Habitat Assessment for the

Limonite Avenue Widening – Bain to Homestead Project Assessor Parcel Numbers: 000-111-130, 157-020-003, 161-332-003, 161-332-008 to -010, 161-332-012, 162-200-008 to -011, 162-200-014, 162-200-022, 162-200-023, 162-200-026, 162-200-027, 162-210-004, 162-210-011, 162-210-012, 162-220-001, 162-220-002, 162-220-008, 162-220-010, 162-220-011, 162-220-014, 162-220-016, 162-220-017, 162-230-001, 162-301-005 to -007, 162-302-001 to -003, 162-302-008, 162-302-009, and 162-302-021 (Impact Area: 18.17 Acres; Total Area Surveyed: 61.80 Acres) in the City of Jurupa Valley, Riverside County, California

Corona North and Riverside West USGS 7.5-Minute Series Maps Township 2 South, Range 6 West, Sections 22 and 27

Prepared For:

Chase Keys, E.I.T. City of Jurupa Valley 8930 Limonite Avenue Jurupa Valley, California 92509 (951) 332-6464 x235 ckeys@jurupavalley.org

Prepared By:

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Surveys Conducted By:

Allison D. Rudalevige Cristhian Mace

Surveys Conducted On: September 6, 2018

> **Report Date:** October 18, 2018

CERTIFICATION

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

DATE: 10/19/2018 SIGNED: allian D. Rudaleng

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SECTION 1.0

COUNTY OF RIVERSIDE ATTACHMENTS

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Attachment E-3

BIOLOGICAL REPORT SUMMARY SHEET

(Submit two copies to the County)

Applicant Na	me: <u>City of Jurupa</u>	Valley		
Assessor's Pa	rcel Number (APN):	see attached		
APN cont. : _				
Site Location:	: Section: <u>22 and 27</u>	Township: 2 South	Range: <u>6 West</u>	
Site Address:				
Related Case Number(s):]	PDB Number:	
	CHECK	SDECIES or ENVIDONMENTAL	(Circle Ves, No or N/A regarding	
	SPECIES	ISSUE OF CONCERN	species findings on the referenced	
	SURVEYED		site)	
	FOR		,	

SPECIES SURVEYED FOR	ISSUE OF CONCERN	species findin	ngs on the ro site)	eferenced
	Arroyo Southwestern Toad	Yes	No	N/A
\checkmark	Blueline Stream(s)	Yes	No	N/A
	Coachella Valley Fringed-Toed Lizard	Yes	No	N/A
	Coastal California Gnatcatcher	Yes	No	N/A
\checkmark	Coastal Sage Scrub	Yes	No	N/A
	Delhi Sands Flower-Loving Fly	Yes	No	N/A
	Desert Pupfish	Yes	No	N/A
	Desert Slender Salamander	Yes	No	N/A
	Desert Tortoise	Yes	No	N/A
	Flat-Tailed Horned Lizard	Yes	No	N/A
habitat	Least Bell's Vireo	Yes	No	N/A
\checkmark	Oak Woodlands	Yes	No	N/A
	Quino Checkerspot Butterfly	Yes	No	N/A
	Riverside Fairy Shrimp	Yes	No	N/A
	Santa Ana River Woolystar	Yes	No	N/A
	San Bernardino Kangaroo Rat	Yes	No	N/A
	Slender Horned Spineflower	Yes	No	N/A
	Stephen's Kangaroo Rat	Yes	No	N/A
\checkmark	Vernal Pools	Yes	No	N/A
\checkmark	Wetlands	Yes	No	N/A

CHECK SPECIES SURVEYED FOR	SPECIES or ENVIRONMENTAL ISSUE OF CONCERN	(Circle Ye species fine	s, No or N/A dings on the site)	regarding referenced
✓	Other: Riparian Habitat	Yes	No	N/A
✓	Other jurisdictional waters	Yes	No	N/A
✓	Other fairy shrimp habitat	Yes	No	N/A
✓	Other burrowing owl habitat	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A
	Other	Yes	No	N/A

Species of concern shall be any unique, rare, endangered, or threatened species. It shall include species used to delineate wetlands and riparian corridors. It shall also include any hosts, perching, or food plants used by any animals listed as rare, endangered, threatened or candidate species by either State, or Federal regulations, or for Riverside County as listed by the California Department of Fish and Game Natural Diversity Data Base (NDDB).

I declare under penalty of perjury that the information provided on this summary sheet is in accordance with the information provided in the biological report.

allisan D. Rudalenje

Signature and Company Name

10(a) Permit Number (if applicable)

10/19/2018

_Date:___

Report Date

County Use Only

Received by:____ PD-B#_____

Permit Expiration Date

LEVEL OF SIGNIFICANCE CHECKLIST For Biological Resources

(Submit Two Copies)

Case Number: Lot/Par	rcel No. see attached		EA Number	
Wildlife & Vegetation				
Potentially	Less than Significant	Less than	No	
Significant	with Mitigation	Significant	Impact	
Impact	Incorporated	Impact		
(Check the level of impact the ap	pplies to the following qu	estions)		
a) Conflict with the pro Community Plan, or oth	visions of an adopted Ha	bitat Conservation al, or state conser	Plan, Natural Conservation vation plan?	
	\checkmark			
b) Have a substantial a endangered, or threatene (Sections 670.2 or 670.5	dverse effect, either direct ed species, as listed in Tit 5) or in Title 50, Code of	ctly or through ha le 14 of the Califo Federal Regulation	bitat modifications, on any rnia Code of Regulations ons (Sections 17.11 or 17.12)?	
	\checkmark			
c) Have a substantial ac identified as a candidate regulations or by the Ca	dverse effect, either direc , sensitive, or special stat alifornia Department of F	tly or through hab us species in local ish and Game or I	itat modifications, on any species or regional plans, policies, or US Wildlife Service?	
	лаан араан араа Д			
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident migratory wildlife corridors, or impede the use of native wildlife number of a species?				
		ø		
e) Have a substantial ac	lverse effect on any ripar	ian habitat or othe	r sensitive natural community	
identified in local or reg	ional plans, policies, regu	lations or by the C	California Department of Fish	
and Game or U. S. Fish and Wildlife Service?				
	\checkmark			
f) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				
			\checkmark	
g) Conflict with any loo	cal policies or ordinances	protecting biolog	ical resources, such as a tree	
preservation policy or ordinance?				
			Ø	
Source: CGP Fig. VI.36-VI.	40			

Findings of Fact:

Jurisdictional waters under the regulatory authority of the USACE, the RWQCB, and/or the CDFW are present and may be impacted by the project. Riparian/Riverine Resources and habitat for associated species (e.g., least Bell's vireo) are present and may be impacted. Species associated with vernal pools (i.e., fairy shrimp) may be present and impacted. Narrow Endemic plant habitat is present and may be impacted. Burrowing owls may be present and impacted. Nests of raptors and migratory birds may be impacted.

Proposed Mitigation:

Permits/certifications/agreements from the USACE, RWQCB, and the CDFW (including compensatory mitigation) may be required if jurisdictional waters are impacted.

Monitoring Recommended:

Focused surveys for Narrow Endemic plants, fairy shrimp, least Bell's vireo, and burrowing owl are recommended. A pre-construction survey(s) for nesting birds and raptors is needed prior to any construction activities that occur during the nesting season (generally February 1 through June 30).



Biological Resources Map

Limonite Avenue Widening – Bain to Homestead Project







Biological Resources Map

Limonite Avenue Widening – Bain to Homestead Project



Jurisdictional Resources

- USACE/RWQCB Jurisdictional Area
- CDFW Jurisdictional Area
- Freshwater Pond*

- *Note: Feature mapped by the National Wetlands Inventory.

Aerial Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community





Non-native grassland and disturbed trail at the western end of the survey area.



Ruderal vegetation in an undeveloped lot in the eastern half of the survey area.

Representative Photographs

Attachment E-6a

PSOMAS

Limonite Avenue Widening – Bain to Homestead Project



Riparian scrub vegetation on the north side of Pyrite Creek.



Ornamental/mulefat scrub on the south side of Pyrite Creek.

Representative Photographs

Attachment E-6b

PSOMAS

Limonite Avenue Widening – Bain to Homestead Project



Flood control channel and open water near the western end of the survey area.



Lined basin in the service yard in the western half of the survey area.

Representative Photographs

Attachment E-6c

PSOMAS

Limonite Avenue Widening – Bain to Homestead Project



Disturbed area (foreground) and parks/ornamental (background) in the eastern half of the survey area.

Limonite Avenue Widening – Bain to Homestead Project

Attachment E-6d

PSOMAS

SECTION 2.0

HABITAT ASSESSMENT

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This report presents the findings of a habitat assessment for the Limonite Avenue Widening – Bain to Homestead Project (hereinafter referred to as the "proposed Project") located in the City of Jurupa Valley in Riverside County, California.

The Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) requires that projects be evaluated for a number of factors to assess how they meet MSHCP criteria. This information is used to determine whether a project site should be acquired as part of the habitat reserve or whether it should be allowed for development. The biological resources evaluation also assists the Lead Agency in determining whether additional mitigation would be required for Criteria Area or Additional Survey Needs Species. According to the Regional Conservation Authority (RCA) MSHCP Information Tool, the proposed Project is not located in a designated MSHCP "Criteria Area." The general habitat assessment for the proposed Project includes assessments for riparian/riverine areas (and associated species) and vernal pools (and associated species) pursuant to MSHCP Section 6.1.2; urban/wildlands interface issues pursuant to MSHCP Section 6.1.4; and waters under the jurisdictions of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW) as discussed in MSHCP Section 6.1.2. The MSHCP Additional Survey Needs and Procedures identify species-specific survey areas within the MSHCP Plan Area; portions of the proposed Project are in Narrow Endemic plant (i.e., San Diego ambrosia [Ambrosia pumila], Brand's star phacelia [Phacelia stellaris], and San Miguel savory [Clinopodium] chandleri]) and burrowing owl survey areas; therefore, an assessment of Narrow Endemic plant and burrowing owl habitat was made. The study area analyzed herein consists of a 250-foot buffer around Limonite Avenue. This report has been prepared in accordance with the MSHCP guidelines.

PROJECT LOCATION AND DESCRIPTION

The proposed Project is located along Limonite Avenue approximately 2.4 miles east of Interstate 15 (I-15) and 1.0 mile west of Van Buren Avenue (Exhibit 1). The site is on the U.S. Geological Survey's (USGS) Corona North and Riverside West 7.5-minute quadrangles at Township 2 South, Range 6 West, and portions of Sections 22, 27, and 28 of the San Bernardino Base and Meridian (SBBM) (Exhibit 2). The center or mid-point of the Project site (approximately Limonite Avenue at Pyrite Creek) is located at 33° 58' 32.1" North latitude and 117° 29' 57.7" West longitude. The San Sevaine Flood Control Channel crosses under the existing roadway just east of Bain Street.

The City's purpose for the proposed Project is to widen Limonite Avenue from Bain Street on the west to Homestead Street on the east, a distance of approximately 3,900 feet or 0.74 mile. The existing roadway has two travel lanes without curb and gutter, and the roadway varies from 32 to 42 feet in width depending on location, presence of a shoulder, and other factors.

The proposed Project would widen Limonite Avenue to provide two additional travel lanes (four total travel lanes), a raised center median, and the addition of curb and gutter. An equestrian use trail will be added and located on the north side of the street, while a multi-use path will be located on the south side. In general, the roadway will be widened and realigned slightly to the north to improve sight distances and traffic flow. Some property along the northern limit of the existing roadway will need to be acquired for this purpose. After improvement, the roadway would still have a right-of-way width of 152 feet.

The proposed Project is currently under design and proposes to install a permanent 10-foot wide equestrian trail along the north side of the roadway and a 10-foot wide multi-use trail along the south side of the roadway. The land needed for temporary construction easements would be



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restored to largely existing conditions after completion of the roadway improvements, especially relating to drainage.

Drainage Improvements

The San Sevaine Flood Control Channel crosses under the existing roadway just east of Bain Street, but no work on or improvements to that channel are anticipated as part of this Project. Currently, two 60-inch corrugated metal pipe (CMP) drainage structures are located in Pyrite Creek where it crosses Limonite Avenue to convey runoff under the roadway. The portion of the roadway that crosses over Pyrite Creek will be widened and realigned slightly, and the two CMP structures are proposed to be replaced by two 12-foot by 12-foot concrete box culverts under the new roadway bed.

Construction Methods/Timing

Roadway improvements will be made over a period of nine months and involve heavy equipment to demolish and clear limited areas of pavement and adjacent land either for improvements or temporary construction easements from affected property owners. The City will then grade and reconstruct or construct a new roadway bed where needed, including curb, gutter, and trail improvements where needed. The proposed Project will be phased to allow for continued vehicular movement along Limonite Avenue during construction.

GENERAL SITE INFORMATION

Limonite Avenue is designated as an Urban Arterial in the City's 2017 General Plan. The land adjacent to and north of this portion of Limonite Avenue is designated for low density residential uses (LDR) and referred to as "Country Neighborhood" in the City's General Plan. The land adjacent to and south of this portion of Limonite Avenue is designated for a number of public/institutional uses, i.e., the Joint Activity Training Center or JATC used for electrical union worker training, the Jurupa Community Services District (JCSD) Service Yard and Plant No. 1, San Sevaine Flood Control Channel, the northeast portion of the Jurupa Hills Wildlife Refuge along the Santa Ana River, as well as several private properties with residences and cattle in the center and western portions of the proposed Project and Low Density Residential, Very High Density Residential, and Commercial Retail uses within the Paradise Knolls Specific Plan in the eastern portion of the proposed Project (i.e., south of Limonite and at Homestead Street).

The study area is located between 1,000 feet and 1,700 feet north of the Santa Ana River, pending on location, with its closest point near Bain Street and its farthest point at Homestead Street (separated by the Paradise Knolls Golf Course). At Pyrite Creek, the river is 1,350 feet south of Limonite Avenue.

Topography in the study area is relatively flat, with most of the lots graded. Existing elevations along the roadway range from 679 feet above mean sea level (msl) at Bain Street to 695 feet above msl at Homestead Street, although the lowest elevation of the roadway within the study area is 651 feet, approximately 950 feet east of Bain Street. Soils in the study area consist of Gorgonio loamy sand, deep, 2 to 8 percent slopes; Grangeville fine sandy loam, drained, 0 to 2 percent slopes; Hilmar loamy sand, 0 to 2 percent slopes, eroded; Monserate sandy loam, 0 to 5 percent slopes, severely eroded; Ramona sandy loam, 0 to 5 percent slopes, severely eroded; Ramona sandy loam, 5 to 8 percent slopes, eroded; and Terrace escarpments (Exhibit 3). None of these soils are listed as hydric on the National Hydric Soils List (USDA NRCS 2018).

















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<u>MSHCP Jurupa Area Plan</u>

At the time the MSHCP was approved, Jurupa Valley was unincorporated. Since the time of approval, Jurupa Valley has become incorporated as a new City and is now responsible for implementing the MSHCP within its boundaries. The study area is located in the Western Riverside County MSHCP's Jurupa Area Plan; it is not in an Area Plan Subunit (Dudek 2003). The target conservation acreage range for Jurupa Area Plan is 4,230 to 5,210 acres; it is composed of approximately 3,340 acres of existing Public/Quasi-Public Lands and 890 to 1,870 acres of Additional Reserve Lands.

The Jurupa Area Plan contains the following Cores and Linkages:

- All of Proposed Noncontiguous Habitat Block 1
- All of Proposed Noncontiguous Habitat Block 2
- All of Proposed Noncontiguous Habitat Block 3
- A small portion of Existing Core A

The study area is adjacent to Existing Core A, which consists of Prado Basin and the Santa Ana River. This Core also functions as a Linkage, connecting Orange County to the west with San Bernardino County to the north. This Core is constrained on all sides by existing urban development and agricultural use. The area south of Limonite Avenue and west of the San Sevaine Flood Control Channel is designated Public/Quasi-Public land (Exhibit 4).

METHODS

A literature review was conducted prior to the field survey to identify special status plant and wildlife species reported to occur in the proposed Project vicinity. The California Native Plant Society's (CNPS') <u>Inventory of Rare and Endangered Plants</u> (CNPS 2018) and the CDFW's <u>California Natural Diversity Database</u> (CNDDB) (CDFW 2018a) were reviewed and included the USGS Corona North, Fontana, Guasti, and Riverside West 7.5-minute quadrangles. The RCA MSHCP Information Tool was used to determine MSHCP requirements using the following APNs: 000-111-130, 157-020-003, 161-332-003, 161-332-008, 161-332-009, 161-332-010, 161-332-012, 162-200-008, 162-200-010, 162-200-011, 162-200-014, 162-200-022, 162-200-023, 162-200-026, 162-200-027, 162-210-004, 162-210-011, 162-210-012, 162-220-001, 162-220-001, 162-220-014, 162-220-016, 162-220-017, 162-230-001, 162-301-005, 162-301-006, 162-301-007, 162-302-001, 162-302-002, 162-302-003, 162-302-008, 162-302-001, 162-302-021.

The habitat assessment was conducted on September 6, 2018, by Psomas Senior Biologist Allison Rudalevige and Biologist Cristhian Mace. The habitat assessment was conducted by walking along Limonite Avenue and recording plant and wildlife species observed. Adjacent private property was viewed through binoculars. Vegetation and jurisdictional resources were mapped in the field on an aerial photograph at a scale of 1 inch equals 200 feet (1"=200'). Vegetation types were mapped and generally follow categories outlined in the Western Riverside County MSHCP Habitat Accounts (Dudek 2003). Vegetation classification was cross-referenced to *A Manual of California Vegetation* (Sawyer et al. 2009), which is currently used by the CDFW when determining whether a community is considered sensitive. Photographs were also taken during the habitat assessment (see Attachment E-6).

All plant and wildlife species observed were recorded in field notes. Plant species were identified in the field or collected for later identification using keys in Baldwin et al. (2012). Nomenclature of plant taxa conforms to the *Special Vascular Plants, Bryophytes, and Lichens List* (CDFW 2018d) for special status species and the <u>Jepson eFlora</u> (Jepson Flora Project 2017) for all other taxa.





All wildlife species detected during the course of the surveys were documented in field notes. Active searches for reptiles and amphibians included lifting, overturning, and carefully replacing rocks and debris. Birds were identified by visual and auditory recognition. Surveys for mammals were conducted during the day and included searching for and identifying diagnostic sign, including scat, footprints, scratch-outs, dust bowls, burrows, and trails. Taxonomy and nomenclature for wildlife generally follows the *Special Animals List* (CDFW 2018c) for special status species and, for other species, Center for North American Herpetology (CNAH 2015) for amphibians and reptiles, the American Ornithological Society (AOS 2018) for birds, and the Smithsonian National Museum of Natural History (SNMNH 2011) for mammals.

A delineation of jurisdictional water resource boundaries was conducted concurrently with vegetation mapping and general biological surveys in order to describe the type and extent of waters regulated by the USACE, the RWQCB, and/or the CDFW. Jurisdictional features were mapped on the aerial. Non-wetland waters of the United States under the jurisdiction of the USACE were assessed based on the presence of an Ordinary High Water Mark (OHWM). The presence of wetland waters of the United States was assessed using a three-parameter approach for wetland hydrology, hydrophytic vegetation, and hydric soils, as described in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If conditions indicating isolated waters are present, the RWQCB takes jurisdiction using the USACE's definition of the OHWM and/or the three-parameter wetlands methods. The CDFW's jurisdiction is generally defined as the top of the bank of a river, stream, or lake or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, or lake.

EXISTING CONDITIONS

Vegetation Types and Other Areas

The following vegetation types and other landcovers occur in the study area: non-native grassland, ruderal, riparian scrub, ornamental/mulefat scrub, flood control channel, lined basin, disturbed, livestock feedyard, golf course/ornamental, developed/ornamental, and developed (Exhibit 5).

Non-native Grassland

Non-native grassland occurs south of Limonite Avenue at the western end of the study area and on a slope adjacent to Pyrite Creek in the center of the study area. At the time of the survey, these areas were covered with desiccated plant material dominated by grasses. Flowering parts were not observable, so identification was not possible; however, the species likely consist of ripgut grass (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), and/or wild oat (*Avena* sp.). Scattered desiccated shortpod mustard (*Hirschfeldia incana*) was also observed.

This vegetation is consistent with the non-native grassland subassociation in Dudek (2003). It is functionally similar to various semi-natural herbaceous stands (e.g., annual brome grassland and wild oat grassland) in Sawyer et al. (2009). This vegetation type is not considered sensitive by the CDFW.

Ruderal

Ruderal vegetation occurs on undeveloped or abandoned parcels throughout the study area. This vegetation is dominated by Russian thistle (*Salsola tragus*). Some areas contain desiccated shortpod mustard and non-native grasses.



Vegetation Types and Other Areas

Limonite Avenue Widening – Bain to Homestead Project





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Ruderal communities are included under the residential/urban/exotic vegetation association in Dudek (2003). The term "ruderal" is used to describe weedy, non-native vegetation often associated with soil that has been disturbed. No named Alliance or Association in Sawyer et al. (2009) includes Russian thistle as a dominant or characteristic species. This vegetation type is not considered sensitive by the CDFW.

Riparian Scrub

Riparian scrub vegetation occurs along Pyrite Creek north of Limonite Avenue. This vegetation type consists of a canopy of Goodding's black willow (*Salix gooddingii*) with an understory of mule fat (*Baccharis salicifolia* ssp. *salicifolia*). A few scattered non-native, ornamental trees are also present along the creek. The creek bed was dry at the time of the survey and lacked herbaceous vegetation; however, debris and downed tree limbs were noted.

This vegetation is consistent with the riparian scrub subassociation in Dudek (2003). The willows are not as mature or extensive as an area that would be designated "riparian forest". It is also consistent with the black willow thicket Alliance in Sawyer et al. (2009). This vegetation type is considered sensitive by the CDFW and is also potentially a jurisdictional water resource (as discussed below).

Ornamental/Mulefat Scrub

Ornamental/mulefat scrub occurs along Pyrite Creek south of Limonite Avenue. This vegetation type consists of a canopy dominated by planted ash (*Fraxinus* sp. tentatively identified as *F. uhdei*) with an understory of mule fat in the channel bottom.

This vegetation is not described in Dudek (2003). While it has an understory consistent with the mulefat scrub subassociation, the tree canopy consists of ornamental species. No named Alliance or Association in Sawyer et al. (2009) includes an ornamental ash as a dominant or characteristic species. This vegetation type is not considered sensitive by the CDFW but is potentially a jurisdictional water resource (as discussed below).

Flood Control Channel

The San Sevaine Flood Control Channel crosses under the existing roadway just east of Bain Street and discharges into a ponded area with riprap banks at the Santa Ana River. It is a concrete-lined channel with vertical walls south of Limonite Avenue and trapezoidal walls north of Limonite Avenue.

The flood control channel is unvegetated landcover not described in Dudek (2003) or Sawyer et al. (2009). It is not considered sensitive by the CDFW but is potentially a jurisdictional water resource (as discussed below).

Lined Basin

The lined basin occurs on the Jurupa Community Services District (JCSD) Service Yard. It is plastic-lined and contains no sediment or vegetation. It was dry at the time of the survey.

Lined basin is unvegetated landcover not described in Dudek (2003) or Sawyer et al. (2009). It is not considered sensitive by the CDFW but is potentially a jurisdictional water resource (as discussed below).

Disturbed

Disturbed areas occur throughout the study area. This landcover consists of roadsides, trails, graded areas, and the mowed/disked edges of vacant lots. These areas are unvegetated.

Disturbed areas are unvegetated landcover not described in Dudek (2003) or Sawyer et al. (2009). They are not considered sensitive by the CDFW.

Livestock Feedyard

A livestock feedyard occurs south of Limonite Avenue in the middle of the study area. This area is unvegetated and is actively used by cattle.

While livestock feedyard is similar to disturbed landcover, it has been mapped separately because Dudek (2003) provides a named vegetation association for it. Livestock feedyard is unvegetated landcover not described in Sawyer et al. (2009). It is not considered sensitive by the CDFW.

Golf Course/Ornamental

Golf course/ornamental (i.e., the Paradise Knolls Golf Course) occurs south of Limonite Avenue in the eastern half of the study area. This vegetation type consists of a broad expanse of ornamental turf grass and scattered ornamental trees (e.g., tree of heaven [*Ailanthus altissima*] and pine [*Pinus* sp.]) along the roadway and throughout the course.

Golf course/ornamental is included under the residential/urban/exotic vegetation association in Dudek (2003). No named Alliance or Association in Sawyer et al. (2009) is dominated by the on-site tree species, but golf course/ornamental is functionally similar to the non-native groves planted as windbreaks, on uplands, or along stream courses (e.g., the pepper tree or myoporum grove or the eucalyptus – tree of heaven – black locust grove) described in Sawyer et al. (2009).

Developed/Ornamental

Developed/ornamental areas occur throughout the study area. These areas contain developed structures (e.g., residences and other buildings) with closely associated landscaping. Vegetation is varied and includes trees, shrubs, herbs, and turf grass. Representative species observed in these areas include pepper tree (*Schinus molle*), pine (*Pinus* sp.), gum tree (*Eucalyptus* sp.), Mexican fan palm (*Washingtonia robusta*), and bougainvillea (*Bougainvillea* sp.).

Developed/ornamental areas are included under the residential/urban/exotic vegetation association in Dudek (2003). These areas are not described in Sawyer et al. (2009). They are not considered sensitive by the CDFW.

Developed

Developed landcover consists of the paved road and the JCSD Service Yard, which does not contain closely associated landscaping.

Developed landcover is included under the residential/urban/exotic vegetation association in Dudek (2003). These areas are not described in Sawyer et al. (2009). They are not considered sensitive by the CDFW.

<u>Wildlife</u>

The study area provides low to moderate quality habitat for wildlife species due to the limited amount of native plant communities, the disturbed nature of part of study area, and surrounding urban development. Wildlife species present are expected to be relatively urban tolerant and acclimated to human activity. However, high quality habitat along the Santa Ana River is located nearby; and wildlife, including less common species, may move between that area and the study area.

No fish species were observed during the survey. Pyrite Creek and the San Sevaine Flood Control Channel are expected to provide limited habitat for fish species due to the lack of consistent flow and, in the case of the flood control channel, the lack of a natural substrate or structural features providing fish habitat (e.g., pools, debris, vegetation, and undercut banks). However, they do have a direct hydrologic connection to the Santa Ana River, and fish species may travel upstream under flow conditions.

Common reptile species observed during the survey include the western fence lizard (*Sceloporus occidentalis*) and common side-blotched lizard (*Uta stansburiana*).

Common bird species observed in or flying over the study area include rock pigeon (*Columba livia*), Eurasian collared-dove (*Streptopelia decaocto*), Anna's hummingbird (*Calypte anna*), killdeer (*Charadrius vociferus*), turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigricans*), common raven (*Corvus corax*), barn swallow (*Hirundo rustica*), European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), house finch (*Haemorhous mexicanus*), and lesser goldfinch (*Spinus psaltria*).

California ground squirrel (*Otospermophilus beecheyi*) was observed during the survey. Other common mammal species that may occur in the study area include Botta's pocket gopher (*Thomomys bottae*), Virginia opossum (*Didelphis virginiana*), common raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and coyote (*Canis latrans*). Bat species that forage and roost in urban areas, such as the big brown bat (*Eptesicus fuscus*), may occur in the study area.

Wildlife Movement

The fragmentation of open space areas by urbanization creates isolated "islands" of wildlife habitat. Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or human disturbance. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, will not likely persist over time in fragmented or isolated habitat areas because barriers to mobility prohibit the infusion of new individuals and genetic information. Corridors mitigate the effects of this fragmentation by (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk that catastrophic events, such as fire or disease, will result in population or local species extinction; and (3) serving as travel routes for individual animals as they move in their home ranges in search of food, water, mates, and other necessary resources.

The study area is located along an existing roadway in an urban setting with scattered undeveloped parcels. Wildlife species occurring in the study area are expected to be relatively tolerant of urban conditions and acclimated to human activity, given the surrounding development. The existing roadway currently acts as a deterrent to wildlife movement. Expansion of the roadway may result in an increase in vehicle strikes of wildlife crossing the road. However, the lined channel and Pyrite Creek would continue to function as movement corridors after construction. Proposed Project activities may temporarily deter wildlife from these areas during active construction.

Existing Core A (i.e., the Santa Ana River), is located between 1,000 and 1,700 feet from the study area. The proposed Project would not directly impact this Core area. Indirect impacts on wildlife movement in this Core (e.g., edge effects) from construction noise are expected to be limited due to the proposed Project's distance from this Core.

SPECIAL STATUS RESOURCES

Special status resources include plant and wildlife species and vegetation types. The CDFW provides a list of vegetation Alliances, Associations, and Special Stands that are considered "Sensitive Natural Communities" based on their rarity and threat (CDFW 2018b). Special status species have generally been afforded this recognition by federal and State resource agencies and by private conservation organizations (e.g., the CNPS). In general, the principal reason an individual taxon (e.g., species, subspecies, or variety) is given such recognition is a documented or perceived decline or limitation of its population size, geographic range, and/or distribution that results, in most cases, from habitat loss.

The Riverside County Board of Supervisors approved the MSHCP in 2003 and received permitting approval from the U.S. Fish and Wildlife Service (USFWS) in June 2004. This plan establishes Criteria Areas (i.e., reserves) to adequately conserve many species listed as Threatened and Endangered by the USFWS and the CDFW. Impacts on Covered Species would be considered fully mitigated with the City's participation in the MSHCP program. With the exception of a few species (e.g., least Bell's vireo [*Vireo bellii pusillus*], which is a Riparian/Riverine species), focused surveys are not required for Covered Species and no additional permitting would be necessary.

Riparian/Riverine Resources

As defined by Section 6.1.2 of the MSHCP, Riparian/Riverine areas are lands that contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or depend upon soil moisture from a nearby fresh water source or areas with fresh water flow during all or a portion of the year (Dudek 2003).

Pyrite Creek contains riparian vegetation, and this area may be considered a Riparian Resource. The proposed Project would impact this creek; therefore, a Determination of Biologically Equivalent or Superior Preservation (DBESP) would be required for these impacts pursuant to the MSHCP. The San Sevaine Flood Control Channel is an artificial structure that is unvegetated. Artificial structures are generally not subject to MSHCP requirements. In addition, the proposed Project is not anticipated to impact this channel. Therefore, a DBESP would not be required for impacts on this channel. The lined basin is also an artificial structure that is unvegetated. Therefore, a DBESP would not be required if this basin would be impacted by the proposed Project.

The on-site vegetation in Pyrite Creek provides marginal habitat for wildlife species associated with riparian/riverine resources (i.e., least Bell's vireo), and it is connected to larger areas of intact habitat in the Santa Ana River. Therefore, pursuant to the MSHCP, focused surveys for least Bell's vireo are recommended in order to determine on-site presence if construction will occur during the vireo breeding season (i.e., between April 10 and July 31). If the species is present, a DBESP specific to the impacted species is required where avoidance of occupied habitat is not feasible.

While southwestern willow flycatcher (*Empidonax traillii extimus*) and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) use habitat similar to that of least Bell's vireo (i.e., riparian habitat along rivers, streams, or other wetlands), these species occur in relatively dense and expansive growths of trees and shrubs (USFWS 2013, 2014). The nearest reported location for these species is 7 miles (from Prado Basin) and 5 miles (downstream in the Santa Ana River), respectively (CDFW 2018a). Given the narrow strip of native willows in Pyrite Creek north of Limonite Avenue and dominance of non-native species south of Limonite Avenue (i.e., the planted ash in the ornamental/mulefat scrub vegetation) that separate the on-site native vegetation from the Santa Ana River habitat, the habitat in the study area is not extensive enough to provide live-in habitat for southwestern willow flycatcher [*Empidonax traillii extimus*] or western yellow-billed cuckoo [*Coccyzus americanus occidentalis*]).

Jurisdictional Waters

Section 404 of the Federal Clean Water Act (CWA) and Section 1602 of the *California Fish and Game Code* regulate activities affecting resources under the jurisdiction of the USACE and the CDFW, respectively. Waters of the United States, under the jurisdiction of the USACE, include navigable coastal and inland waters, lakes, rivers, streams, and their tributaries; interstate waters and their tributaries; wetlands adjacent to such waters; intermittent streams; and other waters that could affect interstate commerce. The CDFW has jurisdictional authority over resources associated with rivers, streams, and lakes. Section 401 of the CWA provides the Regional Water Quality Control Board (RWQCB) with the authority to regulate, through a Water Quality Certification, any proposed federally permitted activity that may affect water quality. The RWQCB also has jurisdiction over isolated wetlands and waters under the Porter-Cologne Water Quality Control Act.

Aerial imagery, the National Wetlands Inventory (NWI) <u>Wetland Mapper</u>, and the USGS quadrangle map identify the following potential jurisdictional waters in the study area: the San Sevaine Flood Control Channel along Bain Street, Pyrite Creek near the center of the study area, a lined basin south of Limonite Avenue near the western end of the study area, and a freshwater pond on an undeveloped parcel north of Limonite Avenue (Exhibit 6).

The San Sevaine Flood Control Channel carries flow through a box culvert under Limonite Avenue and discharges directly into the Santa Ana River, which carries flow to the Pacific Ocean, a Traditional Navigable Water (TNW). The NWI considers this channel to be seasonally flooded (i.e., with surface water present for extended periods early in the growing season but absent by the end of the growing season). Multiple historical aerial images indicate that the flood control channel is a relatively permanent water based on the presence of surface water at various times of the year, including the dry season (e.g., Google Earth images from May and December 2005; January, February, June, and August 2006; June and November 2009). In addition, surface water was observed in the flood control channel during the survey visit, which was conducted during the dry season. Therefore, this channel may be considered waters of the United States under the regulatory authority of the USACE and because it is a non-navigable tributary of a TNW that is relatively permanent. The area was concrete-lined and lacked vegetation, so it would not be considered wetland waters of the United States. USACE and RWQCB jurisdiction would extend to the Ordinary High Water Mark (OHWM) limits, which was evidenced by water staining on the flood control channel. The CDFW jurisdiction extends to the top of the channel bank. The proposed Project is not anticipated to impact this channel.

Pyrite Creek carries flow through two 60-inch CMPs under Limonite Ave and also discharges directly into the Santa Ana River. The vegetation along Pyrite Creek obscures aerial evidence of extended surface flow and water was not observed during the field survey, but the NWI considers it to be seasonally flooded. Therefore, it may be considered waters of the United States under the





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regulatory authority of the USACE as a non-navigable tributary of a TNW that is relatively permanent. If it were not a relatively permanent water, it would still have the capacity to carry nutrients and/or pollutants downstream to the Santa Ana River and would have a significant nexus with a TNW. Pyrite Creek lacked indicators of wetland hydrology, so it would not be considered wetland waters of the United States. USACE and RWQCB jurisdiction would extend to the OHWM limits. Pyrite Creek lacked obvious indicators of OHWM but had a defined bed and bank; therefore, the channel invert was used for the jurisdictional limits of the USACE and RWQCB. The CDFW jurisdiction extends to the outer dripline of riparian vegetation along Pyrite Creek. Impacts on jurisdictional resources would require permitting from the USACE, the RWQCB, and the CDFW. Final determination on jurisdiction would be made by the agencies.

The lined man-made basin is an isolated feature that would not be under the jurisdiction of the USACE because it lacks connectivity or adjacency to a navigable water and would not affect interstate commerce. Based on historical aerial images (i.e., Google Earth), the lined basin was created between 2003 and 2005 in uplands in the JCSD Service Yard, expanded between 2009 and 2011, and lined between 2014 and 2016. Vegetation or sediment was not observed in the basin during the field survey. Since this basin was created entirely within uplands and does not provide wildlife habitat, it would not be considered under the jurisdiction of the RWQCB or the CDFW. Based on current proposed Project design plans, this basin would not be impacted.

The area mapped as freshwater pond by the NWI is also an isolated feature that would not be under the jurisdiction of the USACE. Historic aerial images show surface water in this area over multiple years between 2002 and 2013 when this area was used for horses or cattle. Vegetation grew in this area between 2016 and 2018 when the property appears to have been abandoned. At the time of the field visit, this area was overgrown with upland vegetation (i.e., Russian thistle) and did not show any evidence of recent ponding (e.g., no surface soil cracks, water marks). Therefore, it would not be considered a jurisdictional water under the jurisdiction of the RWQCB or the CDFW.

Vernal Pools

As defined by Section 6.1.2 of the MSHCP, vernal pools are seasonal wetlands that occur in sunken areas that have wetland soils, vegetation, and hydrology during the wetter portion of the growing season but lack hydrology and/or vegetation during the drier portion of the year (Dudek 2003).

As discussed above, the lined, man-made basin in the JCSD Service Yard was created in an upland area before 2005. This basin will be avoided by the proposed Project. The area that was formerly a freshwater pond described above appears to have been used at one time as a stock pond. However, this area currently exhibits no indicators of hydrology and is dominated by upland vegetation. Therefore, it would not be considered a vernal pool.

One fairy shrimp species, Riverside fairy shrimp (*Streptocephalus woottonii*), was reported from the literature review in the proposed Project vicinity (CDFW 2018a). This species occurs in deep, natural and artificial pools (Hathaway and Simovich 1996). Additional species are known to occur in western Riverside County that were not reported from the proposed Project region. Fairy shrimp produce embryonated resting eggs called "cysts" that are persistent in dry conditions and can be dispersed between pools over great distances either in the digestive tract of an animal vector or via mud on the bodies of other animals such as waterfowl or cattle (Eriksen and Belk 1999). The topography of the artificial basin (i.e., a depressional feature) is conducive for holding water; but it is plastic lined, lacks sediment, and would not be ideal habitat for fairy shrimp. However, it will not be impacted by the proposed Project so impacts on fairy shrimp, if present, would be avoided.

The area mapped by the NWI as a freshwater pond has held water in the past and may provide suitable habitat for fairy shrimp. Even as a relict feature, the sediment may contain viable fairy shrimp cysts. Based on current proposed Project design, this former freshwater pond will be impacted by the proposed Project. Therefore, focused surveys for fairy shrimp are required by the MSHCP. If listed fairy shrimp are present, avoidance of the former freshwater pond is recommended. A DBESP specific to the species impacted would be required where avoidance of occupied habitat is not feasible.

Criteria Area, Narrow Endemic, and Other Special Status Plant Species

According to the RCA MSHCP Information Tool, focused plant surveys are required for Narrow Endemic plant species (i.e., San Diego ambrosia, Brand's star phacelia, and San Miguel savory) if suitable habitat is present in the study area. Brand's star phacelia occurs in open areas of coastal sage scrub and coastal dunes (Jepson Flora Project 2017; CNPS 2018). While this species is known to occur in the Santa Ana River upstream of the study area, suitable coastal sage scrub or dune habitat for this species is not present in the study area; therefore, the species is not expected to occur. San Miguel savory occurs on rocky, gabbroic, or metavolcanic slopes in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland (Jepson Flora Project 2017; CNPS 2018). Suitable soils do not occur in the study area, and the nearest known location is approximately 25 miles south (CDFW 2018a). Therefore, this species is not expected to occur.

San Diego ambrosia occurs in sandy loam or clay soils that are sometimes alkaline, often in disturbed sites; it also is known from chaparral, coastal scrub, valley and foothill grassland, and vernal pools (Jepson Flora Project 2017; CNPS 2018). The nearest reported location is approximately 3 miles southeast of the study area (CDFW 2018a). Given that the species occurs in disturbed areas and grassland, the species has potential to occur in the study area. Focused surveys are recommended to determine the presence/absence of this species in the study area. A DBESP specific to the species impacted would be required where avoidance is not feasible.

Based on the literature review, 16 species not covered by the MSHCP have been reported in the vicinity of the study area: chaparral sand-verbena (Abronia villosa var. aurita; occurs in sandv places in coastal sage scrub, chaparral, and desert dunes [Jepson Flora Project 2017; CNPS 2018]), marsh sandwort (Arenaria paludicola; occurs in sandy openings in wet meadows and marshes [Jepson Flora Project 2017; CNPS 2018]), Catalina mariposa lily (Calochortus catalina occurs in heavy soils of open grassland, scrub, chaparral, and cismontane woodland [Jepson Flora Project 2017; CNPS 2018]), Plummer's mariposa lily (Calochortus plummerae: occurs in dry, granitic, rocky soil in valley and foothill grassland, coastal scrub, chaparral, cismontane woodland, and yellow-pine forest [Jepson Flora Project 2017; CNPS 2018]), salt marsh bird'sbeak (Chloropyron maritimum ssp. maritimum; occurs in coastal dunes and coastal salt marsh [Jepson Flora Project 2017; CNPS 2018]), California sawgrass (Cladium californicum; occurs in alkaline marshes, swamps, meadows, and seeps [Jepson Flora Project 2017; CNPS 2018]), paniculate tarplant (Deinandra paniculata; occurs in vernally mesic or sandy soil in grassland, coastal scrub, vernal pools, open chaparral, woodland, and disturbed areas [Jepson Flora Project 2017; CNPS 2018]), mesa horkelia (Horkelia cuneata var. puberula; occurs in dry, sandy or gravelly coastal chaparral, coastal scrub, and cismontane woodland [Jepson Flora Project 2017; CNPS 2018]), Robinson's peppergrass (Lepidium virginicum var. robinsonii; occurs in coastal scrub and chaparral [CNPS 2018]), Parish's desert-thorn (Lycium parishii; occurs in sandy to rocky slopes and canyons in coastal scrub and Sonoran desert scrub [Jepson Flora Project 2017; CNPS 2018]), Pringle's monardella (Monardella pringlei; occurs in interior sand dunes and sandy soil in coastal scrub [Jepson Flora Project 2017; CNPS 2018]), Parish's bush-mallow (Malacothamnus parishii; occurs in coastal scrub and chaparral [CNPS 2018]), white rabbittobacco (Pseudognaphalium leucocephalum; occurs in sandy or gravelly benches and dry stream

bottoms and canyon bottoms in chaparral, cismontane woodland, coastal scrub, and riparian woodland [Jepson Flora Project 2017; CNPS 2018]), chaparral ragwort (*Senecio aphanactis*; occurs in alkaline flats and dry, open, rocky areas in chaparral, cismontane woodland, and coastal scrub [Jepson Flora Project 2017; CNPS 2018]), prairie wedge grass (*Sphenopholis obtusata*; occurs in wet meadows, streambanks, ponds, and cismontane woodland [Jepson Flora Project 2017; CNPS 2018]), and San Bernardino aster (*Symphyotrichum defoliatum*; occurs near ditches, streams, and springs in disturbed places, grassland, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, marshes and swamps [Jepson Flora Project 2017; CNPS 2018]).

Marginally suitable habitat (i.e., open grassland) for Catalina mariposa lily occurs in the study area. However, on-site soils consist of sandy loams and loamy sands instead of heavy soils; and the study area is at the edge of the known range of the species (CCH 2018). Therefore, Catalina mariposa lily is not expected to occur in the study area.

Potentially suitable habitat (i.e., disturbed areas and grassland) for paniculate tarplant occurs in the study area, and the species has been reported approximately 1 mile south of the study area (CCH 2018). Therefore, paniculate tarplant has potential to occur in the study area. While impacts on this species are not covered by the MSHCP, it has a California Rare Plant Rank (CRPR) of 4.2, indicating that it is of limited distribution, but on a "watch list". Therefore, it is not generally considered a constraint on development.

Marginally suitable habitat for white rabbit-tobacco (i.e., dry stream bottoms and riparian woodland), prairie wedge grass (i.e., streambanks), and San Bernardino aster (i.e., ditches/streams in disturbed places and grassland) occurs in Pyrite Creek in the study area. Therefore, these species have limited potential to occur in the study area. Impacts on these species, if present, are potentially a constraint on development, depending on the size of the impacted population. Focused surveys are recommended to determine the presence/absence of these species in the study area.

Suitable habitat for the remaining species not covered by the MSHCP is not present in the study area. Therefore, they are not expected to occur.

Special Status Wildlife Species

Burrowing Owl

According to the RCA MSHCP Information Tool, a habitat assessment is required for burrowing owl. Suitable foraging habitat for burrowing owl is present in the undeveloped parcels in the study area. Potentially suitable burrows (i.e., California ground squirrel burrows) are present on a bare slope near the San Sevaine Flood Control Channel, and California ground squirrel was observed (aurally) during the survey. Therefore, pursuant to Section 6.3.2 of the MSHCP, focused surveys are required to determine the presence/absence of this species in the study area. A DBESP specific to the species impacted would be required where avoidance of occupied habitat is not feasible.

Per the MSHCP species-specific Objective 6, a pre-construction survey is also required prior to any ground disturbance for development on a project site. As stated in the County of Riverside's Burrowing Owl Survey Instructions, "all project sites containing burrows or suitable habitat... require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls" (Riverside 2006). Pre-construction surveys can be conducted at any time of year.

Stephens' Kangaroo Rat

In response to the federal listing of Stephens' kangaroo rat (*Dipodomys stephensi*), the Riverside County Habitat Conservation Agency (RCHCA) was formed. Its purpose is to acquire and manage habitat for the Stephens' kangaroo rat and other associated special status species. The RCHCA Stephens' Kangaroo Rat Habitat Conservation Plan (HCP) was developed to meet the requirements of the program's Federal Endangered Species Act Section 10(a) permit. The HCP for this species is managed by the RCHCA. The HCP establishes a Reserve System where activities in the core reserve areas are limited and/or restricted. Areas outside the Reserve System are within a designated Fee Area.

The study area is located within a designated Fee Area. For projects within a Fee Area, focused surveys for the Stephens' kangaroo rat are not required, and all potential impacts are mitigated through the RCHCA.

Other Special Status Wildlife Species

Based on the literature review, several species not covered by the MSHCP have been reported in the vicinity of the study area. Of these, one is a State-listed Threatened species: California black rail (*Laterallus jamaicensis coturniculus*; occurs in freshwater marshes, wet meadows, and shallow margins of saltwater marshes with water present during the year and dense vegetation for nesting [CDFW 2018a]). Suitable habitat for this species is not present in the study area; therefore, the species is not expected to occur.

In addition, seven species reported in the literature review are California Species of Special Concern: Santa Ana speckled dace (*Rhinichthys osculus* ssp. 3; occurs in permanently flowing streams with shallow cobble and gravel riffles [CDFW 2018a]), southern California legless lizard (Anniella stebbinsi; occurs in sandy or loose loamy soils under sparse vegetation in a variety of generally moist habitats such as broadleaved upland forest, chaparral, coastal dunes, and coastal scrub [CDFW 2018a]), California glossy snake (Arizona elegans occidentalis; occurs in a range of scrub and grassland habitats, often with loose or sandy soils [CDFW 2018a]), yellow rail (Coturnicops noveboracensis; occurs in freshwater marshes and meadows and seeps [CDFW 2018a]), western mastiff bat (Eumops perotis californicus; occurs in open, semi-arid to arid habitats including conifer and deciduous woodlands, coastal scrub, grasslands, and chaparral and roosts in crevices in cliff faces, high buildings, trees, and tunnels [CDFW 2018a]), western vellow bat (Lasiurus xanthinus; occurs in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats; roosts in trees; and forages over water and among trees [CDFW 2018a]), and pocketed free-tailed bat (Nyctinomops femorosaccus; occurs in a variety of arid areas with rocky high cliffs such as pine-juniper woodlands, desert scrub, palm oases, desert wash, and desert riparian [CDFW 2018a]).

Suitable habitat for yellow rail is not present in the study area; therefore, this species is not expected to occur.

At the time of the survey, suitable habitat (i.e., flowing water) for Santa Ana speckled dace was not present in the study area. The species has been reported less than 2 miles from the study area (CDFW 2018a) and may occur in Pyrite Creek during periods of flow. Therefore; this species has limited potential to occur in the study area. Impacts on this species, if present, are expected to be limited and not reduce regional populations below self-sustaining levels. It is recommended that construction at Pyrite Creek occur during the dry season when there is no flow in the channel to avoid impacts on this species.

Suitable habitat for southern California legless lizard occurs in the study area; therefore, this species has potential to occur in the study area. Impacts on this species, if present, are expected

to be limited and not reduce regional populations below self-sustaining levels. Therefore, impacts on southern California legless lizard are not expected to represent a constraint on development.

Suitable habitat for California glossy snake occurs in the study area; however, all reported occurrences within 20 miles are historic (records from the 1930s and 1940s [CDFW 2018a]). Therefore, this species has low potential to occur in the study area, and impacts are not expected to represent a constraint on development.

Suitable foraging habitat for western mastiff bat, western yellow bat, and pocketed free-tailed bat occurs in the study area; therefore, these species have potential to forage in the study area. Impacts on foraging habitat are expected to be limited and of short duration and so would not reduce regional populations below self-sustaining levels. Western yellow bat has potential to roost in trees in the study area, and western mastiff bat may roost in buildings tall enough to allow exit (i.e., approximately 15-foot vertical drop). However, alternative individual roosting sites nearby would support these individuals. The study area provides limited, marginal habitat to support a maternal roost, and the proposed Project is not expected to impact a maternal roost.

OTHER ISSUES

Urban/Wildlands Interface Issues

Indirect impacts, often called "edge effects," are those that affect the quality of nearby wildlife habitat resulting from disturbance by construction (such as noise, dust, and urban pollutants) and/or the long-term use of the site. Development in proximity to an MSHCP Conservation Area may result in edge effects that adversely affect biological resources within the MSHCP Conservation Area.

The proposed Project is over 1,000 feet from Existing Core A, but the western end of the study area is adjacent to Public/Quasi-Public Lands. Construction activities have the potential to generate edge effects that may impact Public/Quasi-Public Lands, as discussed below. The Urban/Wildlands Interface Guidelines in Section 6.1.4 of the MSHCP are recommended to avoid these edge effects.

Drainage

Proposed developments in proximity to the MSHCP Conservation Area shall incorporate measures, including measures required through the National Pollutant Discharge Elimination System (NPDES) requirements, to ensure that the quantity and quality of runoff discharged to the MSHCP Conservation Area is not altered in an adverse way when compared with existing conditions. In particular, measures shall be put in place to avoid discharge of untreated surface runoff from developed and paved areas into the MSHCP Conservation Area. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials, or other elements that might degrade or harm biological resources or ecosystem processes within the MSHCP Conservation Area.

Storm water runoff from construction and operation of the proposed Project has the potential to adversely affect water quality of the on-site drainages and the downstream Santa Ana River. Measures to protect water quality are included below to minimize adverse effects on water quality.

Toxics

Land uses proposed in proximity to the MSHCP Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife species, habitat or water quality shall incorporate measures to ensure that application of such

chemicals does not result in discharge to the MSHCP Conservation Area. Measures such as those employed to address drainage issues shall be implemented.

Petroleum products will be present on the proposed Project site during construction and operation and could adversely affect the adjacent habitat. Measures are included to minimize the effects runoff of toxics into adjacent habitat areas.

Lighting

Night lighting shall be directed away from the MSHCP Conservation Area to protect species within the MSHCP Conservation Area from direct night lighting. Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased.

While the proposed Project may include new or replacement lighting, light levels are not expected to increase substantially over existing conditions. Therefore, no measures would be required.

Noise

Proposed noise-generating land uses affecting the MSHCP Conservation Area shall incorporate setbacks, berms, or walls to minimize the effects of noise on MSHCP Conservation Area resources pursuant to applicable rules, regulations, and guidelines related to land use noise standards. For planning purposes, wildlife within the MSHCP Conservation Area should not be subject to noise that would exceed residential noise standards.

While the proposed Project would create an incremental increase, noise levels are not expected to increase substantially over existing conditions considering the ambient noise from the existing development and roads adjacent to the proposed Project site. Therefore, no measures would be required.

Invasives

When approving landscape plans for Development that is proposed adjacent to the MSHCP Conservation Area, Permittees shall consider the invasive, non-native plant species (see MSHCP Table 6-2) and shall require revisions to landscape plans (subject to the limitations of their jurisdiction) to avoid the use of invasive species for the portions of development that are adjacent to the MSHCP Conservation Area. Considerations in reviewing the applicability of this list shall include proximity of planting areas to the MSHCP Conservation Areas, species considered in the planting plans, resources being protected within the MSHCP Conservation Area and their relative sensitivity to invasion, and barriers to plant and seed dispersal, such as walls, topography, and other features.

Ornamental landscaping, if included as part of the proposed Project, may introduce new invasive species to the surrounding open space. Invasive species have the potential to spread into the surrounding natural open space and displace native species, hybridize with native species (thereby impacting the genetic integrity of the native species), alter biological communities, or alter ecosystem processes. This could degrade the quality of the adjacent vegetation, including vegetation communities that provide suitable habitat for Threatened or Endangered species. Measures are included for the landscaping plan to be reviewed to avoid this potential impact.

Barriers

Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate, in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in the MSHCP Conservation Area. Such barriers may

include native landscaping, rocks/boulders, fencing, walls, signage and/or other appropriate mechanisms.

Given the nature of the proposed Project, i.e., the widening of an existing road, an increase in human activity and unauthorized access to adjacent open space areas is not expected to increase above existing conditions.

Nesting Raptors

Trees in the immediate vicinity have potential to be used for nesting by raptors such as the American kestrel (*Falco sparverius*). Regulations prohibit activities that "take, possess or destroy" any raptor nest or egg (*California Fish and Game Code* §§ 3503, 3503.5, and 3513). Additionally, the noise and disturbance associated with construction may disturb a nesting raptor if present immediately adjacent to the proposed Project impact area. If construction would be initiated during the raptor nesting season (generally between February 1 and June 30), a pre-construction survey would be required to ensure that no raptor nests are impacted. If an active nest is present, construction may be temporarily restricted in the immediate vicinity of the nest until raptor nesting is complete.

Migratory Bird Treaty Act

The study area has potential to be used by nesting birds, which are protected by the Migratory Bird Treaty Act (MBTA). Birds have potential to nest in any of the study area's vegetation, bare ground, and also on adjacent structures. The MBTA prohibits activities that result in the direct take (defined as the killing or possession) of a migratory bird. If construction would be initiated during the peak bird nesting season (March 1 to June 30, as defined by Section 7.5.3 of the MSHCP), a pre-construction survey would be required to ensure that no nests are impacted. If an active nest is present, construction may be restricted in the immediate vicinity of the nest.

MSHCP CONSISTENCY

The proposed Project would not impact Existing Core A, which is located between 1,000 and 1,700 feet from the study area, or vernal pools. Therefore, the proposed Project is consistent with the MSHCP provisions associated with these resources.

Based on current proposed Project design, the proposed Project may impact Riparian/Riverine Resources or associated species (per Section 6.1.2; i.e., least Bell's vireo), fairy shrimp (per Section 6.1.2), Narrow Endemic plant species (per Section 6.1.3), "Additional Survey Needs" species (per Section 6.3.2; i.e., burrowing owl), or the urban/wildland interface adjacent to Public/Quasi-public land (per Section 6.1.4). The proposed Project would be consistent with the MSHCP if these resources are avoided. If these resources are not avoided, then a DBESP will be required for consistency with the MSHCP. Indirect impacts on Public/Quasi-public lands will be avoided/minimized by implementing the Urban/Wildlands Interface Guidelines in Section 6.1.4 of the MSHCP.

RECOMMENDATIONS

The following is a list of recommendations to ensure that the proposed Project is consistent with the MSHCP and other regulations protecting biological resources.

1. Impacts on Riparian/Riverine Resources should be avoided, if feasible. Under current proposed Project design, portions of Pyrite Creek will be impacted. Therefore, a DBESP will be required.

- 2. Under current proposed Project design, suitable habitat for least Bell's vireo (i.e., vegetation in Pyrite Creek) will be impacted. Construction should occur between August 1 and April 9, which is outside the least Bell's vireo breeding season, if feasible. Pursuant to MSHCP guidelines, focused surveys for this species are required if construction will occur during the breeding season (i.e., between April 10 and July 31). If focused surveys determine that the site is occupied, then a DBESP will be required.
- 3. Impacts jurisdictional water resources should be avoided. if feasible. on Permits/certifications/agreements from the USACE, the RWQCB, and the CDFW are required for impacts to waters under the regulatory authority of those agencies. A pre-application meeting with these agencies is recommended prior to submittal of permit applications to discuss existing conditions; confirm the agencies' jurisdiction over water resources in the study area; discuss impacts to these resources that would result from the project; discuss proposed avoidance, minimization, and mitigation measures to offset these impacts; and to discuss the regulatory permitting process. Following the pre-application meeting, the City of Jurupa Valley would prepare and process the appropriate permits. Additional mitigation measures may be required by the resource agencies regarding impacts to areas under their respective jurisdictions.
- 4. Impacts on the former freshwater pond should be avoided, if feasible. If avoidance of the pond is not feasible, then focused surveys for fairy shrimp are recommended prior to construction. The current USFWS survey protocol and MSHCP take agreement require both dry and wet season surveys be conducted by a permitted Biologist. Dry season surveys can be conducted any time of year when the substrate is dry. Wet season surveys are initiated following inundation (i.e., 3 centimeters of standing water 24 hours after a rain event) and are conducted weekly over a 120-day period (and reinitiated if the pond dries and refills during the same wet season). If fairy shrimp are observed in the study area and their habitat cannot be avoided, then a DBESP will be required.
- 5. Prior to initiation of construction activities, focused surveys for Narrow Endemic plants (i.e., San Diego ambrosia) and sensitive plant species not covered by the MSHCP with potential to occur in the study area are recommended. The surveys should be conducted by a qualified Biologist during the appropriate blooming period for all species with potential to occur in the study area. This generally requires multiple surveys between March and July. If a Narrow Endemic plant species is detected, a DBESP will be required if impacts cannot be avoided. If a plant species not covered by the MSHCP is detected, then additional avoidance, minimization, or mitigation measures may be required, depending on the species' status and size of the impacted population.
- 6. Pursuant to Section 6.3.2 of the MSHCP, focused surveys are required for burrowing owl in areas designated as requiring surveys, including a 500-foot buffer. Surveys should follow the *Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan Area* (Riverside 2006). This includes a habitat assessment (completed as part of this current survey effort), focused burrow surveys, and focused burrowing owl surveys. The buffer would be surveyed remotely via binoculars to avoid trespassing.
- 7. A pre-construction burrowing owl survey by a qualified Biologist is recommended within 30 days prior to ground disturbance. If burrowing owl is observed and avoidance is not possible, then the RCA and Wildlife Agencies should be notified immediately and a Burrowing Owl Protection and Relocation Plan would be required.
- 8. Since the study area is located within a designated Stephen's kangaroo rat Fee Area, payment to the RCHCA is required.
- 9. It is recommended that construction at Pyrite Creek occur during the dry season when there is no flow in the channel to avoid impacts on Santa Ana speckled dace.

- 10. The proposed Project should be designed using guidelines in Section 6.1.4 of the MSHCP to minimize indirect impacts on adjacent Public/Quasi-public lands. This includes measures regarding drainages, toxics, lighting, noise, invasive species, barriers, and grading/land development. The following measures will be incorporated to minimize adverse effect on water quality:
 - a. Drainage/Toxics: A Storm Water Pollution Prevention Plan should be prepared and followed. Standard construction Best Management Practices should be implemented to prevent sediment and petroleum products from entering drainages.
 - b. Invasives: If landscaping is included as part of the proposed Project, the landscaping plan will be reviewed by a qualified Biologist to ensure that invasive species are not included in the plant palette. If possible, the Landscape Plan should use low water-using plants to be consistent with Assembly Bill 1881. Wattles used for erosion control will be certified as weed-free.
- 11. Construction should be planned to occur outside the peak nesting season for raptors (February 1 to June 30) and the peak nesting season for birds (March 1 to June 30). If construction would occur between February 1 and June 30, a pre-construction survey for active raptor/bird nests would be required. Restrictions may be placed on construction activities in the vicinity of any active nest until the nest is no longer active, as determined by a qualified Biologist.

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