outlines the required mitigation accounting for proposed mitigation ratios for all riparian/riverine habitat resources within the Project area. Temporary impacts would be mitigated at a 1:1 ratio. Temporary impacts to conservation easement lands would be mitigated at a 2:1 ratio. Permanent and shade impacts would be mitigated for at a 3:1 ratio. It is anticipated that the Project will require a total of approximately 1.804 acres of mitigation. Table 5 summarizes the types of mitigation proposed for each riparian/riverine resource, and specifies what mitigation would occur on-site and what would occur at the nearby off-site mitigation location.

Table 5. Proposed Mitigation and Habitat Types

Agency Jurisdiction	Mitigation Location	Riparian/Riverine Resource	Mitigation Type	Proposed Mitigation Area (acres)
USACE, RWQCB	ILF or Mitigation Bank	Emergent Wetland & Alkali Salt Marsh (WOUS)	-	0.048
			Total USACE/RWQCB Mitigation:	0.048
RCA, CDFW	On-Site	Emergent Wetland	Re-establishment	0.177
		Willow Scrub Riparian	Re-establishment	0.286
		Alkali Salt Marsh	Re-establishment	0.067
			Total:	0.530
	Off-Site	Emergent Wetland	Establishment/Creation	0.527
		Willow Scrub Riparian	Establishment/Creation	0.412
		Alkali Salt Marsh	Establishment/Creation	0.335
			Total:	1.274
			Total RCA/CDFW Mitigation:	1.804

Off-Site Mitigation

Site Selection

Off-site habitat mitigation would consist of a riparian/riverine habitat creation project at a site approximately 200 feet upstream of the proposed pedestrian bridge within French Valley Creek. The mitigation project would occur on APN 480-160-022, which is a parcel of land within the channel that is currently identified as an RCA MSHCP Conservation Easement. The site was selected during a site visit conducted on February 2, 2022 by Dokken biologists, a County environmental planner, and an RCA representative. The site was selected because of favorable channel hydrology and soil moisture, and a lack of existing habitat. This stretch of the creek has been channelized during development and construction of flood control levees, and currently is a narrow stream channel and a confined riparian area, unlike upstream and downstream, where riparian vegetation is broad and across the entire channel floor. The center of the site is currently dominated by broad-leafed pepperweed (*Lepidium latifolium*), an invasive species, and the northern edge of the site contains a line of tamarisk (*Tamarix ramosissima*) and tree tobacco (*Nicotiana glauca*), both of which are also invasive (Representative Photograph 1). Various natives such as alkali heath (*Frankenia salina*), mulefat (*Baccharis salicifolia*), willow (*Salix sp.*), and San Diego sunflower (*Bahiopsis laciniata*) are scattered adjacent to and throughout the site, but are limited by the widespread dominance of broad-leafed pepperweed. During site visits, adequate soil moisture was observed to support riparian plant species, including willows and

mulefat. In addition, the site contains patches of concentrated salt deposits, which suggests the site's potential to support the alkali salt marsh habitat type (Representative Photograph 2).

Representative Photograph 1. Representative photograph of the invasive broad-leafed pepperweed-dominated mitigation site (February 2022).

Representative Photograph 2. Representative photograph of salt deposits present at the proposed mitigation site (February 2022).

Habitat establishment/creation activities would be focused on establishing a diverse, self-sustaining native plant community which provides balanced mitigation to offset the Project's anticipated impacts to alkali saltmarshes, emergent wetlands, and willow scrub. Further studies would be required prior to

final HMMP design, including hydraulic and soil analysis. The results of these investigations would determine the details of the final HMMP; however, the County commits to provide mitigation for alkali saltmarshes, emergent wetlands, and willow scrub in kind, as appropriate throughout the mitigation site.

Willow scrub would be planted in non-saline soils to mitigate for willow scrub riparian habitat. During site visits, adequate soil moisture was observed to support riparian plant species, including willows and mulefat. Further hydraulic and soil analysis would determine the best locations throughout the mitigation site to establish this habitat type. A mixture of alkali sedge-meadows, alkali marshes, and alkali wet-meadows would be created in areas of saline soils to mitigate for emergent wetland and alkali salt marsh habitats. The floristic composition would be designed to vary according to the length of inundation and the length of time that groundwater is near the surface. In areas with longer periods of shallow inundation, the County would establish alkali sedge-meadows dominated by species of spike-rushes (*Eleocharis sp*.), flatsedges (*Cyperus sp*.), and rushes (*Juncus sp*.). In areas of intermediate hydroperiod, the County would establish alkali marshes dominated by a mixture of Cyperaceae and wetland grass species. In patches with even shorter hydroperiods, mitigation would include the establishment of alkali meadows dominated by a hyper-diverse mixture of wetland wildflowers and other forbs. The proposed mitigation site contains patches of concentrated salt deposits and further analysis would determine the availability of groundwater in these areas, which would determine the best mitigation method to establish habitat. Salt-crust patches that also have groundwater near the surface during summer may be able to support the reintroduction of western nitrophila (*Nitrophila occidentalis*) and other halophytic plant species native to salt-crust wetlands. Salt-crust areas lacking shallow groundwater during summer are alkali playas (salt pans) and support a different guild of seasonally dry wetland salt-loving species of plants adapted to the extremely saline conditions, such as Parish's brittlescale (*Atriplex parishii*). The final HMMP would use the results of further soil and hydraulic analysis to determine the exact boundaries of established habitat types and the most appropriate planting and seeding palates.

The mitigation efforts would, at a minimum, include initial invasive and non-native species removal, seeding with a native seed palette, and planting native cuttings and container plants. Further restoration activities may be required, such as the creation of side channels to distribute water throughout the floodplain. The final HMMP would outline any additional activities required based on the results of mitigation site investigation and analysis. Following installation of the mitigation site, the site will be irrigated for at least 3 years (at the beginning of the plant establishment period) and monitored for 5 years to verify successful development of native habitat. Maintenance of the site will include regular irrigation for three years of installed plant material and weeding to prevent re-encroachment by invasive species.

Non-Native and Invasive Species Removal

Invasive species removal is a key component of the proposed mitigation, as the off-site location is currently dominated by broad-leafed pepperweed. Preparation of the off-site mitigation area would entail mowing down the existing field of broad-leafed pepperweed and manually removing tamarisk and tree tobacco stands. This would be done in the early spring before seed set and repeatedly for the duration of the 5-year plant establishment period as needed to prevent re-infestation by invasive species. It is anticipated that the majority of weeding efforts would be required within the first 3 years of the plant establishment period and would taper off as planted native species mature and are able to outcompete non-natives. Due to the site's proximity to the stream, the use of specific herbicides may be prohibited, in which case, invasive species removal would need to be completed using approved aquatic herbicides or through mechanical means (i.e. mowing, string trimming, and hand pulling).

Plantings and Seeding

The mitigation site will be focused on replacing impacted habitat in kind and as appropriate to the inundation period throughout the mitigations site, as described previously. The location of willow riparian scrub and emergent wetland versus alkali salt marsh will be determined based on further hydraulic and soil investigations that would occur during final mitigation plan development.

In order to maximize success, seeding should occur in September or October, just before the onset of the regional rainy season. Container plantings should be planted around the beginning of the rainy season, in November or December, so that plantings benefit from the entire rainy season. This will reduce the mortality rate of plantings, which will have time to mature with optimal water resources prior to the dry season. The seeding method will be determined by the restoration contractor, as can be conducted by hydroseed or by hand; however, the site will need to be properly prepared and irrigated depending on the selected seeding method. Plantings should be sourced from a native plant nursery such as the Tree of Life Nursery, Moosa Creek Nursery, Theodore Payne Foundation, and Grow Native Nursery. The County will make an effort to procure nursery stock that was sourced from the Project Area from native plant purveyors such as those listed previously so that container plants are genetically similar to local plant populations and acclimated to the regional conditions. Additionally, seeds should be sourced from a California native seed producer, such as S&S Seeds, Stover Seed Company, and Hedgerow Farms. Furthermore, willow cuttings may be sourced from nearby locations along French Valley Creek, such as the Project impact area, in order to salvage willows that would be impacted by the Project.

Table 6 and Table 7 provide preliminary summaries of proposed plant material and seeds that would be installed within the mitigation area. Species selected for mitigation were selected for their regional suitability and/or current presence within the watershed. The final HMMP would include finalized seed and plant pallets for willow riparian scrub, alkali salt marsh, and emergent wetland habitat types.

Table 6. Preliminary Willow Riparian Scrub & Alkali Salt Marsh Planting Pallet

Willow Riparian Scrub Habitat		
Growth Form	Common Name	Botanical Name
Trees	California sycamore	*Platanus racemosa*
	Fremont cottonwood	*Populus fremontii*
	Narrowleaf willow	*Salix exigua*
	Black willow	*Salix gooddingii*
	Red willow	*Salix laevigata*
	Arroyo willow	*Salix lasiolepis*
Shrubs	Saltscale	*Atriplex serenana*
	Mule fat	*Baccharis salicifolia*
	Menzies' goldenbush	*Isocoma menziesii*
Herbs	Western ragweed	*Ambrosia psilostachya*
	Yerba mansa	*Anemopsis californica*
	Mugwort	*Artemisia douglasiana*
	Salt heliotrope	*Heliotropium curassavicum*
	Salt marsh fleabane	*Pluchea odorata*
	Stinging nettle	*Urtica dioica*
	Telegraph weed	*Heterotheca grandiflora*
Alkali Salt Marsh Habitat		
Growth Form	Common Name	Botanical Name
Shrubs	Saltscale	*Atriplex serenana*
	Menzies' goldenbush	*Isocoma menziesii*
Herbs	Western ragweed	*Ambrosia psilostachya*
	Alkali heath	*Frankenia salina*
	Salt heliotrope	*Heliotropium curassavicum*
	Salt marsh fleabane	*Pluchea odorata*

Table 7. Hydroseed Mixes

Willow Riparian Scrub Habitat	
Common Name	Botanical Name
Alkali barley	*Hordeum depressum*
Annual hairgrass	*Deschampsia danthoniodes*
Field sedge	*Carex praegracilis*
Saltgrass	*Distichlis spicata*
Stinging nettle	*Urtica dioica*
Tall flatsedge	*Cyperus eragrostis*
Valley sedge	*Carex barbarae*
Western ragweed	*Ambrosia psilostachya*

Alkali Salt Marsh Habitat	
Common Name	Botanical Name
Alkali goldenbush	*Isocoma acradenia*
Alkali sacaton	*Sporobolus airoides*
Alkali weed	*Cressa truxillensis*
Hoary saltbush	*Atriplex canescens*
Saltgrass	*Distichlis spicata*
Yellow rayed goldfields	*Lasthenia glabrata*
Emergent Wetland Habitat	
Common Name	Botanical Name
Alkali barley	*Hordeum depressum*
Annual hairgrass	*Deschampsia danthonoides*
California bulrush	*Schoenoplectus californicus*
Common spikerush	*Eleocharis macrostachya*
Tall flatsedge	*Cyperus eragrostis*
Valley sedge	*Carex barbarae*
Vernal barley	*Hordeum intercedens*
Yellow-rayed goldfields	*Lasthenia glabrata*

On-Site Mitigation

In addition to off-site mitigation, the County would complete re-establishment of all temporary impact areas (approximately 0.530 acres) on-site as a part of the overall Project mitigation effort. The 0.530 acres of on-site mitigation would be composed of re-establishment of 0.286 acres of willow scrub riparian habitat, 0.177 acres of emergent wetland, and 0.067 acres of alkali salt marsh (Table 5). Representative Photograph 3 shows the current condition of the Project impact area. On-site re-establishment would occur under the same ecological principles of the off-site mitigation project, and include site preparation, seeding with a native seed palette, planting native cuttings and container plants, regular irrigation for three years during the plant establishment period, weeding maintenance, and 5-year biological monitoring and reporting. A preliminary planting palette proposed for on-site willow riparian scrub and alkali salt marsh re-establishment is included as Table 6. Additionally, there are preliminary seed mixes proposed in Table 7. In wetland areas, toad rush (*Juncus bufonis*) and longleaf rush (*Juncus macrrophyllus*) plugs would be installed in addition to the seed mix. The Project area currently exhibits a high level of native species, and a comprehensive invasive species removal plan is not required. Due to the narrow area of impacts and the placement of the new bridge, adjacent willows would be protected in place and natural recruitment is expected to be high. On-site re-establishment activities would provide benefits to the temporarily impacted areas that are equivalent or superior to that which would occur if effects to the riparian/riverine resources in these areas were avoided. The final mitigation plan would include on-site mitigation activities.

Representative Photograph 3. Representative photograph of the proposed Project site, taken from the west side of the channel on Skyview Road (February 2022).

Maintenance

Immediately following planting and seeding at both the on-site and off-site mitigation areas, irrigation and weed control methods would be implemented. Scheduled irrigation and weed control would be necessary for 3 years following initial site preparation in order to support plantings until their root systems are developed enough to tap into groundwater and the plants are mature enough to outcompete non-natives. It is anticipated that regular maintenance activities would cease after 3 years, and the sites would be monitored for an additional 2 years to determine that the site can survive independent of supplemental waterings and weed control.

Irrigation

To maximize early plant establishment success and minimize shock at the end of the maintenance period, it is recommended that more frequent waterings are provided during the first year following planting, with the number of waterings tapering down during years 2 and 3. Scheduled irrigation would cease after 3 years, as it is anticipated that plantings will have developed mature, deep root systems that can survive on groundwater sources.

There is an existing access ramp utilized by the Flood Control Board adjacent to the site which can be used for access to irrigate the site. In addition, the French Valley Library located adjacent to the proposed mitigation site contains landscaped areas and the restoration contractor may be able to utilize

the library's water source for irrigation. The irrigation method would ultimately be determined by the restoration contractor, in conjunction with the biological monitor's recommendations. The irrigation schedule should be adjusted as needed by the biological monitor and restoration contractor to accommodate soil moisture and anticipated precipitation. Waterings can be done by hand or by a drip irrigation system, but will target all planted trees, shrubs, and plugs. Irrigation shall allow for deep watering, which would encourage deep root growth and increase the chances of plant success once watering ceases. Over time, waterings would be decreased until plantings have matured enough with developed root systems that can survive without regular irrigation.

Weed Control

Regular weed control would be conducted at the mitigation site until it is determined that the non-native and invasive seed bank has been sufficiently reduced and native plantings are mature enough to survive over non-native and invasive species. Following planting, weed control would be conducted by hand by personnel trained in plant identification in order to avoid removal of native species. Invasives such as broad-leafed pepperweed, tamarisk, and tree tobacco would be specifically targeted for removal, given their current prevalence at the proposed mitigation site; however, all non-native species found on-site would be controlled. Control of non-native and invasive species should occur approximately four times per year during the active growing season. In the beginning of the growing season, weed abatement events should be spaced approximately 3 weeks apart, with more time allowed to pass between weeding events later in the season to capture re-growth. Focused efforts will be made to control or remove non-native and invasive species before seed-set each year.

Monitoring

The County proposes to conduct biological monitoring of the on and off-site mitigation for 5 years following the completion of construction and the installation of mitigation plant materials. Monitoring would be conducted by a qualified biological monitor, with background in restoration ecology, biology, botany, and/or other similar fields. Monitoring is proposed to occur quarterly (four times per calendar year) during the 5-year maintenance, monitoring, and reporting period following habitat enhancement efforts and will include photo point monitoring, a quantitative assessment of plant survivorship, and assessment of if the off-site mitigation area is developing in a way that will provide suitable LBV habitat. The results of monitoring will be presented annually to the applicable regulatory agencies (likely the RCA and CDFW – RWQCB and USACE involvement in the mitigation project is not anticipated due to the proposed payment of an ILF for permanent effects to WOUS) in a comprehensive Annual Monitoring Report.

Photo Points

Photo points would be determined following completion of planting and would be repeated during the second quarterly monitoring of each year. The location of each photo point will be recorded with a GPS

unit and may be marked in the field to aid in long term photo consistency. The location and number of photo points must be determined to sufficiently represent habitat re-establishment, enhancement, and establishment/creation areas including emergent wetland, alkali salt marsh, and willow riparian scrub habitat areas at both the on-site and off-site locations. During each subsequent photo point monitoring, each photo point will be re-taken to visually represent change over time.

Plant Survivorship and Success Criteria

During the second and third quarterly monitoring of each year, the biological monitor will quantify the number of surviving native trees and shrubs in the planting areas to determine a percent survival for the quarter. Plant survivorship monitoring data will be compiled and used to document compliance with success criteria in the annual report.

Success criteria for the mitigation plantings will be finalized during the Project's permitting process. The County proposes that the restoration contractor be responsible for the following success criteria by the end of the 5-year monitoring period:

- A minimum 75% survivorship for installed trees and shrubs within planting zones.
- A minimum 75% relative cover within the herbaceous layer of planting and seeding zones.
- A minimum 75% native plant species relative cover (no more than 25% relative cover of non-native species).

3.3.1.3 Equivalency Analysis

The proposed on- and off-site mitigation will result in habitat conditions that are biologically equivalent or superior to the existing conditions at the Project site. Ultimately, the proposed mitigation will provide mitigation for emergent wetland, willow riparian scrub, and alkali salt marsh in-kind via the creation of a combination of willow riparian scrub, alkali sedge-meadows, alkali marshes, and alkali wet-meadows at the proposed off-site mitigation location. Additionally, temporary impacts would be mitigated for on-site, re-establishing 0.530 acres of habitat. With the combination of both on- and off-site mitigation totaling in 1.804 acres, mitigation will result in habitat conditions that are biologically equivalent or superior to the existing conditions at the Project site.

In addition to an increase in quantity of habitat, the proposed mitigation will result in habitat quality that is biologically equivalent or superior to the current conditions. The proposed mitigation site is currently dominated by a single invasive species that does not provide suitable habitat for many wildlife species. Broad-leafed pepperweed grows across much of the French Valley Creek corridor, creating monotypic stands which limit wildlife and aquatic habitat. There is low habitat value currently at this location. The proposed mitigation will remove a large stand of this invasive species and replace it with

diverse, native vegetation. In addition to species diversity, there will be diversity of the landscape with different canopy height and cover. This will create alternating foraging and cover habitat for a variety of wildlife species. The mitigation project would increase the value and functionality of habitat in this area to a level which is biologically equivalent or superior to the existing condition.

3.3.2 Indirect Effects

The avoidance/minimization measures listed in Chapter 3.3.1.1 reduce potential indirect effects to riparian/riverine habitat and associated plant and wildlife species. This includes seasonal work limitations to avoid nesting bird impacts (BIO-3), pre-construction protocol botanical surveys (BIO-6), and requirements for a biological monitor (BIO-18). Further, the proposed Project does not anticipate any changes to the hydrology within proximity of the proposed pedestrian bridge. Hydrology modeling has shown that due to the very small and limited number of piers, there would be an increase of only 0.03 to 0.06 inches in water surface elevation; however, no changes to the flow or backwater within French Valley Creek are anticipated. The Project will also follow all of the standard BMPs required by the MSHCP, which are incorporated into the avoidance and minimization measures listed in Chapter 2.4.

4 NARROW ENDEMIC PLANT SPECIES MITIGATION (SECTION 6.1.3)

Projects located within a mapped Narrow Endemic Plant Species survey area (NEPSSA) are subject to additional site-specific surveys and procedures in order to achieve coverage for these species as outlined in Section 6.3.2 (Vol. I.) of the MSHCP. The MSHCP designated NEPSSAs based on the presence of select soils, existing occurrence data and coordination with the USFWS. Pursuant to the MSHCP, site-specific focused surveys for Narrow Endemic Plant Species are required for all public and private projects where appropriate habitat is present in NEPSSAs.

The proposed Project is located within Narrow Endemic Plant Species Survey Area 4, which includes the following species:

- Munz's onion (*Allium munzii*)
- California Orcutt grass (*Orcuttia californica*)
- San Diego ambrosia (*Ambrosia pumila*)
- Many-stemmed dudleya (*Dudleya multicaulis*)
- Spreading navarretia (*Navarretia fossalis*)
- Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*)

4.1 METHODS

Habitat assessments and botanical surveys for the six NEPSSA 4 species listed above were conducted by POWER Engineers biologists on April 22 and June 9, 2020. These survey dates encompass the blooming periods of the six Narrow Endemic Plant species identified by the MSHCP as having the potential to occur within the NEPSSA 4. Botanical surveys were conducted within the Project area footprint within French Valley Creek, plus an additional approximate 50-foot buffer. During the surveys, habitat communities were identified and described, and all plant species within the survey area were identified to species level. The year 2020 was a drought year with significantly less rainfall than the state average (NIDIS 2021); however, the surveys conducted during 2020 are not anticipated to be influenced by drought conditions due to the overall lack of suitable habitat features, specifically suitable soil types and vernal pool features, within the Project area for Narrow Endemic Plant species listed above.

4.2 RESULTS/IMPACTS

Preliminary habitat assessments determined that the Project area does not include suitable habitat features, such as clay soils and vernal pools, for the following Narrow Endemic Plant species: Munz's onion, California Orcutt grass, and many-stemmed dudleya. Due to the negative survey results, the lack of suitable habitat features, and the lack of local occurrences, these three NEPSSA 4 species are presumed absent from the Project area. No impacts are anticipated to these species.

San Diego ambrosia, spreading navarretia, and Wright's trichocoronis were not observed within the Project area during the botanical surveys; however, these species are often associated with alkaline soils and wetland habitats, which are present within the Project area. Despite the negative survey results and the lack of local occurrences for these three species, it was determined that San Diego ambrosia, spreading navarretia, and Wright's trichocoronis have a low to moderate potential to occur within the Project area, although not currently present.

The Project is anticipated to temporarily impact approximately 0.067 acres of alkali salt marsh and 0.177 acres of emergent wetland habitats, which may be suitable habitat for the NEPSSA 4 species that have the potential to occur within the Project area. The Project is also anticipated to have permanent impacts of 0.009 acres to alkali salt marsh and 0.007 acres to emergent wetland. Shade impacts are anticipated to be approximately 0.091 acres to alkali salt marsh and 0.152 acres to emergent wetland (Appendix B – Figure 5).

Preliminary geotechnical investigations for the Project are anticipated to have temporary impacts to approximately 0.086 acres of alkali marsh habitat and 0.063 acres of emergent wetland habitat (Appendix B – Figure 6). However, these impacts are located entirely within the temporary impact areas for the pedestrian bridge proposed by the Project. Mitigation for temporary impacts associated with the geotechnical investigations will be adequately compensated for with the Project mitigation; as such, no additional compensatory mitigation for the geotechnical investigation is proposed.

4.3 MITIGATION AND EQUIVALENCY

4.3.1 Direct Effects

As outlined in Section 6.3.2 (Vol. I.) of the MSHCP, projects with positive survey results for the above species must avoid 90% of those portions of the property that provide for long-term conservation value for the identified species until certain MSHCP conditions are met. Project impacts to suitable habitat for NEPSSA 4 species are anticipated to exceed the permitted 10% threshold for impacts; however, botanical surveys conducted in the spring of 2020 produced negative results for these species. Therefore, at this time, the Project does not require equivalent or superior conservation of habitat specific to these species.

Three NEPSSA 4 species have a low to moderate potential to occur within the Project area. In addition, annual and short-lived perennial plants may require updated surveys immediately prior to construction to accurately detect presence. With the implementation of BIO-6 (below) and the other avoidance and minimization measures listed within Chapter 2.4, direct effects to these species will be avoided and minimized.

BIO-6: Prior to construction-related activities, a protocol level botanical survey will be conducted by the Project biologist to detect if NEPSSA 4 plant species (San Diego ambrosia, spreading

navarretia, and Wright's trichocoronis), local Criteria Area plants (smooth tarplant, Coulter's goldfields) and other special status plants (white rabbit-tobacco, woven-spored lichen) are present within the Project area. The survey will be conducted during the appropriate blooming season when special status plants are more likely to be encountered. If any special status plant species are discovered within the Project footprint prior to construction, the RCA shall be notified and the County will determine if the population can be avoided.

Furthermore, the County will implement a mitigation effort as described in Chapter 3.3.1.2 to compensate for impacts to populations of NEPSSA 4 species habitats.

4.3.2 Indirect Effects

The measures listed above and in Chapter 2.4 reduce potential indirect effects to riparian/riverine habitat and associated NEPSSA 4 species. Additionally, the proposed Project does not anticipate any substantial changes to the hydrology within proximity of the proposed pedestrian bridge. The Project will also mitigate for permanent and temporary impacts to populations of NEPSSA 4 species, as described in Chapter 3.3.1.2, which would mitigate for indirect effects to NEPSSA 4 plant species.

5 ADDITIONAL SURVEY NEEDS (SECTION 6.3.2)

5.1 CRITERIA AREA SPECIES SURVEY AREA – PLANTS

The Project area is located in MSHCP Criteria Cell 5477, which is included in the Criteria Area Species Survey Area (CASSA) 4. This survey area indicates potential habitat for eight CASSA plant species:

- Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*)
- Davidson's saltscale (*Atriplex serenana var. davidsonii*)
- Little mousetail (*Myosurus minimus ssp. apus*)
- Mud nama (*Nama stenocarpa*)
- Parish's brittlescale (*Atriplex parishii*)
- Round-leaved filaree (*Erodium macrophyllum*)
- Smooth tarplant (*Centromadia pungens ssp. laevis*)
- Thread-leaved brodiaea (*Brodiaea filifolia*)

As outlined in section 6.3.2 of the MSHCP, projects within a CASSA require additional habitat assessments in order to identify existing populations of these species as well as provide for long-term conservation for any identified species. Habitat suitability assessments and botanical surveys for CASSA species were conducted by POWER Engineers biologists on April 22, 2020 and June 9, 2020.

5.1.1 Methods

On-site habitat assessments, with special emphasis on Criteria Area species, were conducted by POWER Engineers biologists on April 22 and June 9, 2020. These survey dates encompass the blooming period of all of the Criteria Area plant species identified by the MSHCP as having the potential to occur on-site. 2020 was a drought year with significantly less rainfall than the state average (NIDIS 2021); however, the surveys conducted during 2020 are not anticipated to be influenced by drought conditions due to the overall lack of suitable habitat features within the Project area for 6 of the 8 Criteria Area plant species listed above.

Habitat assessments and botanical surveys for the eight CASSA 4 species listed above were by conducted POWER Engineers biologists on April 22 and June 9, 2020. These survey dates encompass the blooming periods of the eight Criteria Area Species identified by the MSHCP as having the potential to occur within the NEPSSA 4. Botanical surveys were conducted within the Project area footprint within French Valley Creek, plus an additional approximate 50-foot buffer. During the surveys, habitat communities were identified and described, and all plant species within the survey area were identified to species level. The year 2020 was a drought year with significantly less rainfall than the state average (NIDIS 2021); however, the surveys conducted during 2020 are not anticipated to be influenced by

drought conditions due to the overall lack of suitable habitat features, specifically suitable soil types and vernal pool features, within the Project area for Criteria Area Species listed above.

5.1.2 Results/Impacts

Preliminary habitat assessments determined that the Project area does not include suitable habitat features for six of the eight listed Criteria Area species. However, two of the species, Coulter's goldfields and smooth tarplant, were determined to have a high potential of occurring within the Project area. French Valley Creek provides conservation value for these Criteria Area Plant species because it provides suitable vegetation communities as well as alkali soils. The presence of suitable habitat features as well as a recent local CNDDB occurrence indicates that Coulter's goldfields have a high potential to occur within the Project area. Additionally, the biological survey conducted by POWER Engineers biologists on June 9, 2020, identified a population of approximately 25 individuals of smooth tarplant on the northwest side of the channel, just outside of the Project area (Appendix B – Figure 9. Criteria Area Species: Habitat Evaluation).

Due to the presence of potentially suitable habitat for Coulter's goldfields as well as the positive detection of smooth tarplant just outside of the Project area during initial biological surveys, a protocol-level botanical survey will be required prior to construction in order to detect the potential presence of local special status plant species within the Project's impact area. The survey will be conducted during the appropriate blooming season when special status plants are more likely to be encountered. Surveys should be conducted in accordance with accepted botanical survey protocols including USFWS (2002) and CDFW (2009). The appropriate blooming season for Coulter's goldfields is between February and June. Smooth tarplant blooms between April and November.

The Project is anticipated to temporarily impact approximately 0.067 acres of alkali salt marsh, 0.286 acres of willow riparian scrub, and 0.177 acres of emergent wetland habitats, which may be suitable habitat for the CASSA 4 species that have the potential to occur within the Project area. The Project is also anticipated to have permanent impacts of 0.009 acres to alkali salt marsh, 0.029 acres to willow scrub riparian, and 0.007 acres to emergent wetland. Shade impacts are anticipated to be approximately 0.091 acres to alkali salt marsh, 0.077 acres to willow scrub riparian, and 0.152 acres to emergent wetland (Appendix B – Figure 5).

Preliminary geotechnical investigations for the Project are anticipated to have temporary impacts to approximately 0.076 acres of alkali marsh habitat, 0.063 acres of emergent wetland, and 0.055 acres of willow scrub riparian habitat (Appendix B – Figure 6). However, these impacts are located entirely within the temporary and shade impact areas for the pedestrian bridge proposed by the Project. Mitigation for temporary impacts associated with the geotechnical investigations will be compensated for with the proposed Project mitigation; as such, no additional compensatory mitigation for the geotechnical investigation is proposed.

5.1.3 Mitigation and Equivalency

5.1.3.1 Direct Effects

As outlined in Section 6.3.2 (Vol. I.) of the MSHCP, projects with positive survey results for the above species must avoid 90% of those portions of the property that provide for long-term conservation value for the identified species until certain MSHCP conditions are met. Project impacts to suitable habitat for CASSA 4 species are anticipated to exceed the permitted 10% threshold for impacts; however, botanical surveys conducted in the spring of 2020 produced negative results within the Project area for these species. Therefore, at this time, the Project does not require equivalent or superior conservation of habitat specific to these species.

One CASSA 4 species, Coulter's goldfields, has a high potential to occur within the Project area, and one CASSA 4 species, smooth tarplant, was observed just outside of the Project impact area during 2020 surveys. With the implementation of BIO-6 (below) and the other avoidance and minimization measures listed within Chapter 2.4, direct effects to these species will be avoided and minimized.

BIO-6: Prior to construction-related activities, a protocol level botanical survey will be conducted by the Project biologist to detect if NEPSSA 4 plant species (San Diego ambrosia, spreading navarretia, and Wright's trichocoronis), local Criteria Area plants (smooth tarplant, Coulter's goldfields) and other special status plants (white rabbit-tobacco, woven-spored lichen) are present within the Project area. The survey will be conducted during the appropriate blooming season when special status plants are more likely to be encountered. If any special status plant species are discovered within the Project footprint prior to construction, the RCA shall be notified and the County will determine if the population can be avoided.

Furthermore, the County will implement a mitigation effort as described in Chapter 3.3.1.2 to compensate for impacts to populations of CASSA 4 species.

5.1.3.2 Indirect Effects

The measures listed above and in Chapter 2.4 reduce potential indirect effects to riparian/riverine habitat and associated CASSA 4 species. Additionally, the proposed Project does not anticipate any substantial changes to the hydrology within proximity of the proposed pedestrian bridge. The Project will also mitigate for permanent and temporary impacts to populations of CASSA 4 species, as described in Chapter 3.3.1.2, which would mitigate for indirect effects to CASSA 4 plant species.

5.2 BURROWING OWL

5.2.1 Methods

Potential for burrowing owl habitat within the Project area was assessed by Dokken biologist Scott Salembier during a general biological survey on July 24, 2019. Additionally, Power Engineers biologists

conducted surveys on April 22, 2020 and June 9, 2020. Biological surveys were conducted within the Project area and an additional buffer area of French Valley Creek within approximately 50 feet of the Project area.

5.2.2 Results/Impacts

During biological surveys, no suitable habitat for burrowing owl was observed within the Project area – the Project area does not contain grassland, desert, or scrubland habitat and no mammal burrows were observed in the area. Due to the absence of suitable habitat within the Project area, the species is presumed to be absent from the Project area and no CDFW protocol level burrowing owl surveys will be required prior to initial ground disturbing activity. No Project impacts to this species are expected.

5.2.3 Mitigation and Equivalency

5.2.3.1 Direct Effects

Burrowing owls are presumed absent from the Project area. No direct effects to this species are expected as a result of the construction of this Project.

5.2.3.2 Indirect Effects

Burrowing owls are presumed absent from the Project area. No indirect effects to this species are expected as a result of the construction of this Project.

5.3 MAMMALS

5.3.1 Methods

Under Section 6.3.2 of the MSHCP, additional surveys may be necessary if certain covered mammalian species have potential to occur within the Project area. General biological surveys were conducted by a Dokken biologist on July 24, 2020 and by Power Engineering biologists on April 22, 2020 and June 9, 2020. The Project area does not fall within any of the mammalian species survey areas outlined by the MSHCP.

5.3.2 Results/Impacts

The Project area lacks suitable habitat for the Aguanga kangaroo rat (*Dipodomys merriami collinus*), San Bernardino kangaroo rat (*Dipodomys merriami parvus*), and the Los Angeles pocket mouse (*Perognathus longimembris brevinasus*). No special status mammals are presumed to be present in the Project area. No Project impacts to these species are expected.

5.3.3 Mitigation and Equivalency

5.3.3.1 Direct Effects

Special status mammalian species are presumed absent from the Project area. No direct effects to these species are expected as a result of the construction of this Project.

5.3.3.2 Indirect Effects

Special status mammalian species are presumed absent from the Project area. No indirect effects to these species are expected as a result of the construction of this Project.

5.4 AMPHIBIANS

5.4.1 Methods

Under Section 6.3.2 of the MSHCP, additional surveys may be necessary if certain covered amphibian species have potential to occur within the Project area. General biological surveys were conducted by a Dokken biologist on July 24, 2020 and by Power Engineering biologists on April 22, 2020 and June 9, 2020. The Project area does not fall within the amphibian species survey areas outlined by the MSHCP.

5.4.2 Results/Impacts

The Project area lacks suitable habitat for the arroyo toad (*Bufo californicus*), California red-legged frog (*Rana draytonii*), and mountain yellow-legged frog (*Rana mucosa*). No special status amphibians are presumed to be present in the Project area. No Project impacts to these species are expected.

5.4.3 Mitigation and Equivalency

5.4.3.1 Direct Effects

Special status amphibian species are presumed absent from the Project area. No direct effects to these species are expected as a result of the construction of this Project.

5.4.3.2 Indirect Effects

Special status amphibian species are presumed absent from the Project area. No indirect effects to these species are expected as a result of the construction of this Project.

6 DELHI SANDS FLOWER-LOVING FLY

6.1 METHODS

General biological surveys of the Project area were conducted by a Dokken biologist on July 24, 2020 and by Power Engineering biologists on April 22, 2020 and June 9, 2020. Review of literature and CNDDB occurrence data indicates the Delhi sands flower-loving fly (*Rhaphiomidas terminatus abdominalis*) does not have the potential of occurring within the Project area.

6.2 RESULTS/IMPACTS

No Delhi sands flower-loving flies were observed during any of the biological surveys. The Project area does not contain soil types suitable for this species and the nearest CNDDB occurrence of the Delhi sands flower-loving fly is located approximately 28 miles northeast of the Project area. The species is presumed absent from the Project area. The species is presumed absent from the Project area due to a lack of habitat and local occurrences. No Project impacts to this species are expected.

6.3 MITIGATION AND EQUIVALENCY

6.3.1 Direct Effects

The Delhi sands flower-loving fly is presumed absent from the Project area. No direct effects to this species are expected as a result of the construction of this Project.

6.3.2 Indirect Effects

The Delhi sands flower-loving fly is presumed absent from the Project area. No indirect effects to this species are expected as a result of the construction of this Project.

7 REFERENCES

CDFG 2021 — Alkali Desert Scrub. Peter G. Rowlands, California Wildlife Habitat Relationships System. California Department of Fish and Game (Accessed 7/22/2021).

Holly 2011 — Environmental Factors Correlated with Changes in Riparian Plant Composition along the Santa Clara River Floodplain, California. (Accessed: 7/22/2021).

Kus 2002 — Kus, B. 2002. Least Bell's Vireo (*Vireo bellii pusillus*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html

Preston et. al — Preston, K.L., Kus, B.E., and Perkins, E., 2021, Modeling Least Bell's Vireo habitat suitability in current and historic ranges in California: U.S. Geological Survey Open-File Report 2020–1151, 44 p., https://doi.org/10.3133/ofr20201151 (Accessed 3/10/2022)

U.S. Climate Data 2021 — U.S. Climate Data. 2021. Temecula Weather Averages. Available at: <http://www.usclimatedata.com> (accessed: 8/5/2021).

USFWS 2021 — Emergent Wetlands. Classification of Wetlands and Deepwater Habitats of the United States (Accessed: 7/22/2021).

8 APPENDICES

Appendix A – LBV and SWFL Survey Memorandums

BUSBY
Biological Services

October 2, 2020

Ms. Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2020 Least Bell's Vireo Survey Summary Report for the Proposed Skyview Pedestrian Bridge Project, Riverside County, California

Ms. Love:

This letter report summarizes the results of the focused, protocol-level, presence/absence surveys for the federally and state-listed endangered least Bell's vireo (*Vireo bellii pusillus*) conducted in 2020 for the proposed Skyview Pedestrian Bridge project (project). Busby Biological Services, Inc. (BBS) was contracted by POWER Engineers, Inc. to conduct these surveys on behalf of the County of Riverside (County) to determine the presence/absence of least Bell's vireo within and adjacent to the proposed project area.

PROJECT INFORMATION

The proposed project includes the construction of a new pedestrian bridge across the Warm Springs Valley/French Valley Channel, approximately 800 feet east of Highway 79. Currently, there is an undeveloped, County-owned easement at that location, with cul-de-sacs located on either side of the Warm Springs Valley/French Valley Channel. The County has determined a need to provide continuity on Skyview Road for travelers within the French Valley community to traverse the Warm Springs Valley/French Valley Channel, and would fill that need through the development of a multipurpose pedestrian and bicyclist bridge on the County-owned easement. A new French Valley Library is anticipated to be constructed in the northwest quadrant of the pedestrian bridge in a separate project by the County. Thus, special aesthetic treatment and bridge design will be employed to complement the proposed library.

The proposed project occurs within the U.S. Geological Survey (USGS) Bachelor Mountain 7.5-minute quadrangle, in Riverside County, California (USGS 1968; Attachment A: Figures 1 through 3). The proposed project area and the Warm Springs Valley/French Valley Channel is bordered on all sides by developed land, which includes Skyview Road, housing developments, and a parcel of land currently under construction. The elevation within the proposed project area is approximately 1,360 feet above mean sea level.

The dominant vegetation communities and land cover types in the proposed project area include southern willow scrub, disturbed wetland, fresh water marsh, and disturbed habitat.

SPECIES INFORMATION

The least Bell's vireo is a small, olive-gray colored, migratory songbird that is federally and state-listed as endangered. One of four Bell's vireo subspecies, the least Bell's vireo is endemic to California and Baja California, Mexico. This highly migratory species arrives in California in mid-March and departs by late September to fly south to wintering grounds near the tip of Baja California, Mexico. This species formally bred in lowland riparian habitat, ranging from coastal southern California through the Sacramento and San Joaquin Valleys as far north as Redbluff, and other scattered locations east of the Sierra Nevada (United States Fish and Wildlife Service [USFWS] 1998; Grinnell and Miller 1986).

The least Bell's vireo is dependent upon riparian habitat during the breeding season and prefers willow-dominated woodland or scrub that typically exists along streams and rivers. Other habitat types used include *Baccharis* scrub, mixed oak/willow woodland, mesquite woodland, and elderberry scrub. Habitat characteristics that appear to be essential for vireo occupation include dense cover from 3 to 6 feet in height for nesting and foraging, and a stratified canopy providing both foraging habitat and song perches for territorial advertisement.

By the time least Bell's vireo was listed by the California Department of Fish and Wildlife (CDFW) in 1984, it had been extirpated from much of its former range and was restricted to eight counties south from Santa Barbara with just 300 pairs statewide (Unitt 2004). Declines were caused by widespread clearing of riparian habitat combined with brood parasitism by brown-headed cowbirds (*Molothrus ater*), whose increase in California was as dramatic as the species' decline. Currently, with restriction of habitat destruction, extensive cowbird trapping, and protection from the federal and state Endangered Species Acts, populations have recovered in some areas of cismontane southern California and are expanding into former ranges, with the northernmost sighting from Santa Clara County, California (Brown 1993, Kus 2002). San Diego County holds the largest breeding population of least Bell's vireo in the state, where it is a fairly common breeder in appropriate habitats, primarily in the coastal lowlands (Unitt 2004).

METHODS

The methods used to conduct a habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Methods

A qualified BBS biologist conducted a focused habitat assessment for least Bell's vireo within 500 feet of all proposed project features. The habitat assessment was conducted by assessing the vegetation communities and other parameters (e.g., species composition, height, density, disturbance type/amount) for their potential to support the least Bell's vireo. Polygons of suitable least Bell's vireo habitat were drawn by hand onto a high-resolution aerial field map, which were later screen-digitized in the office by a Geographic Information Systems (GIS) specialist using ArcGIS software.

Focused Survey Methods

Qualified BBS biologists conducted focused, protocol-level surveys for the least Bell's vireo in accordance with the current USFWS survey protocol, titled *Least Bell's Vireo Survey Guidelines* (USFWS 2001). Eight surveys were conducted at least 10 days apart during the protocol survey window of April 10 to July 31. All surveys were conducted between approximately dawn and 1100 and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, other inclement weather conditions) that would impede detection of the least Bell's vireo. Surveyors slowly walked throughout the suitable habitat within the survey area, which includes a 500-foot buffer from all proposed project features, and used visual and auditory cues to detect the least Bell's vireo. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area, while taking care not to disturb sensitive habitat or potential nest areas. No more than approximately 3 linear kilometers (50 hectares) of suitable habitat were surveyed per day, per the protocol.

Sensitive species detections were recorded electronically using a hand-held Global Positioning Systems (GPS) device and/or by hand onto a high-resolution aerial image of the survey area, and relevant information (e.g., age, sex, number of individuals detected) was noted if least Bell's vireo were detected. In addition, numbers and locations of parasitic brown-headed cowbirds were recorded, if present, and other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence, were recorded.

RESULTS

The results of the habitat assessment and focused, protocol-level least Bell's vireo surveys are presented in this section.

Habitat Assessment Results

BBS biologists Erik LaCoste and Charles Vettes identified an approximate total of 3.42 acres of potentially suitable least Bell's vireo habitat within the project survey area during the habitat assessment conducted simultaneously with the first survey

on April 22, 2020 (Attachment 1: Figure 3). The potentially suitable least Bell's vireo habitat within the survey area includes southern willow scrub and disturbed wetland. These vegetation communities and their suitability for least Bell's vireo are described in more detail below.

The southern willow scrub within the survey area generally ranges in height from 10 to 25 feet, contains an open to dense canopy dominated by woody species such as red willow (*Salix laevigata*), black willow (*Salix gooddingii*), mulefat (*Baccharis salicifolia* ssp. *salicifolia*), and salt-cedar (*Tamarix ramosissima*) with an herbaceous understory dominated by broadleaved pepperweed (*Lepidium latifolium*), saltbush (*Atriplex* sp.), broad-leaved cattail (*Typha latifolia*), and tule (*Schoenoplectus acutus* var. *occidentalis*). In addition, the southern willow scrub appears to have experienced a fire in the recent past, as evident from scattered, charred willow snags throughout the survey area. The southern willow scrub provides moderate to high quality habitat for least Bell's vireo, as the majority of the suitable habitat supports a plant species composition, height, and density typically associated with the species. In addition, the suitable habitat within the survey area is contiguous with adjacent suitable habitat in the Warm Springs Valley/French Valley Channel up- and downstream of the survey area.

The disturbed wetland within the survey area generally ranges in height from approximately 2 to 10 feet, contains dense, short to moderately high vegetation, and is dominated by species such as tree tobacco (*Nicotiana glauca*), broadleaved pepperweed, salt-cedar, saltbush, broad-leaved cattail, and tule. In addition, the disturbed wetland appears to have experienced a fire in the recent past, as evident from scattered, charred willow snags throughout the survey area. The disturbed wetland provides low quality habitat for least Bell's vireo, because it is dominated by an overall low community height and species composition not typically associated with the species' preferred habitat.

Focused Survey Results

Eight focused, protocol-level surveys were conducted within the project survey area between April 22 and July 13, 2020. Surveys were conducted during appropriate weather conditions by qualified BBS biologists Darin Busby, Erik LaCoste, and Charles Vettes. Dates and survey conditions during the focused surveys are provided in Table 1, below.

Table 1. Survey Conditions

Survey #	Date	Time		Weather				Surveyor
				Temp (°F)	Wind (mph)	Clouds (% cover)	Precipitation	
1	4/22/20	Start	0740	51	1-2	0	0	E. LaCoste C. Vettes
		End	0945	67	2-4	0	0	
2	5/5/20	Start	0730	66	0-1	0	0	D. Busby C. Vettes
		End	0930	74	0-1	0	0	
3	5/18/20	Start	0735	64	3-5	20	0	D. Busby C. Vettes
		End	1000	70	3-5	30	0	
4	6/1/20	Start	0745	71	0-1	0	0	D. Busby E. LaCoste
		End	1000	80	1-2	50	0	
5	6/11/20	Start	0700	60	1-2	0	0	C. Vettes E. LaCoste
		End	1000	84	2-3	0	0	
6	6/22/20	Start	0730	59	4-6	100	0	C. Vettes E. LaCoste
		End	0930	63	2-4	0	0	
7	7/2/20	Start	0730	60	1-2	100	0	D. Busby C. Vettes
		End	0930	63	1-2	100	0	
8	7/13/20	Start	0730	68	0-1	0	0	C. Vettes E. LaCoste
		End	1000	81	1-3	0	0	

No breeding least Bell's vireo were detected during the 2020 focused, protocol-level surveys. However, a single least Bell's vireo was detected during the eighth survey conducted on July 13, 2020. The least Bell's vireo was detected within the 500-foot buffer area north of the proposed project area. The individual least Bell's vireo, which appeared to be an adult, was observed foraging and singing sporadically for approximately 25 minutes. A follow-up visit to the site was conducted on July 22, 2020, to further investigate the least Bell's vireo detected on July 13, 2020; however, the least Bell's vireo was not detected during this survey. It is likely that this individual least Bell's vireo was only using the survey area as foraging habitat. No other least Bell's vireo were detected in the survey area at any other time during surveys.

A total of 57 wildlife species were detected during the focused least Bell's vireo surveys (Attachment 2). Of these 57 species, 5 sensitive species were detected during these surveys, including least Bell's vireo; willow flycatcher (*Empidonax traillii*), a state-listed endangered species; yellow warbler (*Dendroica petechia*), a state species of special concern; yellow-breasted chat (*Icteria virens*), a state species of special concern; and Cooper's hawk (*Accipiter cooperii*), a state watch list species (Attachment 1: Figure 3). In addition, several brown-headed cowbirds, a brood parasite, were detected and recorded during each of the eight surveys. Cowbirds were detected continuously flying through and perched in the survey area. The number of individuals detected during surveys ranged from 2 to 12 with both male and female individuals present at times. It should be noted that the locations of sensitive species and brown-headed cowbirds on Figure 3 (Attachment 1) may reflect repeated detections of the same individuals from one survey to the next and are not intended to represent the quantity of individuals present.

SUMMARY

No breeding least Bell's vireo were detected during the 2020 focused, protocol-level surveys. However, a single least Bell's vireo was detected foraging within the survey area on July 13, 2020.

Please do not hesitate to contact me at darin@busbybiological.com or (858) 334-9508 or Melissa Busby at melissa@busbybiological.com or (858) 334-9507 if you have any questions.

Sincerely,

Darin Busby
Principal Biologist / Owner

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Wildlife Species Detected within the Proposed Project Survey Area
Attachment 3: Representative Photographs from the Proposed Project Survey Area

REFERENCES

Brown, B.T.
1993 Bell's Vireo (*Vireo bellii*). In *The Birds of North America*, No. 35 (A. Poole, P. Stettenheim, and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, DC: The American Ornithologists' Union.

Grinnell, J., and A.H. Miller
1986 The Distribution of the Birds of California. *Pacific Coast Avifauna* No. 27, published 1944 and reprinted by Artimisa Press, Lee Vining, California.

Kus, B.
2002 Least Bell's vireo (*Vireo bellii pusillus*). In California Partners in Flight. The riparian bird conservation plan: a strategy for reversing the decline of riparian-associated birds in California. Available at: http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

U.S. Fish and Wildlife Service (USFWS)
1998 Draft Recovery Plan for the Least Bell's Vireo. U.S. Fish and Wildlife Service, Portland, OR. 139 pgs.
2001 Least Bell's Vireo Survey Guidelines.

U.S. Geological Survey (USGS)
1968 7.5-minute Bachelor Mountain Topographic Quadrangle (Photorevised 1975)

PROJECT BIOLOGIST SIGNATURE PAGE

The project biologists performing focused, protocol-level, least Bell's vireo (*Vireo bellii pusillus*) surveys for the proposed Skyview Pedestrian Bridge Project (project) were qualified to survey for this species. The undersigned project biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for least Bell's vireo conducted for the proposed project during spring 2020.

_____

Darin Busby
Principal Biologist / Owner
Busby Biological Services, Inc.

_____

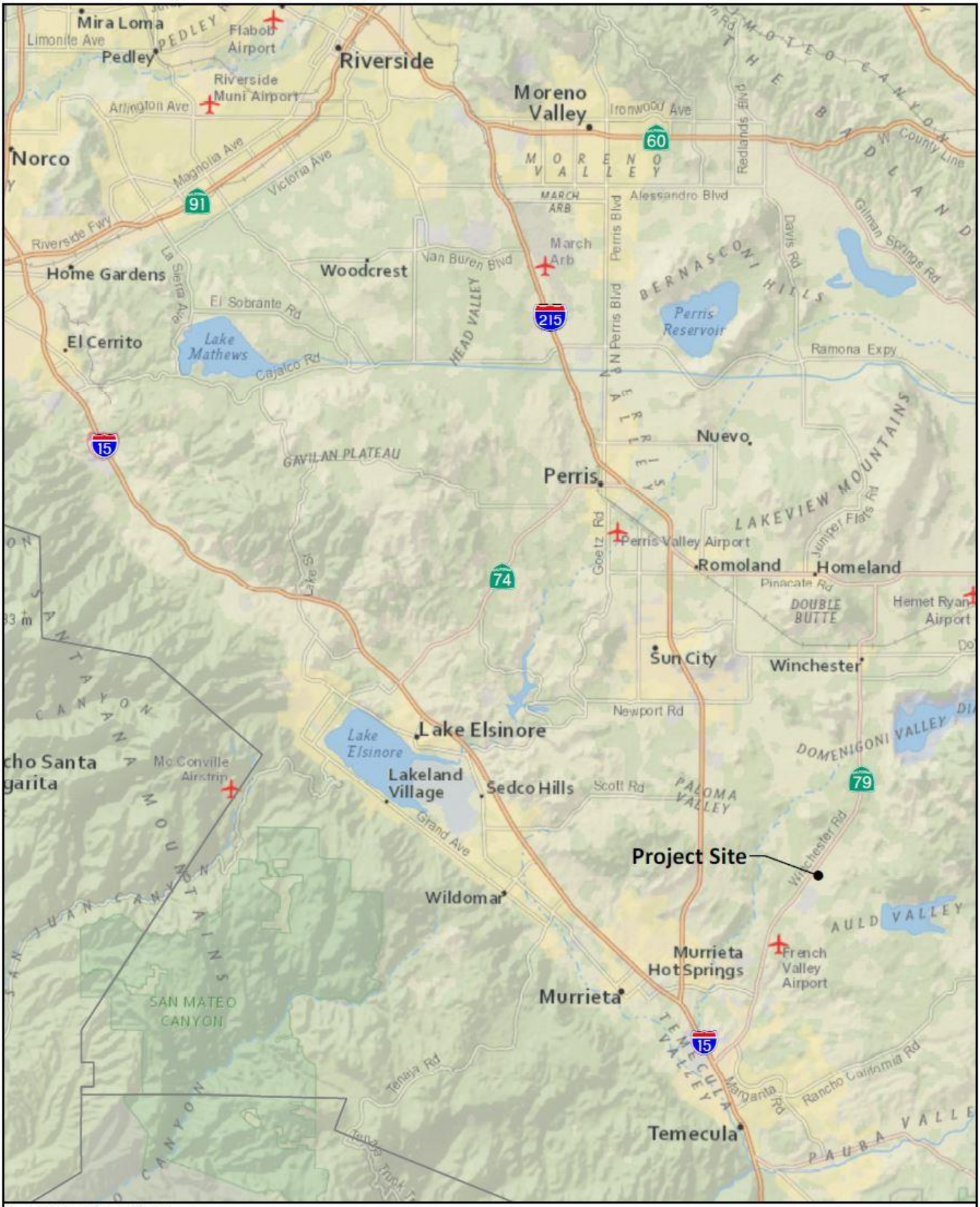
Erik LaCoste
Senior Biologist
Busby Biological Services, Inc.

_____

Charles Vettes
Senior Biologist
Busby Biological Services, Inc.

ATTACHMENT 1

FIGURES



Source: National Geographic, Esri

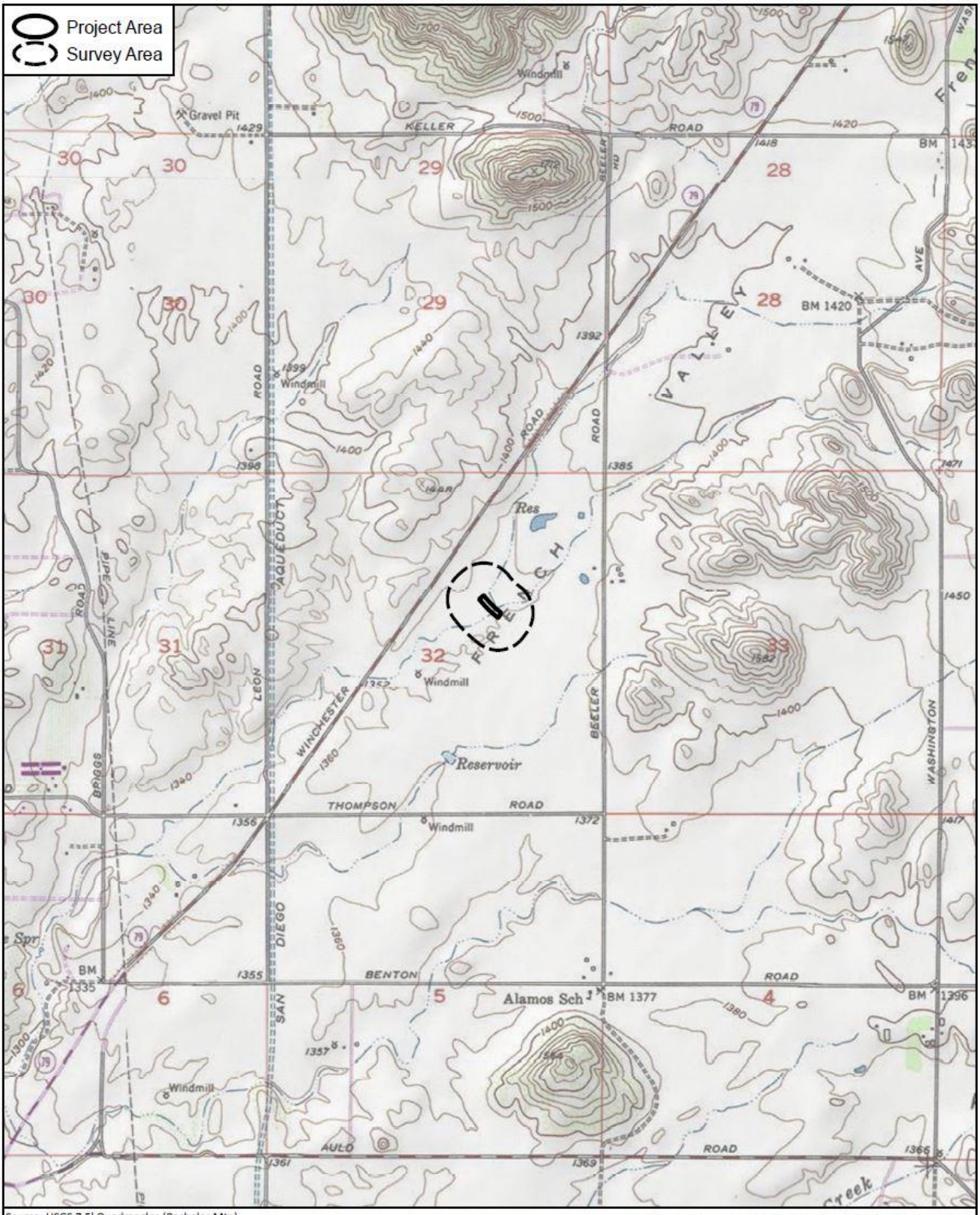
BUSBY Biological Services

N 0 2 4 Miles

Regional Location

SKYVIEW PEDESTRIAN BRIDGE PROJECT

Figure 1



Source: USGS 7.5' Quadrangles (Bachelor Mtn)

BUSBY Biological Services

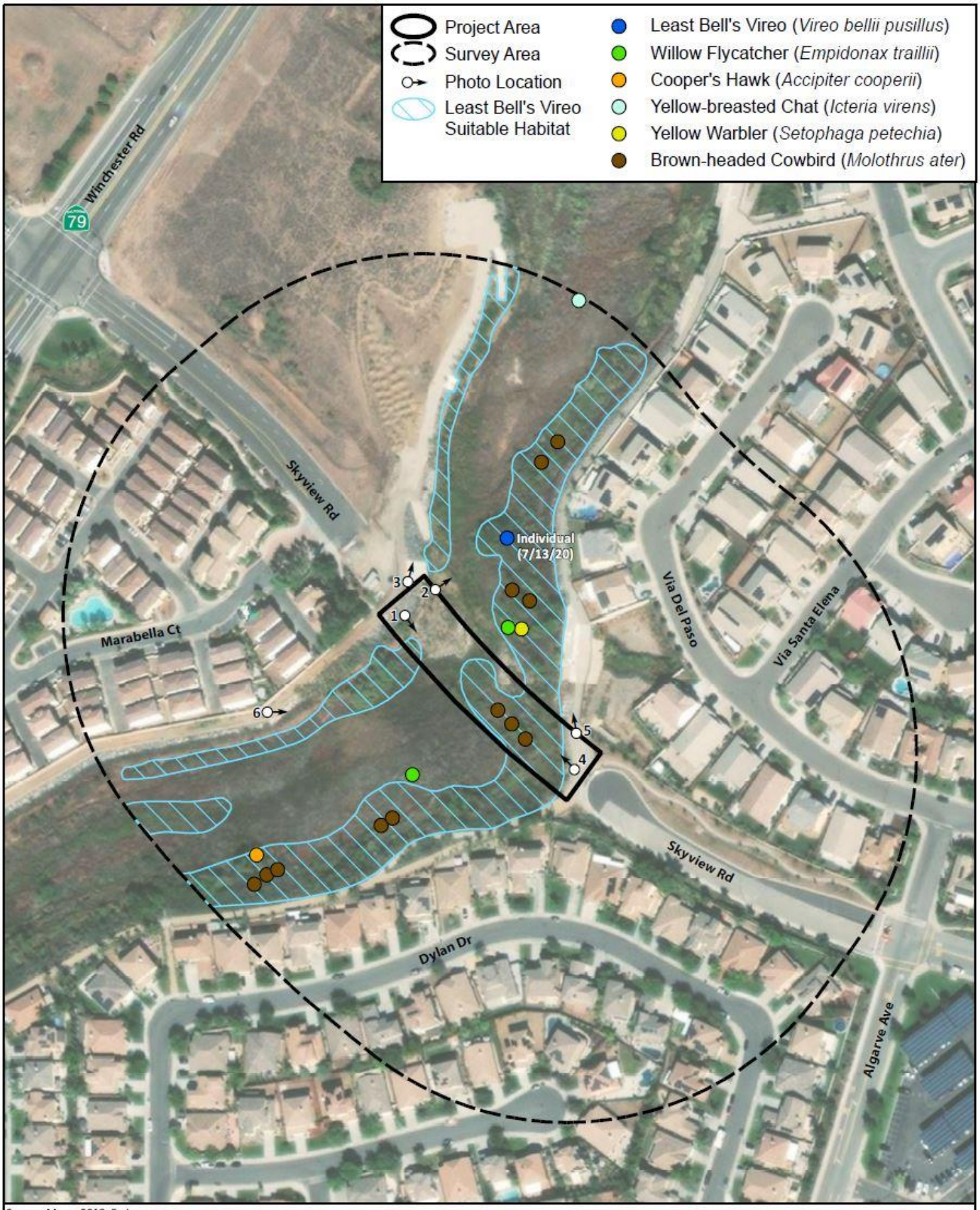
0 1,000 2,000 Feet

N

Project Vicinity - USGS Topo

SKYVIEW PEDESTRIAN BRIDGE PROJECT

Figure 2



Source: Maxar 2018, Esri

Least Bell's Vireo Survey Results

SKYVIEW PEDESTRIAN BRIDGE PROJECT

Figure 3

BUSBY Biological Services

N

0 100 200 Feet

ATTACHMENT 2

WILDLIFE SPECIES DETECTED WITHIN THE PROPOSED PROJECT SURVEY AREA

Attachment 2
Wildlife Species Detected within the Proposed Project Survey Area

INVERTEBRATES			
Order	**Family**	**Scientific Name**	**Common Name**
Lepidoptera			
	Papilionidae	*Papilio rutulus*	Western Tiger Swallowtail
VERTEBRATES			
Order	**Family**	**Scientific Name**	**Common Name**
AMPHIBIANS			
Anura			
	Ranidae	*Lithobates catesbeianus*	American bullfrog
REPTILES			
Cryptodira			
	Emydidae	*Trachemys scripta elegans*	Red-eared Slider
Squamata			
	Phrynosomatidae	*Sceloporus occidentalis*	Western Fence Lizard
BIRDS			
Accipitriformes			
	Accipitridae	*Accipiter cooperii**	Cooper's Hawk
		Buteo jamaicensis	Red-tailed Hawk
Anseriformes			
	Anatidae	*Anas platyrhynchos*	Mallard
Apodiformes			
	Trochilidae	*Archilochus alexandri*	Black-chinned Hummingbird
		Calypte anna	Anna's Hummingbird
		Calypte costae	Costa's Hummingbird
		Selasphorus sasin	Allen's Hummingbird
Columbiformes			
	Columbidae	*Columba livia*	Rock Pigeon
		Streptopelia decaocto	Eurasian Collared-Dove
		Zenaida macroura	Mourning Dove
Cuculiformes			
	Cuculidae	*Geococcyx californianus*	Greater Roadrunner
Falconiformes			
	Falconidae	*Falco sparverius*	American Kestrel
Gruiformes			
	Rallidae	*Fulica americana*	American Coot
		Gallinula galeata	Common Gallinule
		Laterallus jamaicensis	Black Rail

Passeriformes			
	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Cardinalidae	*Pheucticus melanocephalus*	Black-headed Grosbeak
		Piranga ludoviciana	Western Tanager
	Corvidae	*Aphelocoma californica*	California Scrub-Jay
		Corvus brachyrhynchos	American Crow
		Corvus corax	Common Raven
	Fringillidae	*Haemorhous mexicanus*	House Finch
		Spinus psaltria	Lesser Goldfinch
		Spinus tristis	American Goldfinch
	Hirundinidae	*Hirundo rustica*	Barn Swallow
		Petrochelidon pyrrhonota	Cliff Swallow
		Stelgidopteryx serripennis	Northern Rough-winged Swallow
	Icteria	*Icteria virens**	Yellow-breasted Chat
	Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird
		Icterus cucullatus	Hooded Oriole
		Molothrus ater	Brown-headed Cowbird
	Mimidae	*Mimus polyglottos*	Northern Mockingbird
	Parulidae	*Cardellina pusilla*	Wilson's Warbler
		Geothlypis trichas	Common Yellowthroat
		Leiothlypis celata	Orange-crowned Warbler
		*Setophaga petechia**	Yellow Warbler
	Passerellidae	*Melospiza melodia*	Song Sparrow
		Pipilo maculatus	Spotted Towhee
	Passeridae	*Passer domesticus*	House Sparrow
	Sturnidae	*Sturnus vulgaris*	European Starling
	Troglodytidae	*Thryomanes bewickii*	Bewick's Wren
		Troglodytes aedon	House Wren
	Tyrannidae	*Empidonax difficilis*	Pacific-slope Flycatcher
		*Empidonax traillii**	Willow Flycatcher
		Empidonax wrightii	Gray Flycatcher
		Sayornis nigricans	Black Phoebe
		Sayornis saya	Say's Phoebe
		Tyrannus vociferans	Cassin's Kingbird
	Vireonidae	*Vireo gilvus*	Warbling Vireo
		*Vireo bellii pusillus**	Least Bell’s Vireo
Pelecaniformes			
	Ardeidae	*Butorides virescens*	Green Heron
Piciformes			
	Picidae	*Dryobates nuttallii*	Nuttall's Woodpecker
MAMMALS			
Lagomorpha			
	Leporidae	*Sylvilagus audubonii*	Desert Cottontail

*special status species

ATTACHMENT 3

REPRESENTATIVE PHOTOGRAPHS FROM THE PROJECT SURVEY AREA

REPRESENTATIVE PHOTOS

	Photograph 1. View across the Warm Springs Valley/French Valley Channel showing proposed project area and riparian habitat (taken 6/1/2020; facing southeast).
	Photograph 2. View across the Warm Springs Valley/French Valley Channel north of proposed project area (taken 6/1/2020; facing northeast).
	Photograph 3. View of riparian habitat upstream from the proposed project area (taken 6/1/2020; facing north).

	Photograph 4. View across the Warm Springs Valley/French Valley Channel showing proposed project area and riparian habitat (taken 6/1/2020; facing northwest).
	Photograph 5. View of riparian habitat upstream from the proposed project area (taken 6/1/2020; facing north).
	Photograph 6. View across the Warm Springs Valley/French Valley Channel showing proposed project area and riparian habitat (taken 6/1/2020; facing east).

BUSBY
Biological Services

October 2, 2020

Ms. Stacey Love
Recovery Permit Coordinator
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

RE: 2020 Southwestern Willow Flycatcher Survey Summary Report for the Proposed Skyview Pedestrian Bridge Project, Riverside County, California

Ms. Love:

This letter report summarizes the results of the focused, protocol-level, presence/absence surveys for the federally and state-listed endangered southwestern willow flycatcher (*Empidonax traillii extimus*) conducted in 2020 for the proposed Skyview Pedestrian Bridge project (project). Busby Biological Services, Inc. (BBS) was contracted by POWER Engineers, Inc. to conduct these surveys on behalf of the County of Riverside (County) to determine the presence/absence of southwestern willow flycatcher within and adjacent to the proposed project area.

PROJECT INFORMATION

The proposed project includes the construction of a new pedestrian bridge across the Warm Springs Valley/French Valley Channel, approximately 800 feet east of Highway 79. Currently, there is an undeveloped, County-owned easement at that location, with cul-de-sacs located on either side of the Warm Springs Valley/French Valley Channel. The County has determined a need to provide continuity on Skyview Road for travelers within the French Valley community to traverse the Warm Springs Valley/French Valley Channel, and would fill that need through the development of a multipurpose pedestrian and bicyclist bridge on the County-owned easement. A new French Valley Library is anticipated to be constructed in the northwest quadrant of the pedestrian bridge in a separate project by the County. Thus, special aesthetic treatment and bridge design will be employed to complement the proposed library.

The proposed project occurs within the U.S. Geological Survey (USGS) Bachelor Mountain 7.5-minute quadrangle, in Riverside County, California (USGS 1968; Attachment A: Figures 1 through 3). The proposed project area and the Warm Springs Valley/French Valley Channel is bordered on all sides by developed land, which includes Skyview Road, housing developments, and a parcel of land currently under construction. The elevation within the proposed project area is approximately 1,360 feet above mean sea level.

The dominant vegetation communities and land cover types in the proposed project area include southern willow scrub, disturbed wetland, fresh water marsh, and disturbed habitat.

SPECIES INFORMATION

The southwestern willow flycatcher is a small, olive-colored, migratory songbird that is federally and state-listed as endangered. One of four subspecies of willow flycatcher (*Empidonax traillii*), it is distinguished by breeding distribution, song, call, and plumage. The southwestern willow flycatcher is a neotropic migrant that is endemic to the Americas and is a summer breeding resident in the southwestern U.S., specifically within Arizona, New Mexico, southern California, southern portions of Nevada and Utah, southwestern Colorado, far western Texas, and extreme northwestern Mexico (U.S. Fish and Wildlife Service [USFWS] 2002). It is the only subspecies of willow flycatcher that is known to breed in southern California, ranging from Kern County to San Diego County. This species arrives on breeding territories by late April to early May and migrates southward again to wintering areas in southern Mexico, Central America, and northern South America in August and September. Two additional subspecies of willow flycatcher (e.g., *E. t. brewsteri* and *E. t. adastus*) migrate through southern California in the spring and fall to and from their breeding grounds in northern California.

The southwestern willow flycatcher typically breeds in patchy to dense, well-developed riparian woodlands that occur along streams, rivers, lakes, or other wetlands, that are below 8,000 feet in elevation, and provide surface water and/or saturated soil during mid-summer (Sedgwick 2000; Sogge et al. 1997; USFWS 2002). Typical breeding habitat for southwestern willow flycatcher is composed of native riparian plant species such as willows (*Salix* spp.) and mule fat (*Baccharis salicifolia*) in patches at least 2 acres in size or in linear-shaped habitats at least 10 meters (33 feet) wide (Sogge et al. 1997). However, the species has also been observed successfully breeding in riparian communities dominated by extensive patches of invasive, non-native species such as tamarisk (*Tamarix ramosissima*) and Russian olive (*Eleagnus angustifolia*, USFWS 2002).

Once a common species in southern California, the southwestern willow flycatcher population collapsed in the early 20th century from the combined effects of habitat loss and nest parasitism by brown-headed cowbird (*Molothrus ater*; Craig and Williams 1998; Garrett and Dunn 1981; Sedgwick 2000; Unitt 2004; USFWS 2002). The cowbird is an obligate brood parasite that lays its eggs in the nests of over 200 different bird species, often causing death to some or all of the host species eggs and nestlings (Eastzer et al. 1980).

As of 2003, the southwestern willow flycatcher bred at 75 known sites in southern California within 18 drainages from San Diego to Santa Barbara and Kern counties and the Owens Valley. Prominent locations include the San Luis Rey, Santa Ana,

Santa Ynez, Owens, and Kern rivers, which supported approximately 70 percent of known territories (Sogge et. al. 2003). As of 2004, nearly half of the estimated 200 breeding pairs in southern California occurred in San Diego County, primarily along the upper San Luis Rey River (Unitt 2004).

METHODS

The methods used to conduct a habitat assessment and focused, protocol-level southwestern willow flycatcher surveys are presented in this section.

Habitat Assessment Methods

A qualified BBS biologist conducted a focused habitat assessment for southwestern willow flycatcher within 500 feet of all proposed project features. The habitat assessment was conducted by assessing the vegetation communities and other parameters (e.g., species composition, height, density, disturbance type/amount) for their potential to support the southwestern willow flycatcher. Polygons of suitable southwestern willow flycatcher habitat were drawn by hand onto a high-resolution aerial field map, which were later screen-digitized in the office by a Geographic Information Systems (GIS) specialist using ArcGIS software.

Focused Survey Methods

Focused, protocol-level surveys for the southwestern willow flycatcher were conducted by a permitted biologist in accordance with the current USFWS-accepted survey protocol, titled *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher* (Sogge et al. 2010). The survey protocol entails intensive surveys of suitable habitat as well as detailed datasheets documenting detections, habitat, and other information about the southwestern willow flycatcher.

Five surveys were conducted during the three survey periods outlined in the protocol, including one survey during the first period (May 15 to May 31), two surveys during the second period (June 1 to June 24), and two surveys during the third period (June 25 to July 17). The surveys were conducted in suitable habitat within the survey area, which includes a 500-foot buffer from all proposed project features. All surveys were conducted between approximately 0530 and 1000 and avoided periods of adverse weather conditions (e.g., excessively hot or cold temperatures, high winds, steady rain, dense fog, other inclement weather conditions) that would impede detection of the southwestern willow flycatcher.

The permitted biologist slowly walked throughout the suitable habitat within the survey area and used visual and auditory cues to detect the southwestern willow flycatcher. Various routes were utilized to conduct an unbiased survey of the potentially suitable habitat within the survey area, while taking care not to disturb sensitive habitat or potential nest areas. Pre-recorded southwestern willow flycatcher vocalization playbacks were used only to elicit initial calls from the southwestern

willow flycatcher but were not used frequently or to elicit further behaviors. Pre-recorded vocalizations were played for a period of 10 to 15 seconds and were generally repeated approximately every 70 to 100 feet within the surveyed habitat.

Sensitive species detections were recorded electronically using a hand-held Global Positioning System (GPS) device and/or by hand onto a high-resolution aerial image of the survey area, and relevant information about the detection (e.g., age, sex, number of individuals detected) was noted when necessary. In addition, numbers and locations of parasitic brown-headed cowbirds were recorded, and other wildlife species observed directly or detected indirectly by sign, including scat, tracks, calls, and other evidence, were recorded.

RESULTS

The results of the habitat assessment and focused, protocol-level southwestern willow flycatcher surveys are presented in this section.

Habitat Assessment Results

BBS biologists Erik LaCoste and Charles Vettes identified an approximate total of 3.42 acres of potentially suitable southwestern willow flycatcher habitat within the project survey area during the habitat assessment conducted on April 22, 2020 (Attachment 1: Figure 3). The potentially suitable southwestern willow flycatcher habitat within the survey area includes southern willow scrub and disturbed wetland. These vegetation communities and their suitability for southwestern willow flycatcher are described in more detail below.

The southern willow scrub within the survey area generally ranges in height from 10 to 25 feet, contains an open to dense canopy dominated by woody species such as red willow (*Salix laevigata*), black willow (*Salix gooddingii*), mulefat (*Baccharis salicifolia* ssp. *salicifolia*), and salt-cedar (*Tamarix ramosissima*) with an herbaceous understory dominated by broadleaved pepperweed (*Lepidium latifolium*), saltbush (*Atriplex* sp.), broad-leaved cattail (*Typha latifolia*), and tule (*Schoenoplectus acutus* var. *occidentalis*). In addition, the southern willow scrub appears to have experienced a fire in the recent past, as evident from scattered, charred willow snags throughout the survey area. The southern willow scrub provides moderate quality habitat for southwestern willow flycatcher, as the majority of the suitable habitat supports a plant species composition, height, and density typically associated with the species, but in areas lacks the necessary width preferred for establishing a nesting territory. In addition, the suitable habitat within the survey area is contiguous with adjacent suitable habitat in the Warm Springs Valley/French Valley Channel up- and downstream of the survey area.

The disturbed wetland within the survey area generally ranges in height from 2 to 10 feet, contains dense, short to moderately high vegetation, and is dominated by species such as tree tobacco (*Nicotiana glauca*), broadleaved pepperweed, salt-

cedar, saltbush, broad-leaved cattail, and tule. In addition, the disturbed wetland appears to have experienced a fire in the recent past, as evident from scattered, charred willow snags throughout the survey area. The disturbed wetland provides low quality habitat for southwestern willow flycatcher, because it contains an overall low community height and species composition not typically associated with the species' preferred habitat.

Focused Survey Results

Five focused, protocol-level surveys were conducted within the project survey area between May 18, and July 13, 2020. Surveys were conducted during appropriate weather conditions by USFWS permitted BBS biologists Erik LaCoste (TE-027736-6) and Charles Vettes (TE-20160B-2), and assisted by BBS biologist Darin Busby. Dates and survey conditions during the focused surveys are provided in Table 1, below.

Table 1. Survey Conditions

Survey #	Date	Time		Weather				Surveyor
				Temp (°F)	Wind (mph)	Clouds (% cover)	Precip	
1	5/18/20	Start	0735	64	3-5	20	0	C. Vettes
		End	1005	70	3-5	30	0	D. Busby
2	6/1/20	Start	0745	71	0-1	100	0	E. LaCoste
		End	1000	80	1-2	100	0	D. Busby
3	6/11/20	Start	0700	60	1-2	0	0	E. LaCoste
		End	1000	84	2-3	0	0	C. Vettes
4	7/2/20	Start	0730	60	1-2	100	0	C. Vettes
		End	0930	63	1-2	100	0	D. Busby
5	7/13/20	Start	0730	68	0-1	0	0	E. LaCoste
		End	1000	81	1-3	0	0	C. Vettes

No breeding southwestern willow flycatchers were detected during the 2020 focused, protocol-level surveys. However, two willow flycatchers were detected during the second survey on June 1, 2020 (Attachment 1: Figure 3). Each willow flycatcher was heard responding to a call playback. The willow flycatcher sightings occurred early in the second survey window, the time of year when southwestern willow flycatchers are establishing breeding territories but also the time of year when subspecies *E.t. brewsterii* or *E.t. edastus* may still be present and singing while migrating through southern California (Sogge 2010). Because no willow flycatchers were detected during the subsequent three surveys, the two flycatchers detected during the second survey were likely one of the other migrant willow flycatcher subspecies and not breeding southwestern willow flycatcher. No other willow flycatchers were detected within or adjacent to the survey area during the 2020 focused, protocol-level presence/absence surveys. A USFWS Willow Flycatcher Survey and Detection Form containing the results of the focused surveys is included as Attachment 3.

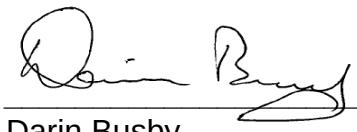
A total of 57 wildlife species were detected during the focused southwestern willow flycatcher surveys (Attachment 2). Of these 57 species, four sensitive species (in addition to willow flycatcher) were detected during these surveys, including least Bell's vireo (*Vireo bellii pusillus*), a federally and state-listed endangered species; yellow warbler (*Dendroica petechia*), a state species of special concern; yellow-breasted chat (*Icteria virens*), a state species of special concern; and Cooper's hawk (*Accipiter cooperii*), a state watch list species (Attachment 1: Figure 3). In addition, several brown-headed cowbirds, a brood parasite, were detected and recorded during each of the five surveys. Cowbirds were continuously detected flying through and perched in the survey area. The number of individuals detected during surveys ranged from 2 to 12 with both male and female individuals present at times. It should be noted that the locations of sensitive species and brown-headed cowbirds on Figure 3 (Attachment 1) may reflect repeated detections of the same individuals from one survey to the next and are not intended to represent the quantity of individuals present.

SUMMARY

No breeding southwestern willow flycatchers were detected during the 2020 focused, protocol-level surveys. Two migrant willow flycatchers were detected during the second survey conducted on June 1, 2020. However, these individuals were detected early in the 2020 breeding season and were not detected during subsequent surveys. Therefore, they were likely migrant willow flycatchers and not breeding southwestern willow flycatchers.

Please do not hesitate to contact me at darin@busbybiological.com or (858) 334-9508 or Melissa Busby at melissa@busbybiological.com or (858) 334-9507 if you have any questions.

Sincerely,



Darin Busby
Principal Biologist / Owner
Busby Biological Services, Inc.

ATTACHMENTS

Attachment 1: Figures
Attachment 2: Wildlife Species Detected within the Proposed Project Survey Area
Attachment 3: Representative Photographs from the Proposed Project Survey Area
Attachment 4: Willow Flycatcher Survey and Detection Form

REFERENCES

Craig, D. and P. L. Williams
1998 Willow Flycatcher (*Empidonax traillii*). *In* The Riparian Bird Conservation Plan: a strategy for reversing the decline of riparian-associated birds in California. California Partners in Flight. http://www.prbo.org/calpif/htmldocs/riparian_v-2.html.

Eastzer, D., P.R. Chee, and A.P. King
1980 The young cowbird: average or optimal nestling? Condor 82:417-425. From the Nature Serve website at www.natureserve.org accessed in October 2017.

Garrett, K. and J. Dunn
1981 Birds of southern California: status and distribution. Los Angeles Audubon Soc., Los Angeles.

Sedgwick, James A.
2000 Willow Flycatcher (*Empidonax traillii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from the Birds of North America Online: http://bna.birds.cornell.edu/bna/species/533.

Sogge, M.K., R.M. Marshall, S.J. Sferra, and T.J. Tibbitts
1997 A Southwestern Willow Flycatcher Natural History Summary and Survey Protocol. Technical Report NPS/NAUCPRS/NRTR-97/12. USGS Colorado Plateau Research Station, Northern Arizona University, Flagstaff, Arizona.

Sogge, M. K., Sferra, S. J., McCarthey, T. D., Williams, S. O., and Kus, B. E.
2003 Distribution and characteristics of Southwestern Willow Flycatcher breeding sites and territories: 1993-2001. Studies in Avian Biology No. 26:5–11. Colorado River valley. Univ. of Arizona Press, Tucson.

Sogge, M.K., Ahlers, Darrell, and Sferra, S.J.,
2010 *A Natural History Summary and Survey Protocol for the Southwestern Willow Flycatcher.* U.S. Geological Survey Techniques and Methods. 2A-10, 38 p.

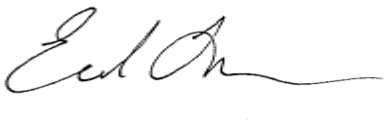
Unitt, Philip
2004 San Diego County Bird Atlas. San Diego Natural History Museum. San Diego, CA.

U.S. Fish and Wildlife Service (USFWS)
2002 Final Recovery Plan Southwestern Willow Flycatcher (*Empidonax traillii extimus*). Prepared by Southwestern Willow Flycatcher Recovery Team. Technical Subgroup. August 2002.

U.S. Geological Survey (USGS)
1968 7.5-minute Bachelor Mountain Topographic Quadrangle (Photo revised 1997).

PROJECT BIOLOGIST SIGNATURE PAGE

The biologists performing focused, protocol-level, southwestern willow flycatcher (*Empidonax traillii extimus*) surveys for the proposed Skyview Pedestrian Bridge Project (project) were permitted to survey for this species. The undersigned permitted biologists certify this report to be a complete and accurate account of the findings and conclusions of surveys for southwestern willow flycatcher conducted for the proposed project during spring 2020.

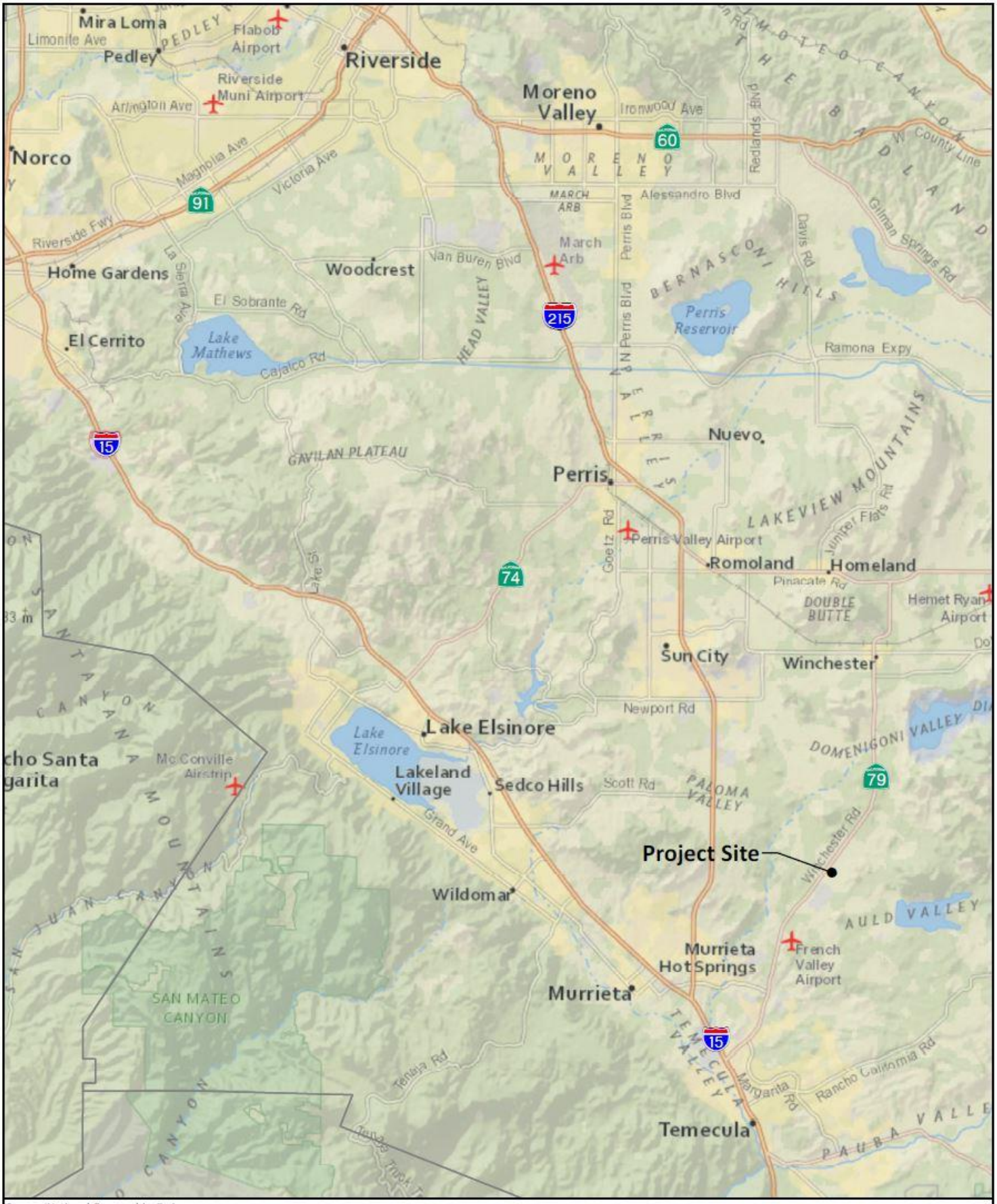


Erik LaCoste
Senior Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-027736-6

Charles Vettes
Senior Biologist
Busby Biological Services, Inc.
ESA Permit Number TE-20160B-2

ATTACHMENT 1

FIGURES



Source: National Geographic, Esri

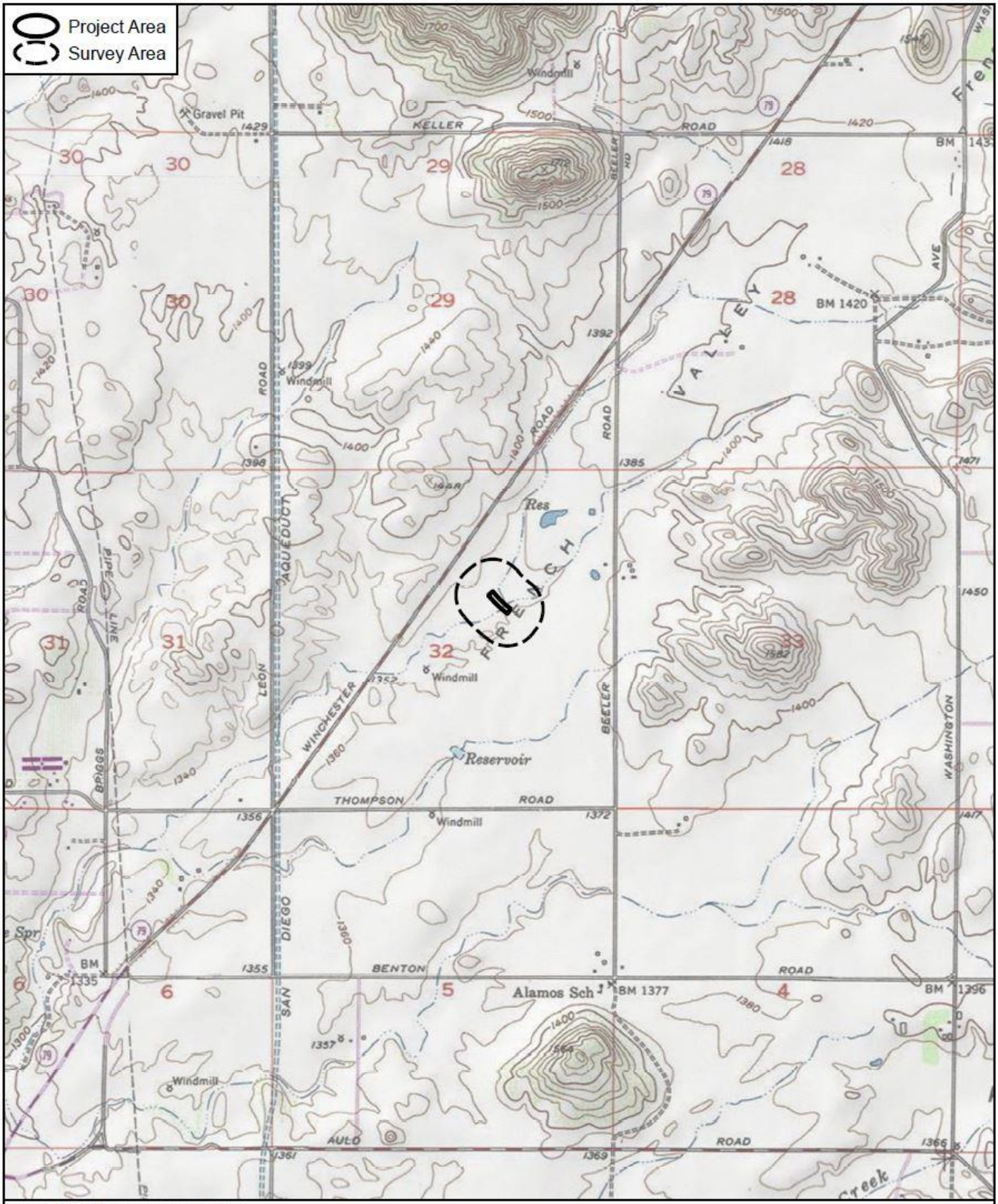
BUSBY Biological Services

N 0 2 4 Miles

Regional Location

SKYVIEW PEDESTRIAN BRIDGE PROJECT

Figure 1



Source: USGS 7.5' Quadrangles (Bachelor Mtn)

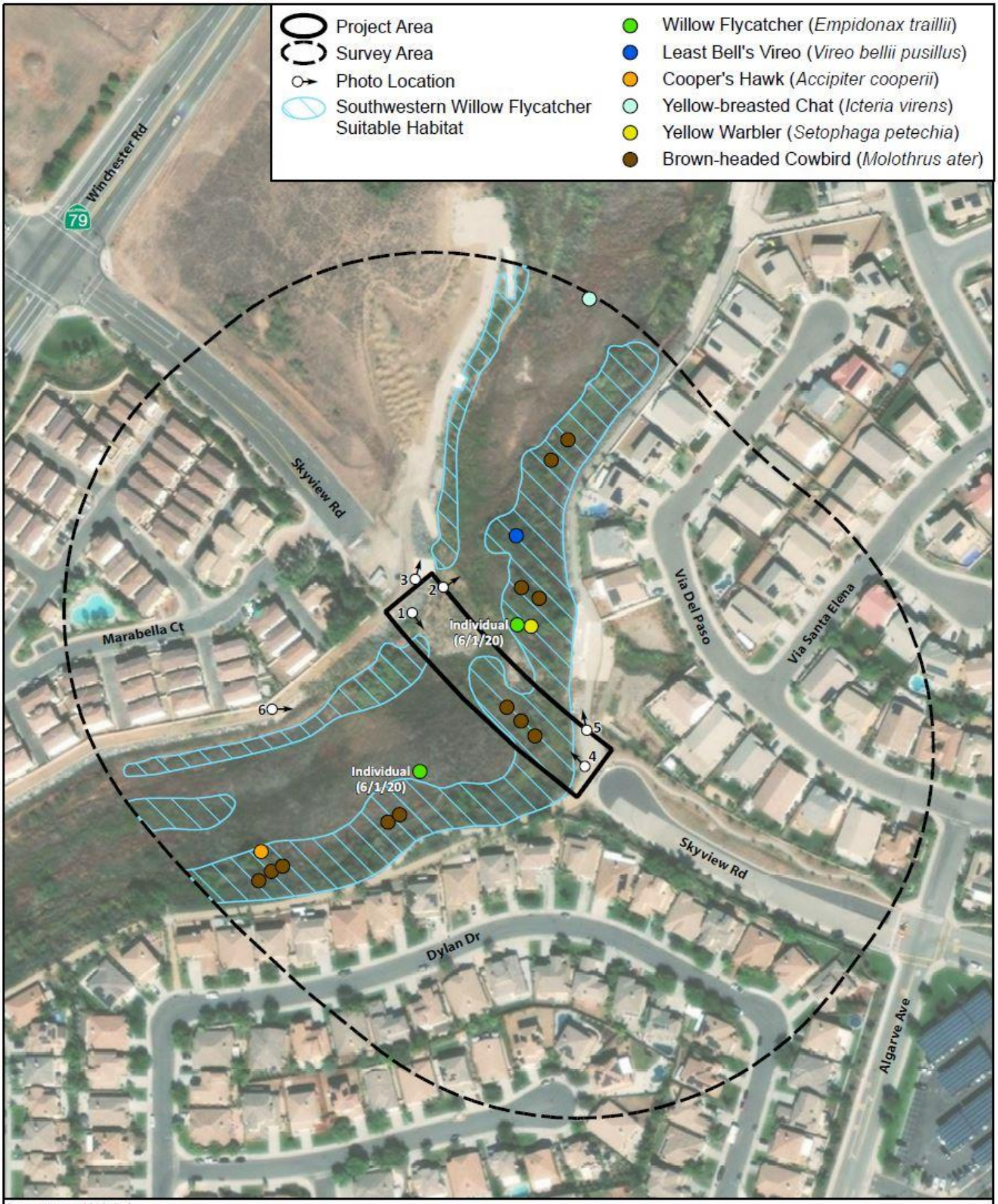
BUSBY Biological Services

N 0 1,000 2,000 Feet

Project Vicinity - USGS Topo

SKYVIEW PEDESTRIAN BRIDGE PROJECT

Figure 2



Source: Maxar 2018, Esri

Southwestern Willow Flycatcher Survey Results

SKYVIEW PEDESTRIAN BRIDGE PROJECT

BUSBY Biological Services

N

0 100 200 Feet

Figure 3

ATTACHMENT 2

WILDLIFE SPECIES DETECTED WITHIN THE PROPOSED PROJECT SURVEY AREA

Attachment 2
Wildlife Species Detected within the Proposed Project Survey Area

INVERTEBRATES			
Order	**Family**	**Scientific Name**	**Common Name**
Lepidoptera			
	Papilionidae	*Papilio rutulus*	Western Tiger Swallowtail
VERTEBRATES			
Order	**Family**	**Scientific Name**	**Common Name**
AMPHIBIANS			
Anura			
	Ranidae	*Lithobates catesbeianus*	American bullfrog
REPTILES			
Cryptodira			
	Emydidae	*Trachemys scripta elegans*	Red-eared Slider
Squamata			
	Phrynosomatidae	*Sceloporus occidentalis*	Western Fence Lizard
BIRDS			
Accipitriformes			
	Accipitridae	*Accipiter cooperii**	Cooper's Hawk
		Buteo jamaicensis	Red-tailed Hawk
Anseriformes			
	Anatidae	*Anas platyrhynchos*	Mallard
Apodiformes			
	Trochilidae	*Archilochus alexandri*	Black-chinned Hummingbird
		Calypte anna	Anna's Hummingbird
		Calypte costae	Costa's Hummingbird
		Selasphorus sasin	Allen's Hummingbird
Columbiformes			
	Columbidae	*Columba livia*	Rock Pigeon
		Streptopelia decaocto	Eurasian Collared-Dove
		Zenaida macroura	Mourning Dove
Cuculiformes			
	Cuculidae	*Geococcyx californianus*	Greater Roadrunner
Falconiformes			
	Falconidae	*Falco sparverius*	American Kestrel
Gruiformes			
	Rallidae	*Fulica americana*	American Coot
		Gallinula galeata	Common Gallinule
		Laterallus jamaicensis	Black Rail
Passeriformes			
	Aegithalidae	*Psaltriparus minimus*	Bushtit
	Cardinalidae	*Pheucticus melanocephalus*	Black-headed Grosbeak
		Piranga ludoviciana	Western Tanager

	Corvidae	*Aphelocoma californica*	California Scrub-Jay
		Corvus brachyrhynchos	American Crow
		Corvus corax	Common Raven
	Fringillidae	*Haemorhous mexicanus*	House Finch
		Spinus psaltria	Lesser Goldfinch
		Spinus tristis	American Goldfinch
	Hirundinidae	*Hirundo rustica*	Barn Swallow
		Petrochelidon pyrrhonota	Cliff Swallow
		Stelgidopteryx serripennis	Northern Rough-winged Swallow
	Icteria	*Icteria virens**	Yellow-breasted Chat
	Icteridae	*Agelaius phoeniceus*	Red-winged Blackbird
		Icterus cucullatus	Hooded Oriole
		Molothrus ater	Brown-headed Cowbird
	Mimidae	*Mimus polyglottos*	Northern Mockingbird
	Parulidae	*Cardellina pusilla*	Wilson's Warbler
		Geothlypis trichas	Common Yellowthroat
		Leiothlypis celata	Orange-crowned Warbler
		*Setophaga petechia**	Yellow Warbler
	Passerellidae	*Melospiza melodia*	Song Sparrow
		Pipilo maculatus	Spotted Towhee
	Passeridae	*Passer domesticus*	House Sparrow
	Sturnidae	*Sturnus vulgaris*	European Starling
	Troglodytidae	*Thryomanes bewickii*	Bewick's Wren
		Troglodytes aedon	House Wren
	Tyrannidae	*Empidonax difficilis*	Pacific-slope Flycatcher
		*Empidonax traillii**	Willow Flycatcher
		Empidonax wrightii	Gray Flycatcher
		Sayornis nigricans	Black Phoebe
		Sayornis saya	Say's Phoebe
		Tyrannus vociferans	Cassin's Kingbird
	Vireonidae	*Vireo gilvus*	Warbling Vireo
		*Vireo bellii pusillus**	Least Bell’s Vireo
Pelecaniformes			
	Ardeidae	*Butorides virescens*	Green Heron
Piciformes			
	Picidae	*Dryobates nuttallii*	Nuttall's Woodpecker
MAMMALS			
Lagomorpha			
	Leporidae	*Sylvilagus audubonii*	Desert Cottontail

*special status species

ATTACHMENT 3

REPRESENTATIVE PHOTOGRAPHS FROM THE PROPOSED PROJECT SURVEY AREA

REPRESENTATIVE PHOTOS

	Photograph 1. View across the Warm Springs Valley/French Valley Channel showing proposed project area and riparian habitat (taken 6/1/2020; facing southeast).
	Photograph 2. View across the Warm Springs Valley/French Valley Channel north of proposed project area (taken 6/1/2020; facing northeast).
	Photograph 3. View of riparian habitat upstream from the proposed project area (taken 6/1/2020; facing north).

	Photograph 4. View across the Warm Springs Valley/French Valley Channel showing proposed project area and riparian habitat (taken 6/1/2020; facing northwest).
	Photograph 5. View of riparian habitat upstream from the proposed project area (taken 6/1/2020; facing north).
	Photograph 6. View across the Warm Springs Valley/French Valley Channel showing proposed project area and riparian habitat (taken 6/1/2020; facing east).

ATTACHMENT 4

WILLOW FLYCATCHER SURVEY AND DETECTION FORM

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 (WIFL) Survey and Detection Form (revised April 2010)

Site Name Skyview Pedestrian Bridge Project State CA County Riverside
USGS Quad Name Bachelor Mountain Elevation 475 (meters)
Creek, River, Wetland, or Lake Name Warm Springs Valley/French Valley Channel
Is copy of USGS map marked with survey area and WIFL sightings attached (as required)? *Yes* ✓ *No* ___

Survey Coordinates: Start: E 490105.4 N 3718700.6 UTM Datum ___ (See instructions)
Stop: E 489885.7 N 3718500.6 UTM Zone 11
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 WIFLs	Estimated Number of Pairs	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, cowbirds, *Diorhabda* spp.]). If *Diorhabda* found, contact USFWS and State WIFL coordinator	GPS Coordinates for WIFL Detections (this is an optional column for documenting individuals, pairs, or groups of birds found on each survey). Include additional sheets if necessary.			
Survey # 1 Observer(s) Charles Vettes Darin Busby	Date 5/18/20 Start 0735 Stop 1005 Total hrs 3	0	0	0	0	N/A	# Birds	Sex	UTM E	UTM N
Survey # 2 Observer(s) Erik LaCoste Darin Busby	Date 6/1/20 Start 0745 Stop 1000 Total hrs 2.25	2	0	0	0	2 indiviuals detected. No nesting behavior. Both resonded to call play-back.	# Birds 1 1	Sex M M	UTM E 490070.7 490024.9	UTM N 3718600.6 3718530.7
Survey # 3 Observer(s) Erik LaCoste Charles Vettes	Date 6/11/20 Start 0700 Stop 1000 Total hrs 3	0	0	0	0	N/A	# Birds	Sex	UTM E	UTM N
Survey # 4 Observer(s) Charles Vettes Darin Busby	Date 7/2/20 Start 0730 Stop 0930 Total hrs 2	0	0	0	0	N/A	# Birds	Sex	UTM E	UTM N
Survey # 5 Observer(s) Erik LaCoste Charles Vettes	Date 7/13/20 Start 0730 Stop 1000 Total hrs 2.5	0	0	0	0	N/A	# Birds	Sex	UTM E	UTM N

Overall Site Summary Totals do not equal the sum of each column. Include only resident adults. Do not include migrants, nestlings, and fledglings. Be careful not to double count individuals. Total Survey Hrs	Total Adult Residents	Total Pairs	Total Territories	Total Nests	Were any Willow Flycatchers color-banded? Yes ___ No ✓ If yes, report color combination(s) in the comments section on back of form and report to USFWS.
	0	0	0	0	

Reporting Individual Erik LaCoste Date Report Completed August 2020
US Fish and Wildlife Service Permit # 027736-6 State Wildlife Agency Permit # SC-9735
Submit form to USFWS and State Wildlife Agency by September 1st. Retain a copy for your records.

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

Reporting Individual Erik LaCoste Phone # 760-500-8802
Affiliation Busby Biological Services, Inc. E-mail erik@busbybiological.com
Site Name Date Report Completed 8/10/20
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? N/A
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) County of Riverside

Length of area surveyed: 0.305 (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 lasiolopsis, Baccharis salicifolia, Salix gooddingii

Average height of canopy (Do not include a range): 5 (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.

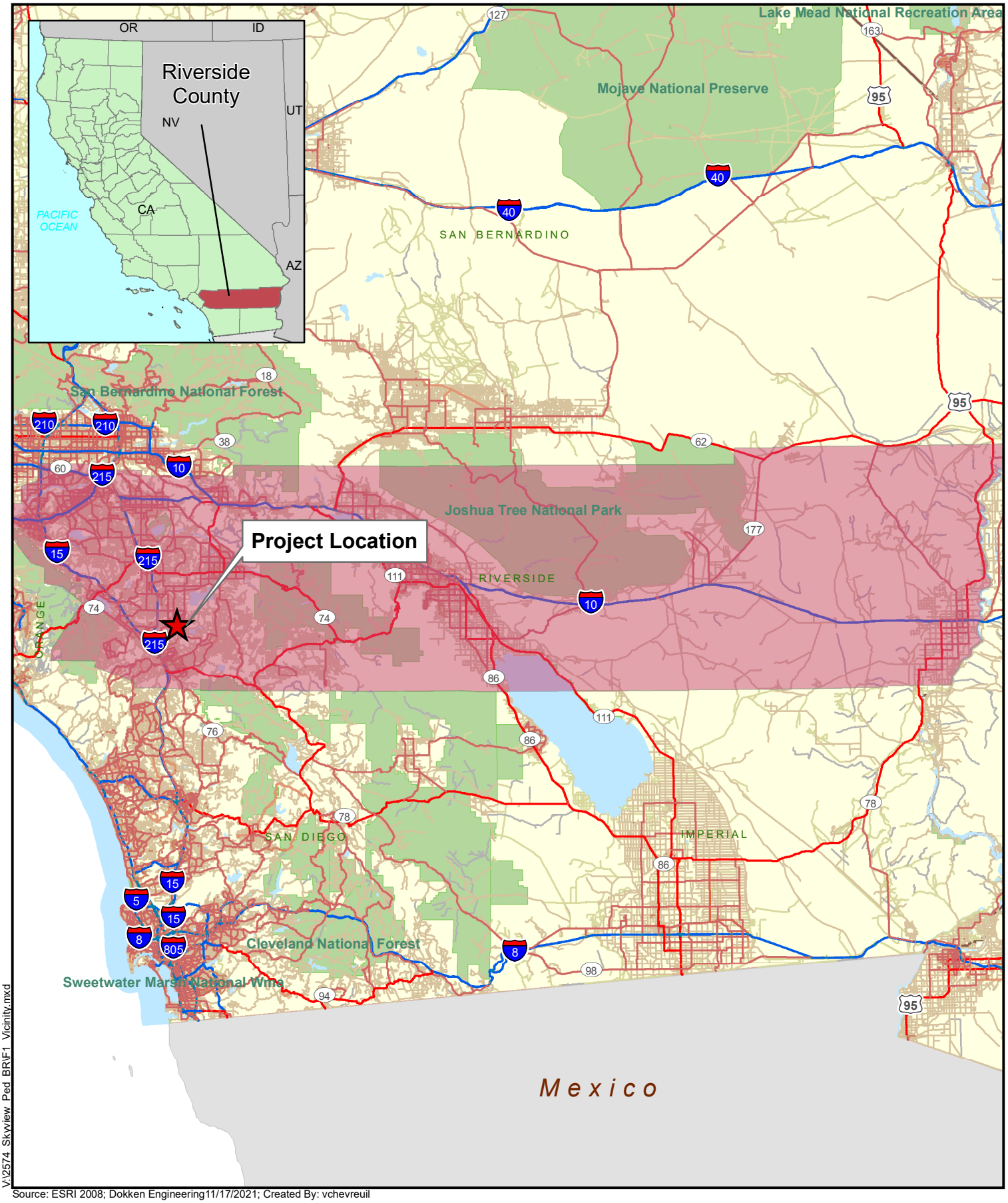
Comments (such as start and end coordinates of survey area if changed among surveys, supplemental visits to sites, unique habitat features. Attach additional sheets if necessary.

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

Appendix B – Project Mapping

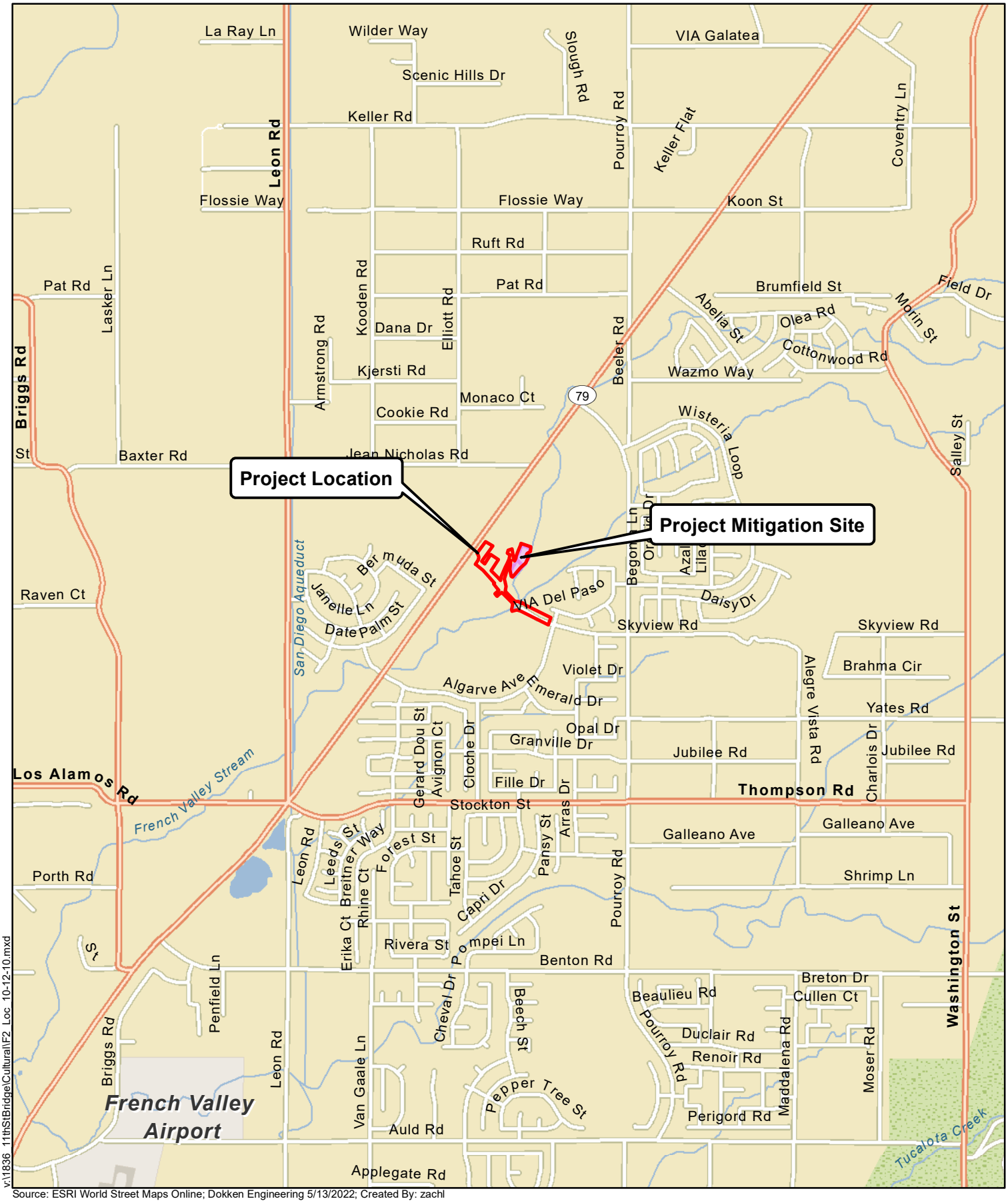


V:\2574_Skyview_Ped_BRIF1_Vicinity.mxd

Source: ESRI 2008; Dokken Engineering11/17/2021; Created By: vchevreuil

0 10 20 30 Miles

FIGURE 1
Project Vicinity
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California



v:\1836 11thStBridge\Cultural\F2 Loc 10-12-10.mxd

Source: ESRI World Street Maps Online; Dokken Engineering 5/13/2022; Created By: zachl

0 0.25 0.5 0.75 1 Miles

FIGURE 2
Project Location
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

V:\2574_Skyview_Ped_BR\Biology\F3_Project Features_2022-10-07.mxd

Source: ESRI Maps Online; Dokken Engineering 10/7/2022; Created By: cfavro

1 inch = 150 feet

0 150 300 450 600 750 Feet

Figure 3
Project Features
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

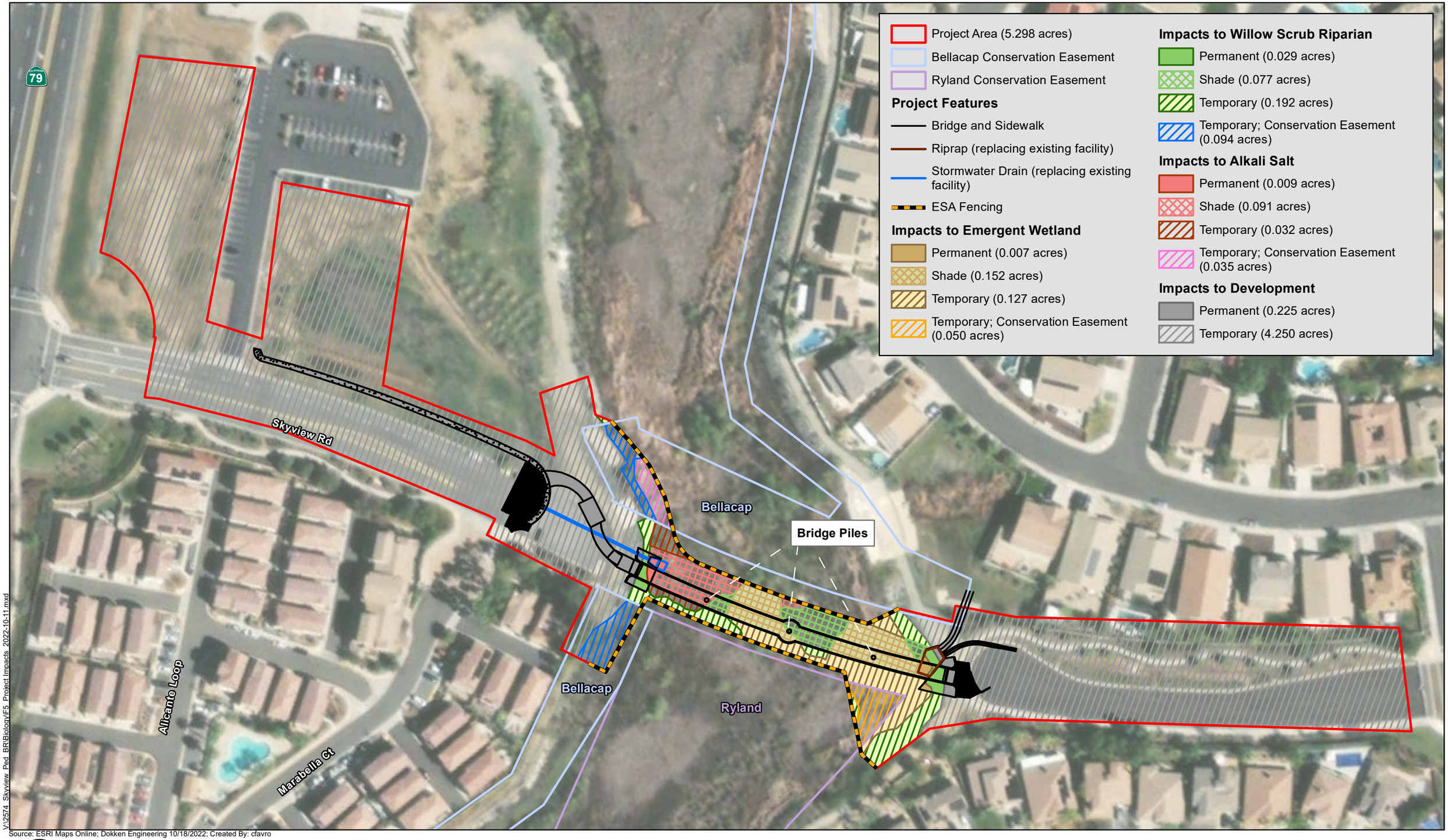
V:\2574_Skyview_Ped_BR\Biology\F4_Vegetation Communities_2022-10-07.mxd

Source: ESRI Maps Online; Dokken Engineering 10/7/2022; Created By: cfavro

1 inch = 100 feet

0 100 200 300 400 500 Feet

Figure 4
Vegetation Communities
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California



V:\2574_Skyview_Ped_BR\Biology\F5_Project Impacts_2022-10-11.mxd

Source: ESRI Maps Online; Dokken Engineering 10/18/2022; Created By: cfavro

1 inch = 100 feet

0 100 200 300 400 500 Feet

Figure 5
Project Impacts
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

V:\12574_Skyview_Ped_BR\Biology\F6_Geotech Survey Impacts_2022-10-18.mxd

Source: ESRI Maps Online; Dokken Engineering 10/18/2022; Created By: cfavro

1 inch = 50 feet

0 50 100 150 200 250 Feet

Figure 6
Geotechnical Survey Impacts
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

Project Area (5.298 acres)

Proposed Off-Site Mitigation

On-Site Habitat Re-establishment

Emergent Wetland (0.177 acres)

Willow Scrub Riparian (0.286 acres)

Alkali Salt Marsh (0.067 acres)

Invasive Species Removal

Broad-leafed pepperweed

Tamarisk and tree tobacco

Off-site mitigation activities will include the establishment/creation of a minimum of 0.527 acres of emergent wetland, 0.412 acres of willow scrub riparian, and 0.335 acres of alkali salt marsh habitat.

Skyview Rd

Alicante Loop

Marabella Ct

79

V:\2574_Skyview_Ped_BR\Biology\F7_Proposed Mitigation Site_2022-10-18.mxd

Source: ESRI Maps Online; Dokken Engineering 10/18/2022; Created By: cfavro

1 inch = 125 feet

0 125 250 375 500 625 Feet

Figure 7
Proposed Mitigation Site
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

Criteria Cell #5477

Project Area

Proposed Off-Site Mitigation

Parcels

MSHCP Lands

MSHCP Lands

MSHCP Conservation Easements (11.7 acres)

MSHCP Conserved Lands (1.7 acres)

Non-MSHCP Conservation Easements (6.8 acres)

V:\12574_Skyview_Ped_BR\Biology\RCA Documents\F8_MSCHP Criteria Cell Features_2022-05-18.mxd

Source: ESRI Maps Online; Dokken Engineering 10/18/2022; Created By: cfavro

1 inch = 300 feet

0 300 600 900 1,200 1,500 Feet

Figure 8
MSHCP Criteria Cell Features
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

V:\2574_Skyview_Ped_BR\Biology\RCA Documents\F9_Criteria Area Species Habitat Evaluation_2022-10-18.mxd

Source: ESRI Maps Online; Dokken Engineering 10/18/2022; Created By: cfavro

1 inch = 60 feet

0 60 120 180 240 300 Feet

Figure 9
Criteria Area Plant Species: Habitat Evaluation
Skyview Road Pedestrian Bridge Project
Winchester, Riverside County, California

FIGURE 10
MSHCP Trail Coverage
Skyview Drive Pedestrian Bridge Project
Winchester, Riverside County, California

Appendix C – Wetland and Waterway Delineation Report

October 2020

RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT

Skyview Road Pedestrian Bridge

Wetland and Waterway Delineation Report

PROJECT NUMBER:
164717

PROJECT CONTACT:
Kim Quinn
EMAIL:
Kim.quinn@powereng.com
PHONE:
714-507-2730

POWER ENGINEERS

This page intentionally left blank.

Wetland and Waterway Delineation Report

PREPARED FOR: RIVERSIDE COUNTY TRANSPORTATION DEPARTMENT

PREPARED BY: POWER ENGINEERS, INC.

This page intentionally left blank.

TABLE OF CONTENTS

TABLES:

APPENDICES:

ACRONYMS AND ABBREVIATIONS

CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CGP	Construction General Permit
County	County of Riverside
CWA	Clean Water Act
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FEMA	Federal Emergency Management Agency
NAIP	National Agriculture Imagery Program
NHD	National Hydrography Dataset
NI	No Indicator
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
NWP	Nationwide Permit
OBL	Obligate
OHWM	Ordinary High-water Mark
POWER	POWER Engineers, Inc.
Project	Skyview Road Pedestrian Bridge
RWQCB	Regional Water Quality Control Board, San Diego
SWPPP	Stormwater Pollution Prevention Plan
UPL	Upland
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WOTUS	Waters of the United States

This page intentionally left blank.

1.0 PROJECT DESCRIPTION

The County of Riverside (County) is proposing to construct a new pedestrian bridge to traverse the gap along the Skyview Road at the Warm Springs Valley / French Valley Channel (Project). Skyview Road is designated as a collector street that connects Highway 79 and Pourroy Road in the French Valley community in the unincorporated area of Riverside County, California. Approximately 800 feet east of Highway 79 (Winchester Road) is the Warm Springs Valley / French Valley Channel. There is a gap in Skyview Road where there is no road crossing the Warm Springs Valley / French Valley Channel. The County has determined a need to provide continuity on the Skyview Road for travelers within the French Valley community to traverse the Warm Springs Valley / French Valley Channel and has determined a vehicular bridge on Skyview Road will not be built. In the place of a vehicular bridge, a multipurpose pedestrian and bicyclist bridge will be constructed. A new library, the French Valley Library, is also anticipated to be constructed at the northwest quadrant of the pedestrian bridge in a separate project by the County of Riverside. The approximate starting and ending points of the pedestrian bridge are indicated below:

- Northwest side: 33^0 36’ 25.72” N, -117^0 06’ 27.60” W
- Southeast side: 33^0 36’ 23.00” N, -117^0 06’ 24.20” W

The purpose of the Project is to:

- Construct a multipurpose pedestrian and bicyclist bridge.
- Provide pedestrian access for residence east of the Warm Springs Valley / French Valley Channel to the proposed library at the northwest quadrant of the proposed bridge.
- Provide an aesthetically pleasing pedestrian bridge to compliment the proposed library as well as the surrounding suburban neighborhood.

2.0 REGULATORY AUTHORITY

There are three key agencies that regulate activities within inland streams, washes, wetlands, and riparian areas in California. These agencies and respective regulations are described below.

2.1 United States Army Corps of Engineers

The Clean Water Act (CWA) (33 United States Code §1251 et seq., formerly the Federal Water Pollution Control Act of 1972) (United States Environmental Protection Agency [USEPA] 1972) was enacted with the intent of restoring and maintaining the chemical, physical and biological integrity of the waters of the United States (WOTUS).

WOTUS, including wetlands, are subject to United States Army Corps of Engineers (USACE) jurisdiction under Section 404 of the CWA. A Section 404 permit is required for the discharge of dredged or fill material into WOTUS. Section 404 of the CWA applies to all jurisdictional WOTUS, including wetlands. The USACE jurisdiction over non-tidal WOTUS extends to the “ordinary high-water mark provided the jurisdiction is not extended by the presence of wetlands” (33 Code of Federal Regulations [CFR] Part 328.4 [USEPA 1972]); and under 40 CFR Part 230.3 (s)(1) (USEPA 1972). Jurisdictional waters include surface waters, such as navigable waters and their tributaries, all interstate waters and their tributaries, natural lakes, all wetlands adjacent to other jurisdictional waters and all impoundments of these waters.

On April 21, 2020, the USEPA and the Department of the Army published the Navigable Waters Protection Rule to define "Waters of the United States" in the Federal Register. For the first time, the agencies are streamlining the definition so that it includes four simple categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. The Navigable Waters Protection Rule regulates traditional navigable waters and the core tributary systems that provide perennial or intermittent flow into them.

The four clear categories of waters which are federally regulated are (USEPA 2020):

- The territorial seas and traditional navigable waters.
- Perennial and intermittent tributaries to those waters.
- Certain lakes, ponds, and impoundments.
- Wetlands adjacent to jurisdictional waters

The final rule also details 12 categories of exclusions, features that are not WOTUS, such as features that only contain water in direct response to rainfall (e.g., ephemeral features); groundwater; many ditches; prior converted cropland; and waste treatment systems.

The Project lies within the USACE Los Angeles District and the following regional conditions for the 2017 Nationwide Permits (NWP) may apply to this Project. Submission of a Pre-Construction Notification pursuant to General Condition 32 and Regional Condition 3 shall be required for specific regulated activities in the following locations:

- The Murrieta and Temecula Creek watersheds in Riverside County, California for any regulated activity that would result in a loss of WOTUS. The definition of "loss of WOTUS" for this regional condition is the same as the definition used for the Nationwide Permit Program.
- Within the Murrieta Creek and Temecula Creek watersheds in Riverside County the use of NWP 14 Linear Transportation Project, shall be restricted, such that a loss of WOTUS cannot exceed 0.25 acre. The definition of "loss of WOTUS" for this regional condition is the same as the definition used for the NWP Program.

2.2 State Water Resources Control Board and Regional Water Quality Control Board

2.2.1 CWA Section 401

Pursuant to Section 401 of the federal CWA, any permit or license issued by a federal agency for an activity that may result in a discharge into WOTUS requires certification from the state in which the discharge originates. This requirement allows each state to have input into federally approved projects that may affect its waters (rivers, streams, lakes, and wetlands) and to ensure the projects will comply with state water quality standards and any other water quality requirements of state law. State certification ensures that the Project will not adversely impact impaired waters (waters that do not meet water quality standards) and that the Project complies with applicable water quality improvement plans (total maximum daily loads). The states must grant, deny, or waive water quality certification for a project before a federal permit or license can be issued. The Regional Water Quality Control Board (RWQCB) 9, San Diego would provide Section 401 Water Quality Certifications for the federally issued permits, including the 404 permits and notifying and non-notifying NWPs.

Effective May 28, 2020, the State Water Resources Control Board adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures). The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

2.2.2 CWA Section 402

To comply with criteria described in Section 402 of the federal CWA, all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, must obtain an National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges (40 CFR Parts 122 and 123; USEPA 1972). NPDES permits (also called Construction General Permits or CGPs) are issued by the USEPA or similar authorized state entity following submittal of a Notice of Intent for construction activities, and preparation of a Stormwater Pollution Prevention Plan (SWPPP) that describes how erosion and sediment transport will be minimized to adjacent water bodies.

The state of California CGP for stormwater discharges associated with construction activities regulates stormwater discharges from all construction activities that disturb one or more acres. To obtain coverage under this CGP, the appropriate legally responsible person must electronically file the Permit Registration Documents, which include an Notice of Intent, SWPPP, and other documents required by this CGP, and mail the appropriate permit fee to the RWQCB, prior to commencement of construction activities. The SWPPP describes potential pollution sources and the Best Management Practices, which will be used to prevent stormwater contamination. The Notice of Intent describes the construction project and route(s) that stormwater may take from the construction site to surface WOTUS

It is expected that as the stormwater program develops, the RWQCB may issue General Permits or Individual Permits that contain more specific permit provisions. When this occurs, the General Permit will no longer regulate those dischargers that obtain coverage under Individual Permits. There is no specified time-table for when these provisions may occur.

A copy of the applicable SWPPP shall remain with the Construction Manager on the construction site or at a staging area(s). The SWPPP must be readily available while the Project is under construction, from the start of construction activities until the Notice of Termination is filed.

To ensure that water quality is being protected, the CGP requires that all SWPPPs be written, amended, and certified by a Qualified SWPPP Developer. A Qualified SWPPP Developer must possess one of the eight certifications and or registrations specified in the CGP, and effective two years after the adoption date of the CGP, must have attended a RWQCB-sponsored or approved Qualified SWPPP Developer training course.

Each project must complete a risk determination analysis, which determines sampling, monitoring, and reporting requirements. There are two major requirements related to site planning and risk determination in the CGP. The Project's overall risk is broken up into two elements: 1) Project sediment risk (the relative amount of sediment that can be discharged, given the Project and location details); and 2) receiving water risk (the risk sediment discharges pose to the receiving waters).

2.2.3 Report of Waste Discharge

Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event there is no Section 404/401 nexus, pursuant to California Water Code Section

13260, which is used to start the application process for all waste discharge requirements and NPDES permits (described above). Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB also interprets it to include discharge of dredged and fill material into water bodies. Typical activities that affect water include, but are not limited to, the following:

- Discharge of process wastewater not discharging to a sewer (factories, cooling water, etc.)
- Confined Animal facilities (dairies, feedlots, etc.)
- Waste containments (landfills, waste ponds, etc.)
- Construction sites
- Boatyards and shipyards
- Discharges of pumped groundwater and cleanups (underground tank cleanups, dewatering, spills)
- Material handling areas draining to storm drains
- Sewage treatment facilities
- Filling of wetlands
- Dredging, filling, and disposal of dredge wastes
- Commercial activities not discharging to a sewer (e.g. factory wastewater, storm drain)
- Waste discharges to land

2.2.4 Porter-Cologne Water Quality Control Act (as Amended)

This law gives broad authority to the State Water Resources Control Board and California's nine RWQCBs to establish water quality standards and discharge prohibitions, issue waste discharge requirements, and implement provisions of the federal CWA, including Section 401 Water Quality Certification. The Project lies within the jurisdiction of the San Diego RWQCB, which administers the Water Quality Control Plan for protection of beneficial uses of surface and groundwater for this part of the state.

2.3 California Department of Fish and Wildlife

California Department of Fish and Wildlife (CDFW) is responsible for protecting and conserving fish and wildlife resources, and the habitats upon which they depend per the following:

- California Fish and Game Code, Sections 1600-1616, as Amended: The CDFW regulates activities that would divert or obstruct the natural flow or otherwise substantially change the bed, channel, or bank of any river, stream, or lake, or that would deposit or dispose of debris, waste, or other material where it may pass into any river, stream, or lake that supports fish or wildlife. This jurisdiction also applies to riparian habitats associated with watercourses. The Lake and Streambed Alteration Program (Section 1602) reviews projects that would alter any river, stream, or lake and conditions projects to conserve existing fish and wildlife resources. Projects must notify the CDFW if a project that will substantially modify a river, stream, or lake.
- California Fish and Game Code, Sections 5650-5656, as Amended: These codes state that it is unlawful to deposit in, permit to pass into, or place where it can pass into waters of the State any substance that is deleterious to fish, plant life, mammals, or bird life.

3.0 DESKTOP REVIEW

Prior to the commencement of the on-site field investigation, POWER Engineers, Inc. (POWER) reviewed available technical documents, databases, and maps to determine the potential extent of wetlands and waterways within the Project area. These data included:

- United States Geological Survey (USGS) 7.5-minute Topographic Quadrangle Maps: Bachelor Mountain, California (USGS 2018).
- National Agriculture Imagery Program (NAIP) Aerial Photography (NAIP 2017).
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) Wetlands Mapper (USFWS 2020).
- USGS National Hydrography Dataset (NHD) mapper (USGS 2020).
- Federal Emergency Management Agency (FEMA) floodplain mapping (2020).
- United States Department of Agriculture, Natural Resource Conservation Service (NRCS) Web Soil Survey (NRCS 2020).

3.1 History of Site

The original conditions of approval of the adjacent Bella Sol and Capistrano developments required the placement of flood protection measures (slope protection) along the French Valley Creek floodplain and the installation of a waterline across the floodplain. The slope protection measures were required to meet standards set by the Riverside County Flood Control and Water Conservation District because the improvements are operated and maintained by the District. The Conservation District standards required access roads and turnarounds to allow for future maintenance, such as repair and restoration (grading and over-excavation to the toe of the slope protection), vegetation control, and graffiti removal.

The work also involved relocating approximately 290 linear feet of low flow channel within French Valley Creek. The new low flow channel was designed to have the same bottom width, channel depth, side slopes, and radius as the existing channel to minimize potential erosion. Realigning the low flow channel creates an area on the southeast (Capistrano) side for access to the toe of the slope for inspection and maintenance activities. The access point will also minimize potential impacts to riparian habitat during future maintenance activities conducted by the Conservation District. Upon project completion, the realigned low flow channel was vegetated to replicate the preconstruction conditions.

3.2 Regional Conditions and Topography

The Project is within the Peninsular Range and is in the Lower Californian Province of the Pacific Mountain System. This Major Land Resource Area is an area of narrow mountain ranges and broad fault blocks. Elevation in the region ranges from 1,000 to 7,900 feet in most of the region. Elevation of the Project area ranges from approximately 1,280 to 1,375 feet above sea level and slopes range between 0 and 25 percent. The strongly sloping to precipitous mountains have unstable slopes and sharp crests. Valleys are typically narrow and are filled with alluvium. Most of the valleys have streams with actively eroding banks. Runoff in this region is generally rapid. All but the larger streams and those that drain from the higher watersheds are dry through the summer and in periods of low precipitation.

The Project is within the Warm Springs Creek, USGS Hydrologic Unit Code 180703020401, which is within the Santa Margarita watershed (Hydrologic Unit Code 18070302). The waterways in the French Valley generally drain southwest into Warm Springs Creek, which drains into Murrieta Creek. The creeks

in this area are identified as intermittent. Murrieta Creek drains into the perennial San Margarita River, which drains to the southwest and enters the Pacific Ocean north of the Camp Pendleton Marine Corps Base.

The average annual precipitation in this region is 8 to 51 inches, increasing with elevation. Most of the rainfall occurs as low- or moderate-intensity, Pacific frontal storms during winter. Rain can turn to snow at the higher elevations. A little snow may fall in winter, but it does not last. Summers are dry. The average annual temperature is 41 to 66 degrees Fahrenheit, decreasing with elevation. The freeze-free period averages 245 days and ranges from 125 to 365 days in most of the region. It decreases in length with elevation.

3.3 Aerial Photography

Current and historical aerial photographs of the Project site were available from Google Earth Pro Imaging. According to the 1996 through 2018 aerial photographs, there are indications of riparian vegetation and/or wetlands in the channel and a potential intermittent stream. Aerial photography for the site is shown in Appendix A.

3.4 National Wetland Inventory Wetlands and Waterways

According to the NWI data, one type of waterway was identified within the Project survey area (see maps in Appendix A). Table 1 identifies the NWI feature located within the Project survey area and the NWI description of those features. NWI classifies wetlands and waterways according to the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979). The Cowardin classification is a taxonomic system that divides wetlands and deepwater habitats into five systems based on hydrologic factors (Marine, Estuarine, Riverine, Lacustrine, and Palustrine).

The NWI-identified feature is a potential jurisdictional waterway. The NWI database does not always provide an accurate inventory of on-site wetland and waterway features as NWI data are typically based on aerial photograph interpretation and are not usually ground-verified.

TABLE 1 NWI WATERWAY FEATURES

CODE	WETLAND DESCRIPTION	WATER REGIME
R4SBA	R – Riverine 4 – Intermittent SB – Streambed A – Temporary flooded	A - Temporary flooded: Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.

The riverine system includes all wetlands and deepwater habitats contained within a channel, with two exceptions: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses, or lichens; and (2) habitats with water containing ocean-derived salinity of 0.5 percent or greater. A channel is an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of standing water (Cowardin et al. 1979). The intermittent subsystem is characterized by a channel that contains nontidal flowing water for only part of the year. When the water is not flowing, it may remain in isolated pools or surface water may be absent.

3.5 National Hydrography Dataset

The NHD and topographic map indicates that an intermittent stream flows within the channel between the start and end points of the proposed Skyview Road pedestrian bridge. It flows in a southwesterly direction. NHD features are shown on the map in Appendix A.

3.6 Floodplain

FEMA classifies the Project area as undetermined flood hazard also known as Zone D (FEMA 2008).

3.7 Soils

Two soil map units are identified by NRCS within Project disturbance areas and are described in Table 2 and shown on the maps in Appendix A. The Chino silt loam soil type is located within the channel and the Wyman loam soil type is located on the slopes adjacent to the channel. There are no soil map units identified as hydric by NRCS.

TABLE 2 NRCS SOILS

SOIL MAP UNIT NAME AND ID	CHARACTERISTICS	DRAINAGE	RUNOFF	HYDRIC
Chino silt loam (Cf)	Drained, saline-alkali, 0-2 percent slopes, located on floodplains	Somewhat poorly drained	Medium	No
Wyman loam (WyC2)	Eroded, 2-8 percent slopes, located on alluvial fans	Well drained	Medium	No

4.0 DELINEATION METHODOLOGY

The field investigation focused on determining the presence of potential jurisdictional wetlands and waterways within disturbance areas of the Project. The following USACE and CDFW guidance documents were used to determine WOTUS, waters of the State, and CDFW jurisdictional limits:

- "Routine Onsite Determination Method" described in the USACE Wetlands Delineation Manual (Environmental Laboratory 1987)
- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008a)
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (USACE 2008b)
- *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010)
- *A Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010)

4.1 Wetlands

The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. USACE, CDFW, and RWQCB jurisdictional wetlands must exhibit characteristics within each of these three parameters and they are discussed below. Per the State Water Resources Control Board's, State Wetland Definition and Procedures for Discharges of

Dredged or Fill Material to Waters of the State (adopted April 2.2019) (SWRCB 2019), The methods described here shall be modified from the USACE 1987 Manual and Supplements, only to allow for the fact that the lack of vegetation does not preclude the determination of such an area that meets the definition of wetland.

4.1.1 Hydrophytic Vegetation

Species abundance in both upland and wetland communities were visually estimated and recorded. Dominant trees and shrubs/saplings were recorded within a 30-foot and 15-foot radius, respectively, from the center of each documentation plot. Woody vines were recorded within a 30-foot radius of the plot. Dominant herbaceous vegetation was recorded within a 5.0-foot radius of the plot. The indicator status of each species was identified using the National Wetland Plant List for the Arid West Region (USACE 2018).

The presence of hydrophytic vegetation within a representative plant community was positively identified if more than 50 percent of the dominant species within the community had an indicator status of Obligate (OBL), Facultative wetland (FACW), or Facultative (FAC). Table 3 provides a summary of the wetland indicator status. This determination method is referred to as the dominance test. Dominant plant species are determined using the "50/20 rule" defined in the *1987 Wetlands Delineation Manual* (Environmental Laboratory 1987). If the plant community failed the dominance test, but indicators for hydric soils or wetland hydrology were present, the plant community was examined for additional hydrophytic vegetation indicators. These hydrophytic vegetation indicators are identified in the Regional Supplement and include the prevalence index, evidence of morphological adaptations for growth in a wetland, and problematic hydrophytic vegetation (USACE 2008a). Upland (UPL) vegetation is identified as Facultative Upland, Obligate Upland, or No Indicator (NI), which is assumed to be UPL.

TABLE 3 SUMMARY OF WETLAND PLANT INDICATOR STATUS

CATEGORY	ACRONYM	PROBABILITY
Obligate Wetland	OBL	Almost always occur in wetlands (estimated probability 99 percent)
Facultative Wetland	FACW	Usually occur in wetlands (estimated probability of 67-99 percent)
Facultative	FAC	Equally likely to occur in wetland/non-wetlands (estimated probability of 34-66 percent)
Facultative Upland	FACU	Usually occur in non-wetlands (estimated probability 99 percent)
Upland	UPL	Almost always occur in non-wetlands (estimated probability >99 percent)
No indicator	NI	No indicator status has been assigned – assumed upland.

Under the California Fish and Wildlife Code, CDFW has jurisdiction over proposed impacts to vegetation associated with waters of the State.

4.1.2 Hydrology

Site hydrology was evaluated during the field survey by initially observing whether the soil at the surface was inundated or saturated. If the ground surface was dry, the depth to freestanding groundwater or saturated soil was measured, and the presence or absence of other indicators of wetland hydrology (e.g., drift lines, water stained leaves) was noted. The wetland hydrology criterion was met if one or more primary or two or more secondary field indicators were present (Environmental Laboratory 1987). However, during the survey, those wetlands which lacked any hydrology indicators due to temporarily

dry conditions, disturbance, or other factors and did not meet the 1987 USACE Manual criteria were evaluated using criteria from the Regional Supplement (USACE 2008a).

4.1.3 Hydric Soils

At each soil data sampling plot, a hole was dug at a width of five inches and a length of five inches to depths necessary to accurately determine a soil's hydric status. The Wetland 1 and Upland 1 soil sampling plots are shown on the map in Appendix A. The soil sample plot is typically dug to a depth of 16 to 24 inches below ground surface. The information collected for each soil profile included soil horizons, depth, texture, color, and hydric soil characteristics including organic content, accumulation of sulfides, gley formation, redoximorphic concentrations and depletions, and the visually-detectable depletion of minerals such as iron and manganese. Colors of the soil matrix and concentrations/depletions were identified using Munsell Soil Color Charts (Munsell 2000). Hydric soil determinations were based on criteria established in the 1987 USACE Manual (Environmental Laboratory 1987), along with Field Indicators of Hydric Soils in the United States (NRCS 2017), and the Arid West Regional Supplement (USACE 2008a).

4.2 Waterways

Any waterways (OHWM and/or defined bed and bank) observed within the Project survey area were classified based on the observed flow and channel characteristics at the time of field review. These features were also demarcated on aerial imagery maps. The specific methods for characterizing the OHWM for determining the presence of WOTUS and state jurisdictional areas are indicated as follows.

The OHWM is indicated by shelving, changes in sediment texture, and changes in vegetation. The active floodplain is formed by a low- to moderate-discharge event in the Arid West and is frequently identified by a break in slope indicating the outer extent of ordinary high discharges. Depending on the time that has passed since the last ordinary high event, the active floodplain often has early to mid-community successional stage vegetation. The sediment texture is generally coarser grained than that in the surrounding floodplain units. The low terrace, which is above the OHWM, is inundated less frequently than the active channel and is characterized by well-established, late-stage vegetation, and the surface may show indications of desert pavement or surface relief.

The following field verification techniques were applied:

1. General overview of the channel and floodplain.
2. Selected a cross-section of the channel.
3. Assessed the cross-section including characteristics of the floodplain and indicators present at the site.
4. Identified the OHWM and mapped on aerial photography.

5.0 FIELD INVESTIGATION RESULTS

Wendy Hosman, a Professional Wetland Scientist, with assistance from Omar Tinoco Gallardo, a certified Qualified SWPPP Developer, completed an on-site field investigation on July 16, 2020 to determine the presence of potential jurisdictional wetlands and waterways within the Project survey area. The results of the investigation are discussed below.

5.1 Wetlands

The investigation identified an intermittent stream (discussed in Section 5.2) with an adjacent wetland complex within the channel that will be crossed by the pedestrian bridge. The wetland boundaries were identified via the field investigation and mapped on aerial photography. The delineated wetland is shown on the map in Appendix A. Photographs of the wetland are in Appendix B and the wetland and upland data sheets are in Appendix C.

5.1.1 Hydrophytic Vegetation

The hydrophytic vegetation indicators at the wetland sample point are dominant species of Goodding's willow (*Salix gooddingii*), with an Arid West wetland indicator status of FACW, and southern cattail (*Typha domingensis*), with an Arid West wetland indicator status of OBL. Beyond the wetland sample point, the southeastern edge of the wetland is dominated by southern cattail and this extends to the bank on the southeastern edge of the channel. Other wetland and riparian plants that were observed within the channel are listed in Table 4, along with their wetland indicator status. Due to restoration activities, there is either wetland and/or floodplain vegetation for the full extent of the channel.

TABLE 4 RIPARIAN AND WETLAND VEGETATION

SCIENTIFIC NAME	COMMON NAME	ARID WEST INDICATOR STATUS
Anemopsis californica	Yerba mansa	OBL
Baccharis salicifolia	Mule fat	FAC
Distichlis spicata	Salt grass	FAC
Eleocharis parishii	Parish's spike rush	FACW
Juncus arcticus var. *mexicanus*	Mexican rush	FACW
Mimulus guttatus	Seep monkey flower	OBL
Muhlenbergia rigens	California deergrass	FAC
Pluchea odorata	Salt marsh fleabane	FACW
Polygonum lapathifolium	Dock-leaf smartweed	FACW
Polypogon monspeliensis	Annual beard grass	FACW
Salix gooddingii	Goodding's willow	FACW
Salix laevigata	Red willow	FACW
Stachys rigida subsp. *rigida*	Rigid hedge-nettle	FACW
Typha domingensis	Southern cattail	OBL

5.1.2 Hydrology

The primary wetland hydrology indicators at the wetland sample point include a high-water table at 12 inches and saturation at two inches. Beyond the wetland sample point, other primary wetland hydrology indicators within the channel include surface water in the stream channel and surface soil cracks. Secondary wetland hydrology indicators beyond the wetland sample point include sediment deposits and drift deposits.

5.1.3 Hydric Soils

The soils at the wetland sample point were characterized as silt loam with some clay content. The color of the soil at 0- to 2- inches was 5YR 2.5/2 and the color of the soil at 2- to 16-inches was 5YR 2.5/1. There was a two percent concentration of redox features with a color of 5YR 3/4 within the matrix. This hydric soil is classified as a redox dark surface.

5.2 Waterway

The stream's OHWM is depicted on a map in Appendix A. Photographs of the channel are in Appendix B and an OHWM is included in Appendix C.

Observed riparian and wetland vegetation and their wetland indicator status are listed in Table 5. Within the non-wetland area between the OHWM lines there are small channels and water movement indicators including soil cracks, ripples, sediment deposits, and drift deposits. There is rip-rap on both sides of the larger channel between the start and end points of the proposed Skyview Road Pedestrian Bridge. The rip rap edge creates a definitive OHWM on the southeastern edge of the channel.

The placement of flood protection measures and the subsequent revegetation activities have created a floodplain channel that extends from the eastern rip-rap bank to the western rip-rap bank. Either floodplain and/or wetland vegetation is located within the entire extent of the channel.

There is a concrete structure on the southeastern bank of the channel (see map in Appendix A). This structure drains stormwater from the adjacent residences into the stream channel. This area is fenced off and can be seen in the photographs in Appendix B. Since this area is connected to the stream channel, it would be considered part of both the wetland and waterway OHWM, up to the base of the rip-rap slope.

5.3 Jurisdiction and Estimated Disturbance

The wetland, intermittent stream, and associated OHWM would be considered both WOTUS and waters of the State under RWQCB jurisdiction. The entire channel would be under CDFW jurisdiction. The wetland and waterway features are described in Table 5 and shown on the map in Appendix A..

TABLE 5 JURISDICTION AND ESTIMATED DISTURBANCE

FEATURE ID AND LOCATION	NWI TYPE	DESCRIPTION	ACRES OF JURISDICTIONAL AREAS	LINEAR FEET OF JURISDICTIONAL AREAS AT BRIDGE CROSSING
W1 Wetland Lat: 33.6067 Long: -117.106872	R4SBA	Wetland complex associated with and including the intermittent stream channel. Dominant vegetation: Southern cattail	WOTUS and RWQCB: 0.9 acre	WOTUS and RWQCB: 202 feet
–OHWM West side Lat: 33.606953 Long: -117.107267 East side: Lat: 33.606447 Long: -11710675	R4SBA	OHWM associated with the intermittent stream, bordered by rip-rap on the southeast bank. Dominant vegetation: Southern cattail and Goodding's willow	WOTUS and RWCQB: 1.2 acres	WOTUS and RWQCB: 232 feet
CDFW West bank Lat: 33.607083 Long: -117.107572 East bank Lat: 33.606447 Long: -117.10675	R4SBA	Ultimate floodplain channel, which extends from west rip-rap bank to east rip-rap bank. Dominant vegetation: Southern cattail, Goodding's willow, red willow, and mule fat.	CDFW: 2.8	CDFW: 346 feet

6.0 PERMIT REQUIREMENTS

The following is a summary of the permits and authorizations that may be necessary prior to construction and/or alteration within jurisdictional areas.

6.1 United States Army Corps of Engineers

WOTUS, including wetlands, are subject to USACE jurisdiction under Section 404 of the CWA. A Section 404 permit is required for the discharge of dredged or fill material into WOTUS. It is anticipated a Section 404 permit would be required for this Project.

6.2 State Water Resources Control Board

To comply with criteria described in Section 402 of the federal CWA, all construction site operators engaged in clearing, grading, and excavating activities that disturb one acre or more, must obtain an NPDES permit for stormwater discharges. NPDES permits (also called CGPs) are issued by the State Water Resources Control Board following submittal of a Notice of Intent for construction activities, and preparation of a SWPPP that describes how erosion and sediment transport will be minimized to adjacent water bodies. It is estimated the Project would not disturb over one acre, so a CGP and SWPPP would not be required.

6.3 Regional Water Quality Control Board, San Diego

The RWQCB regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. The RWQCB's jurisdiction extends to all waters of

the State and WOTUS, including wetlands. If a USACE Section 404 permit and NWP (notifying or non-notifying) is required, a Section 401 Water Quality Certification from the RWQCB would also be required. Since the wetland, intermittent stream, and OHWM are determined to be WOTUS and waters of the State, the RWQCB would also take jurisdiction over these features. A Notice of Intent for stormwater discharges may be used in place of the required RWQCB Form 200, Report of Waste Discharge, with approval from RWQCB, or both a Notice of Intent and Report of Waste Discharge may be required.

6.4 California Department of Fish and Wildlife, Inland Deserts Region

Pursuant to Section 1600 et seq. of the Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream, and/or placement of any structures that will be placed or modified in or near the stream, river, or lake, and any channel clearing. The entire channel would be considered under the jurisdiction of CDFW; therefore, it would be necessary for the applicant to acquire a Section 1602 Lake and Streambed Alteration Agreement if there are impacts occurring near or within CDFW jurisdictional areas.

This page intentionally left blank.

7.0 REFERENCES

Cowardin, L.M., F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. Office of Biological Services, US Fish and Wildlife Service, US Department of the Interior, Washington, DC. 103 p.

California Department of Fish and Wildlife (CDFW). 2010. *A Review of Stream Processes and Forms in Dryland Watersheds*. Ecosystem Conservation Division. Sacramento, California.

California State University (CSU), Fresno and CDFW. 2014. *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* with the MESA Field Guide. California Energy Commission, CEC-500-2014-013.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1. US Army Engineer Waterways Experiment Station, Vicksburg, Mississippi. 100 p., plus appendices.

Federal Emergency Management Agency (FEMA). 2008. FEMA Flood Map Service Center. Available at: https://msc.fema.gov/portal/search?AddressQuery=temecula%2C%20ca#searchresultsanchor. Accessed July 2020.

Munsell. 2000. Munsell Soil Color Charts. Macbeth Division of Kollmorgan Instruments. New Windsor, NY.

National Agriculture Imagery Program (NAIP). 2017. Orthographic Aerial Photography, California.

Natural Resources Conservation Service (NRCS). 2017. Field Indicators of Hydric Soils in the United States. A Guide for Identifying and Delineating Hydric Soils, Version 8.1, 2017.

_____. 2020. Web Soil Survey. Available at http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm. Accessed July 2020.

State Water Resource Control Board (SWRCB). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Available at: https://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/procedures_conformed.pdf. Accessed October 2020.

United States Army Corps of Engineers (USACE). 2008a. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.* United States Army Engineer Research and Development Center. Hanover, NH.

_____. 2008b. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, Version 2.0. United States Army Engineer Research and Development Center. Vicksburg, MS.

_____. 2010. *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.* United States Army Engineer Research and Development Center. Hanover, NH.

_____. 2018. National Wetland Plant List. Available at: http://wetland-plants.usace.army.mil/nwpl_static/v34/home/home.html. Accessed August 2020.

United States Environmental Protection Agency (USEPA). 1972. Clean Water Act (CWA) 33 United States Code [U.S.C.] §1251 et seq., formerly the Federal Water Pollution Control Act of 1972.

_____. 2020. The Navigable Waters Protection Rule. Available at: https://www.epa.gov/nwpr/navigable-waters-protection-rule-step-two-revise. Accessed July 2020.

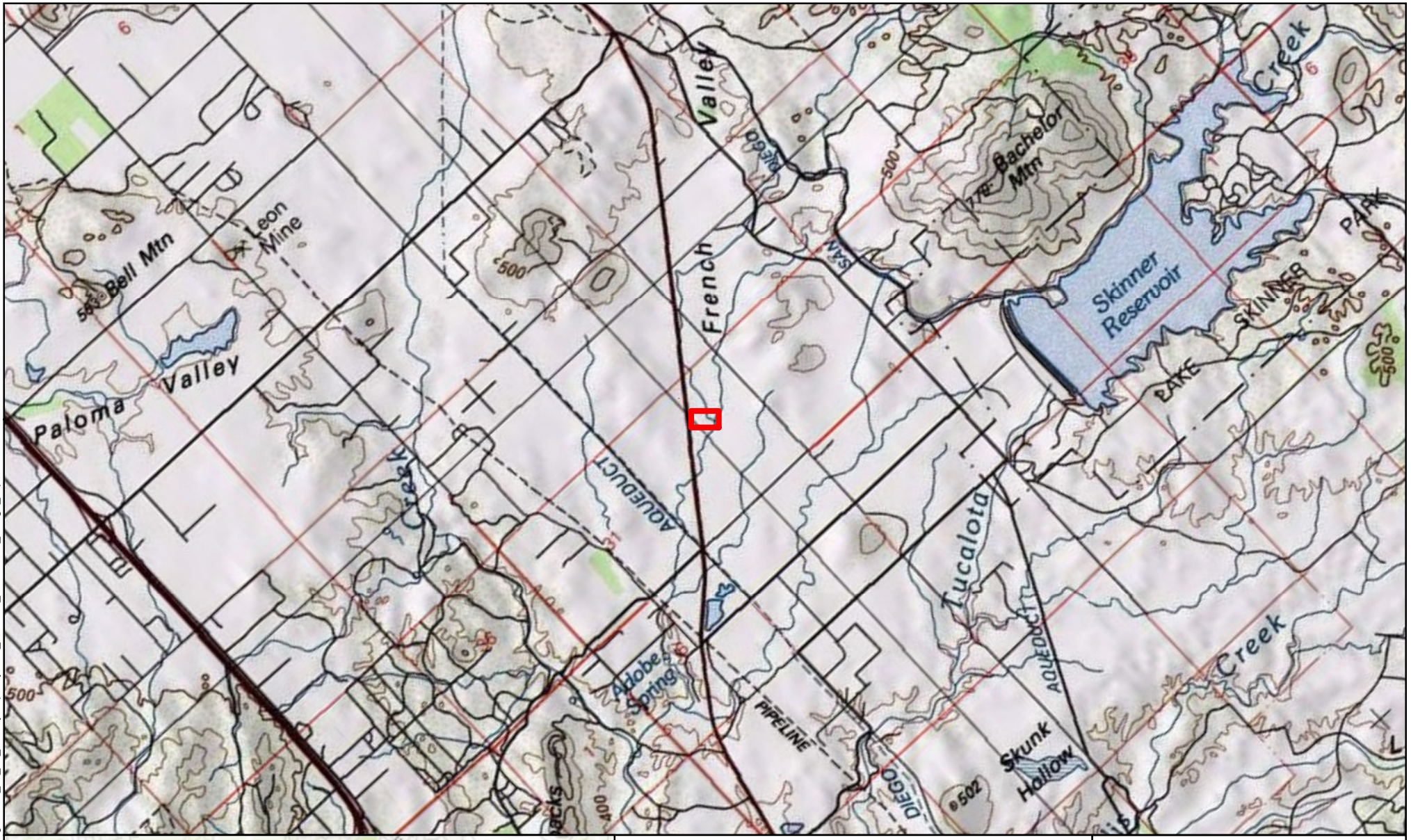
United States Fish and Wildlife Service (USFWS). 2020. National Wetland Inventory (NWI) Mapper. Available online at: http://www.fws.gov/wetlands/Data/Mapper.html. Accessed July 2020.

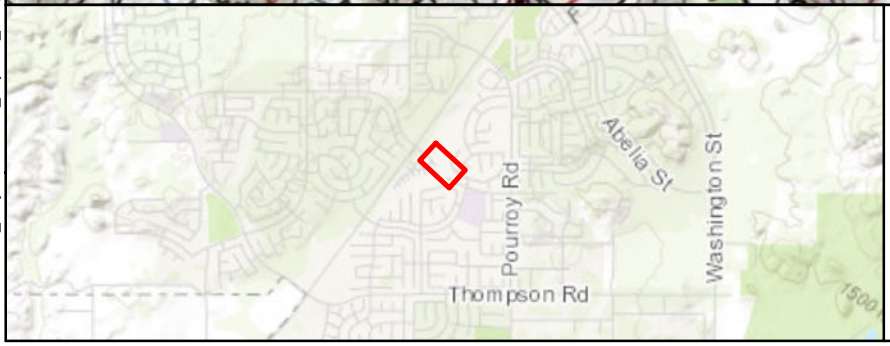
United States Geologic Survey (USGS). 2018. 7.5-minute Topographic Quadrangle Map. Bachelor Mountain, California. Available at: https://ngmdb.usgs.gov/topoview/viewer/#13/33.4790/-117.1049. Accessed July 2020.

_____. 2020. National Hydrography Dataset Mapper. Available online at http://nhd.usgs.gov/. Accessed July 2020.

APPENDIX A PROJECT MAPS

This page intentionally left blank.





Project Area

Skyview Road Pedestrian Bridge

Wetlands and Waterways Topographic Vicinity

0 2,500 5,000 10,000

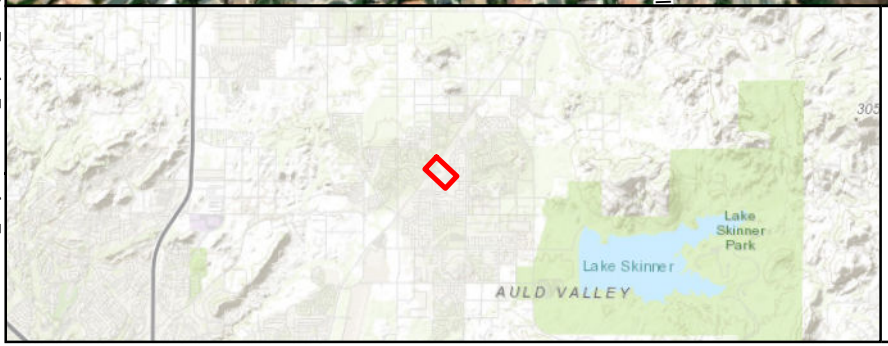
Feet

POWER ENGINEERS

Date: 10/15/2020

Aerial Photography: USDA NAIP\California 2018-07-23

Path: U:\Enviro_Projects\136151_Skyview_Bridge\2020_04_13_SurveyMap\Skyview_Wetland_Pedestrian_Bridge_Topo.mxd



Project Area

Skyview Road Pedestrian Bridge

Wetlands and Waterways Aerial Overview

0 125 250 500 750

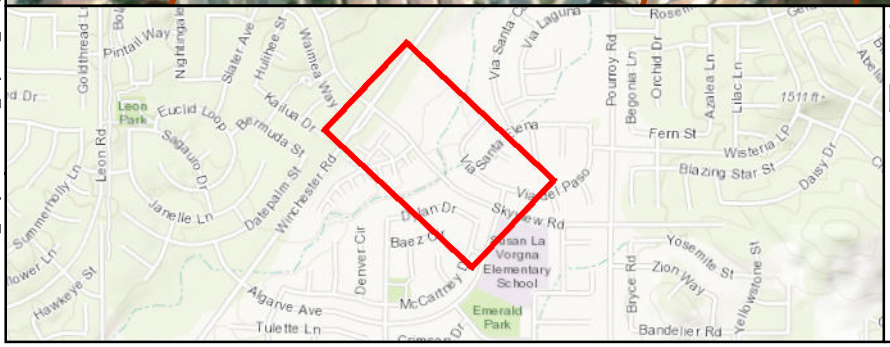
Feet

POWER ENGINEERS

Date: 10/15/2020

Aerial Photography: USDA NAIP\California 2018-07-23

Path: U:\Enviro_Projects\136151_Skyview_Bridge\2020_04_13_SurveyMap\Skyview_Wetland_Pedestrian_Bridge_Vicinity.mxd



Stream (NHD)
Riverine (NWI)
Soil Unit (NRCS SSURGO)

Skyview Road Pedestrian Bridge

Wetlands and Waterways NHD, NWI, and Soils Map

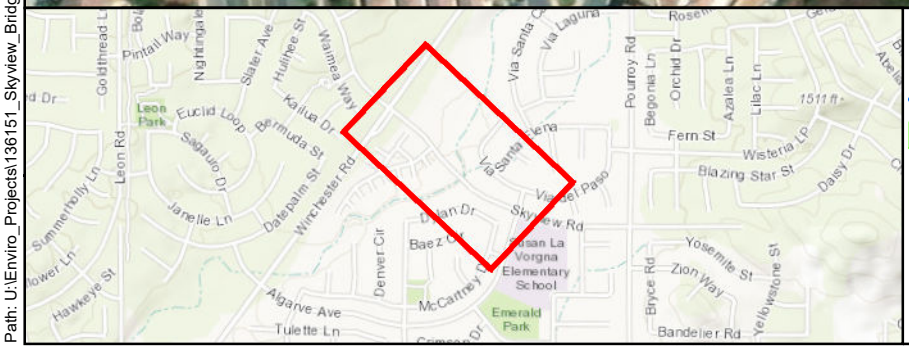
0 50 100 200 300
Feet

POWER ENGINEERS

Date: 10/15/2020

Aerial Photography:
USDA NAIP\California 2018-07-23

Path: U:\Enviro_Projects\136151_Skyview_Bridge\2020_04_13_SurveyMap\Skyview_Wetland_Pedestrian_Bridge_NWI.mxd



- Sample Point
- Pedestrian Bridge
- OHWM (Delineated)
- Wetland (Delineated)
- CDFW Jurisdiction (Project Survey Area)

Note: the linear feet measurements are at the approximate bridge location.

Skyview Road Pedestrian Bridge

Wetlands and Waterways Delineation

0 50 100 200 300

Feet

POWER ENGINEERS

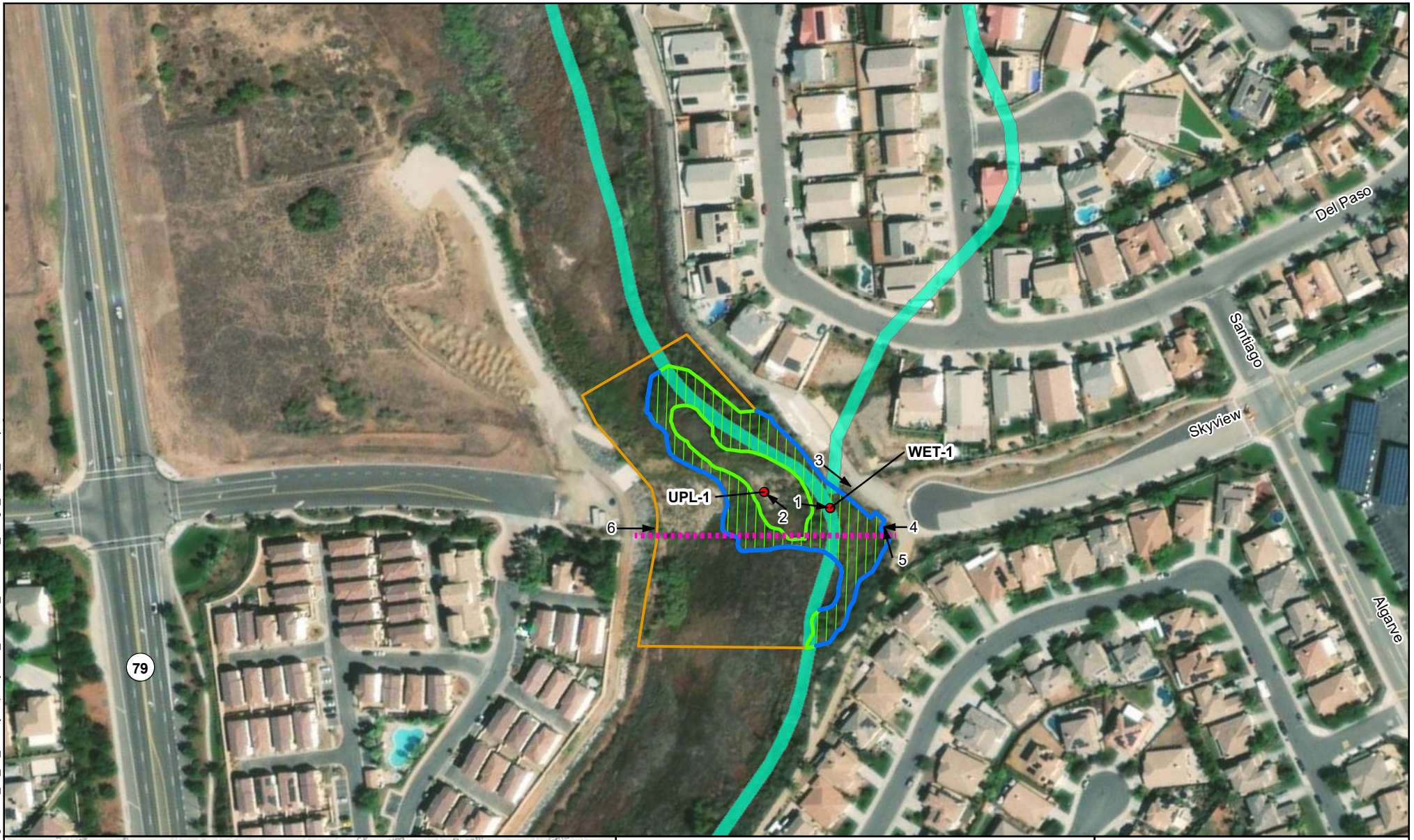
Date: 10/15/2020

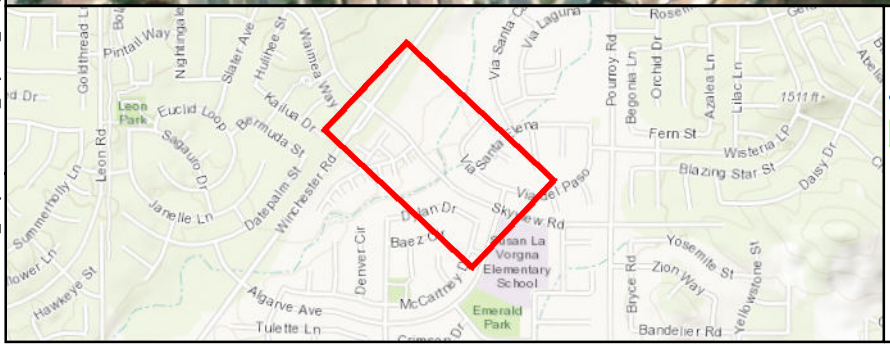
Aerial Photography: USDA NAIP\California 2018-07-23

Path: U:\Enviro_Projects\136151_Skyview_Bridge\2020_04_13_SurveyMap\Skyview_Wetland_Pedestrian_Bridge_Delineated.mxd

APPENDIX B PHOTOGRAPHS

This page intentionally left blank.





- Sample Point
- Pedestrian Bridge
- OHWM (Delineated)
- Wetland (Delineated)
- CDFW Jurisdiction (Project Survey Area)
- Riverine

Skyview Road Pedestrian Bridge

Wetlands and Waterways Photo Point Survey

0 50 100 200 300

Feet

POWER ENGINEERS

Date: 10/15/2020

Aerial Photography: USDA NAIP\California 2018-07-23

Path: U:\Enviro_Projects\136151_Skyview_Bridge\2020_04_13_SurveyMap\Skyview_Wetland_Pedestrian_Bridge_Photo_Survey.mxd

Photo Point 1: W1 Wetland sample point

Photo Point 2: W1 Upland sample point

Photo Point 3: W1 Wetland on southeast end looking south

Photo Point 4: W1 Wetland on southeast end looking north

Photo Point 5: W1 Wetland on southeast end looking east

Photo Point 6: W1 Wetland and floodplain looking southeast

APPENDIX C DATA FORMS

This page intentionally left blank.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Skyview Road City/County: Riverside County Sampling Date: 7/16/20

Applicant/Owner: Riverside County Transportation Dept. State: CA Sampling Point: WEST 1

Investigator(s): W. Hosman Section, Township, Range: 32, 6S, 2W

Landform (hillslope, terrace, etc.): Stream channel Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRR C Lat: 33.60067 Long: -117.106872 Datum: WGS84

Soil Map Unit Name: Chino silt loam NWI classification: R4SBA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 15' R)			
1. Salix goodingii	30	Y	FACW
2.			
3.			
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5' R)			
1. Typha domingensis	75	Y	OBL
2. Artemopsis californica	10	N	OBL
3. Heterotheca grandiflora	5	N	UPL
4.			
5.			
6.			
7.			
8.			
	90 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. None			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: WET 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2"	5YR 0/2	100	—				silt loam w/some clay	
2-16"	5YR 2.5/1	98	5YR 3/4	2	C	M	silt loam w/some clay	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): 0

Water Table Present? Yes X No ___ Depth (inches): 12"

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 2"

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Skyview Road City/County: Riverside County Sampling Date: 7/16/20

Applicant/Owner: Riverside County Transportation Dept. State: CA Sampling Point: UPL1

Investigator(s): W. Hosman Section, Township, Range: 32, 6S, 2W

Landform (hillslope, terrace, etc.): Stream channel Local relief (concave, convex, none): concave Slope (%): 2

Subregion (LRR): LRRC Lat: 33.606931 Long: -117.107056 Datum: WGS84

Soil Map Unit Name: Chino silt loam NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____ No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____ No X	
Wetland Hydrology Present?	Yes _____ No X	

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. None			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. None			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Heterotheca grandiflora	10	Y	UPL
2. Xanthium strumarium	15	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	25 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1. None			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	_____	x 1 =	_____
FACW species	_____	x 2 =	_____
FAC species	1	x 3 =	3
FACU species	_____	x 4 =	_____
UPL species	1	x 5 =	5
Column Totals:	2 (A)		8 (B)

Prevalence Index = B/A = 2.67

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: UPL 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6"	5Y 5/2	100					silt loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Bedrock or hardpan

Depth (inches): 16"

Hydric Soil Present? Yes _____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Skyview Road Pedestrian Bridge
Project Number: POWER #164388
Stream: S1
Investigator(s): W. Hosman
Date: 7/16/20 **Time:** 10:00 a.m.
Town: Riverside Co. **State:** CA
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details: Channel between Skyview Road end points.

Projection: **Datum:** WGS84

Coordinates: 33.6067 -117.106872

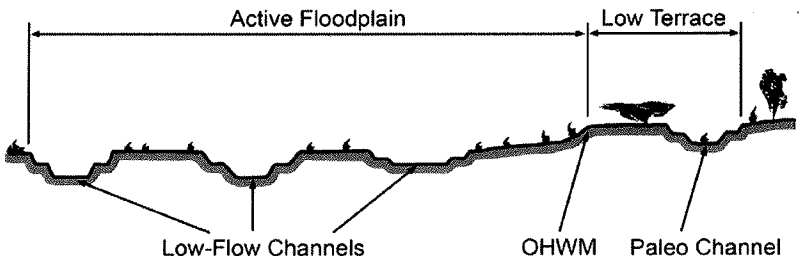
Potential anthropogenic influences on the channel system:
Both sides of the floodplain channel are lined with rip rap. There is a concrete structure on the southeastern edge of the channel which drains stormwater into the channel. Residences line both sides of the top of bank.

Brief site description:
An intermittent stream and adjacent wetland occur within a channel located between the end points of the Skyview Road endpoints.

Checklist of resources (if available):

- ☒ Aerial photography
  Dates: 1996-2018
- ☒ Topographic maps
- ☐ Geologic maps
- ☒ Vegetation maps previous studies and reports
- ☒ Soils maps
- ☒ Rainfall/precipitation ~~maps~~ data
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

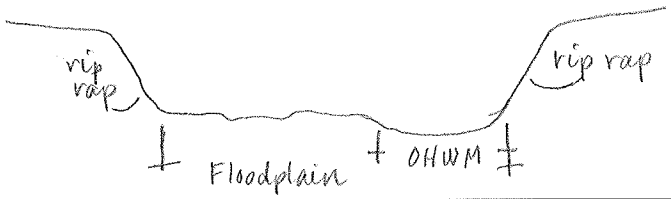


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   ☒ Mapping on aerial photograph ☐ GPS
   ☐ Digitized on computer ☐ Other:

Project ID: Skyview Rd. **Cross section ID:** S1 **Date:** 7/16/20 **Time:** 10:00 a.m.

Cross section drawing:



OHWM

GPS point: 33.60067 -117.106872

Indicators:

- ☒ Change in average sediment texture
- ☒ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

OHWM is on the southeastern edge of the channel, which extends from the rip rap bank to include much of the cattails.

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: 33.607019 -117.107556

Characteristics of the floodplain unit:

Average sediment texture: silt loam w/clay & sand

Total veg cover: 70 % Tree: 15 % Shrub: 70 % Herb: 40 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings) to
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☒ Mudcracks
- ☒ Ripples
- ☒ Drift and/or debris
- ☒ Presence of bed and bank rip rap on banks
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit is bordered by rip rap on both sides of channel.