

**Western Riverside County - MSHCP DBESP**  
**Temescal Valley Commerce Center Project Site**  
Unincorporated Riverside County, California

**FINAL REPORT**



**HANS 190024, APN 283-160-043, GEO 00200040, CUP 20044**

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**October 2021**

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## TABLE OF CONTENTS

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	<b>PAGE</b>
1. EXECUTIVE SUMMARY	1
2. INTRODUCTION	2
2.1 Project Area	2
2.2 Project Description	6
2.3 Existing Conditions	7
3. RIPARIAN, RIVERINE, VERNAL POOL MITIGATION (SECTION 6.1.2)	14
3.1 Methods	14
3.2 Results/Impacts	15
3.3 Mitigation and Equivalency	23
3.3.1 Direct Effects	28
3.3.2 Indirect Effects	30
4. NARROW ENDEMIC PLANT SPECIES MITIGATION (SECTION 6.1.3)	32
4.1 Methods	33
4.2 Results/Impacts	34
4.3 Mitigation and Equivalency	38
4.3.1 Direct Effects	39
4.3.2 Indirect Effects	39
5. CRITERIA AREA SPECIES MITIGATION (SECTION 6.3.2)	39
5.1 Criteria Area Species Survey Area – Plants	39
5.1.1 Methods	40
5.1.2 Results/Impacts	40
5.1.3 Mitigation and Equivalency	42
5.2 Criteria Area Species Survey Area – Burrowing Owl	42
5.2.1 Methods	43
5.2.2 Results/Impacts	45
5.2.3 Mitigation and Equivalency	45
5.3 Criteria Area Species Survey Area – Mammals	45
5.3.1 Methods	46
5.3.2 Results/Impacts	46
5.3.3 Mitigation and Equivalency	46
5.4 Criteria Area Species Survey Area – Amphibians	46
5.4.1 Methods	46
5.4.2 Results/Impacts	46
6. REFERENCES	46

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**LIST OF FIGURES**

---

	<b>PAGE</b>
1 – Regional Location Map	3
2 – Project Site Map	4
3 – MSHCP Criteria Area and Relationship Map	5
4 – Vegetation Communities Map	8
5 – Current Project Site Photographs	9
6 – Current Project Site Photographs	10
7 – Current Project Site Photographs	11
8 – Current Project Site Photographs	12
9 – Soils Association Map	16
10 – MSHCP Section 6.1.2 Riparian/Riverine Map	17
11 – MSHCP Section 6.1.2 Riparian/Riverine Impact Map	22
12 – Proposed Restoration Map	29

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**LIST OF TABLES**

---

	<b>PAGE</b>
1 – Vegetation Communities Acreage	7
2 – MSHCP Section 6.1.2 Riparian/Riverine Resources	18
3 – MSHCP Section 6.1.2 Riparian/Riverine Resources Impacts	23
4 – Potential MSHCP Narrow Endemic Plant Assessment	37
5 – Potential MSHCP Criteria Area Plant Assessment	41

## 1. EXECUTIVE SUMMARY

The proposed Temescal Valley Commerce Center project will require that the reach of Coldwater Canyon located adjacent to Temescal and Dawson Canyon Roads be redirected to its historic alignment in the eastern region of the Project Site. Coldwater Canyon possessed both Western Riverside County Multiple Species Habitat Conservation Plan “MSHCP” Section 6.1.2 Riverine and Riparian resources. A 180-foot wide, 5.70-acre drainage easement will be granted to the County of Riverside within the eastern region of the Project Site within the new Channel Alignment.

Permanent impacts to 2.93-acre (0.25-acre riparian, 2.68-acre riverine), and temporary impacts to 0.23-acre (0.08-acre riverine, 0.15-acre riparian) of MSHCP Section 6.1.2 Riparian/Riverine resources (3.16-acres total) will occur as a result of project implementation. The Project would also require that the reach of Coldwater Canyon located adjacent to Temescal and Dawson Canyon Roads be redirected to its historic alignment in the eastern region of the Project Site. A 180-foot wide, 5.70-acre drainage easement will be granted to the County of Riverside. As a result of the realignment, 0.31-acre of indirect offsite impacts will occur to the downstream reach of Coldwater Canyon Creek due to reduction in stream discharge. To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset permanent and temporary impacts to 3.16-acre and indirect impacts to 0.31-acre of MSHCP Section 6.1.2 Riparian and Riverine resources as follows:

1. Mitigation for permanent impacts to 2.93-acres of riverine habitat within Coldwater Canyon Creek and Temescal Wash would include 2.93-acres of reestablishment and 2.93-acres of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 5.86-acres.
2. Mitigation for temporary impacts to 0.23-acre of riverine habitat within Temescal Wash would be mitigated with 0.23-acre of reestablishment and 0.23 acre of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 0.46-acre.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset indirect impacts to 0.31-acre of Coldwater Canyon as follows:

3. Indirect impacts to the offsite, downstream Coldwater Canyon Creek, due to reduction in stream discharge associated with realignment of Coldwater Canyon Creek accounting for 0.31-acre will be mitigated through 0.31-acre of reestablishment and 0.31-acre of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 0.62-acre.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset 0.27-acre of 3.16-acres of MSHCP Section 6.1.2 riparian and riverine resources impacts to least Bell's vireo habitat as follows:

4. Permanent and temporary impacts to 0.27-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Temescal Wash will be subject to additional mitigation through reestablishment of 0.34-acre of black willow,

0.14-acre cottonwood and 0.06-acre of mule fat scrub (0.54-acre total) resulting in a 2:1 replacement of Section 6.1.2 Riparian habitat within Temescal Wash.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset 0.13-acre of impacts to MSHCP Section 6.1.2 Riversidean alluvial fan sage scrub as follows:

5. Offsite permanent (0.05-acre) and temporary (0.08-acre) impacts to Riversidean alluvial fan sage scrub (0.13-acre total) within Temescal Wash as a result of the proposed realignment of Coldwater Canyon will be mitigated at a ratio of 3:1 (0.39-acre) through the reestablishment of Riversidean alluvial fan sage scrub in the temporary offsite impact area as well as disturbed habitats within Temescal Wash.

## 2. INTRODUCTION

This document presents the results of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis conducted by Cadre Environmental for the Temescal Valley Commerce Center Project Site as required under Section 6.1.2, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, of the Western Riverside County MSHCP (MSHCP 2004).

### 2.1 Project Area

The 46.18-acre (14.12-acre offsite) Project Site (60.30-acres total), is located within Assessor's Parcel Number (APN) 283-160-043. Offsite impact areas associated with realigning Coldwater Canyon and road improvements to Temescal and Dawson Canyon Roads are located partially within existing Right-of-Ways (ROWs) and APNs 283-160-009, -030, -035, 283-170-012, -013, -015, -21, 283-190-013, -024, 283-200-008, and -009. The Project Site is located within United States Geological Survey (USGS) 7.5' Series Lake Mathews Quadrangle, Riverside County, Township 3 South, Range 6 West, Section 34. Specifically, the Project Site is located south and southeast of Dawson Canyon Road (Temescal Wash) and east of Temescal Canyon Road (Coldwater Canyon) as shown in Figure 1, *Regional Location Map*, and Figure 2, *Project Site Map*.

The Project Site is located within the MSHCP Temescal Canyon Plan Area, Subunit 3 – Temescal Wash West and Proposed Extension of Existing Core 2. The Project Site is also located partially within MSHCP Criteria Areas 3035 and 3036, Cell Group F, as shown in Figure 3, *MSHCP Criteria Area and Relationship Map*. All 1.35 acres of the Project Site located within Temescal Wash will be dedicated as conservation land as detailed in HANS 190024 (Riverside County EPD 2020).

The County of Riverside will condition the project to convey the proposed conservation area to the RCA prior to any project ground disturbance.



Project Site APN: 283-160-043

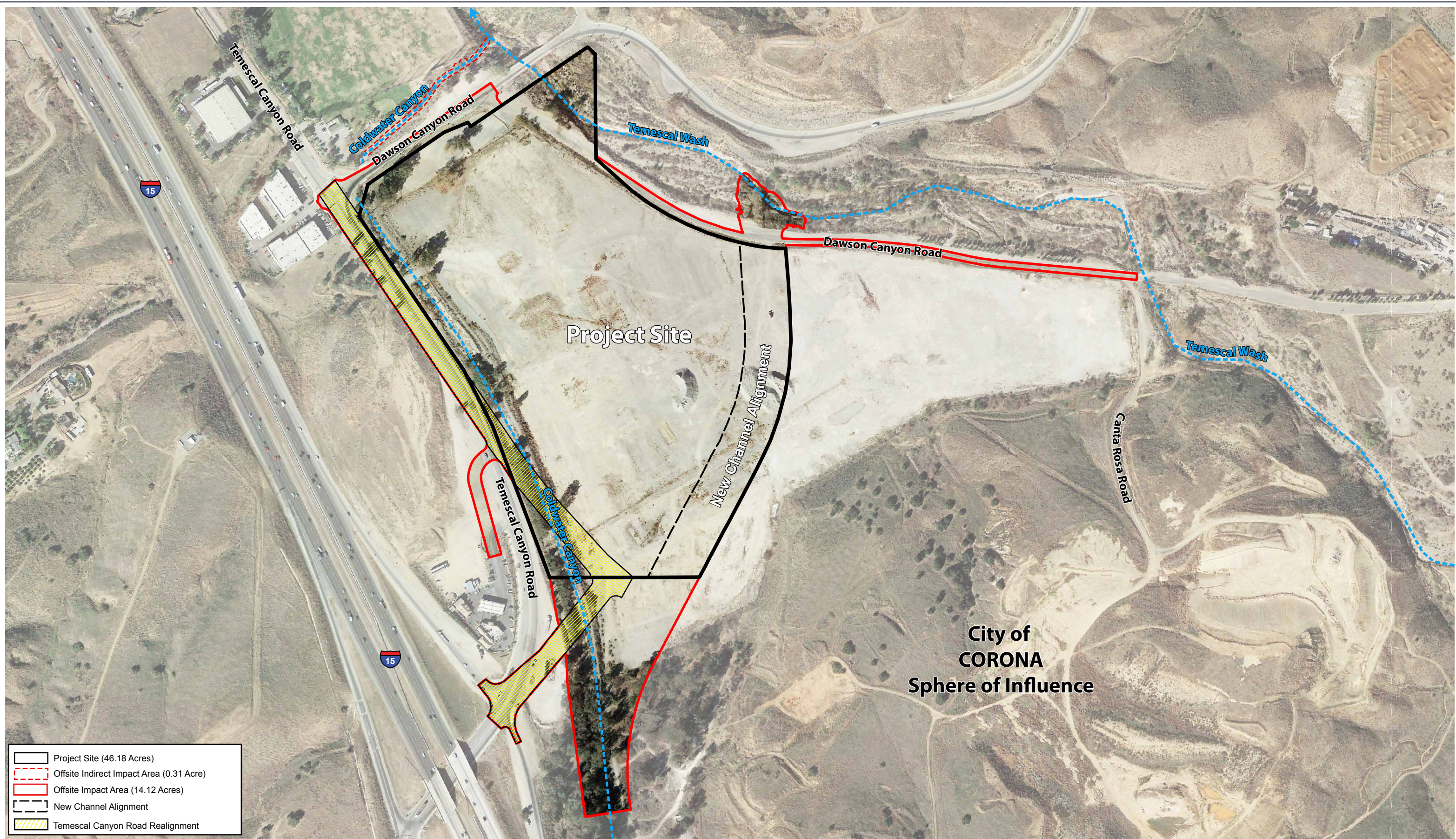
Offsite Impact Area APNs: Portions of 283-160-009, -030, -035, 283-170-012, -013, -015, -21, 283-190-013, -024, 283-200-008, and -009

### Figure 1 - Regional Location Map

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Project Site*



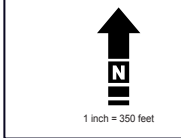
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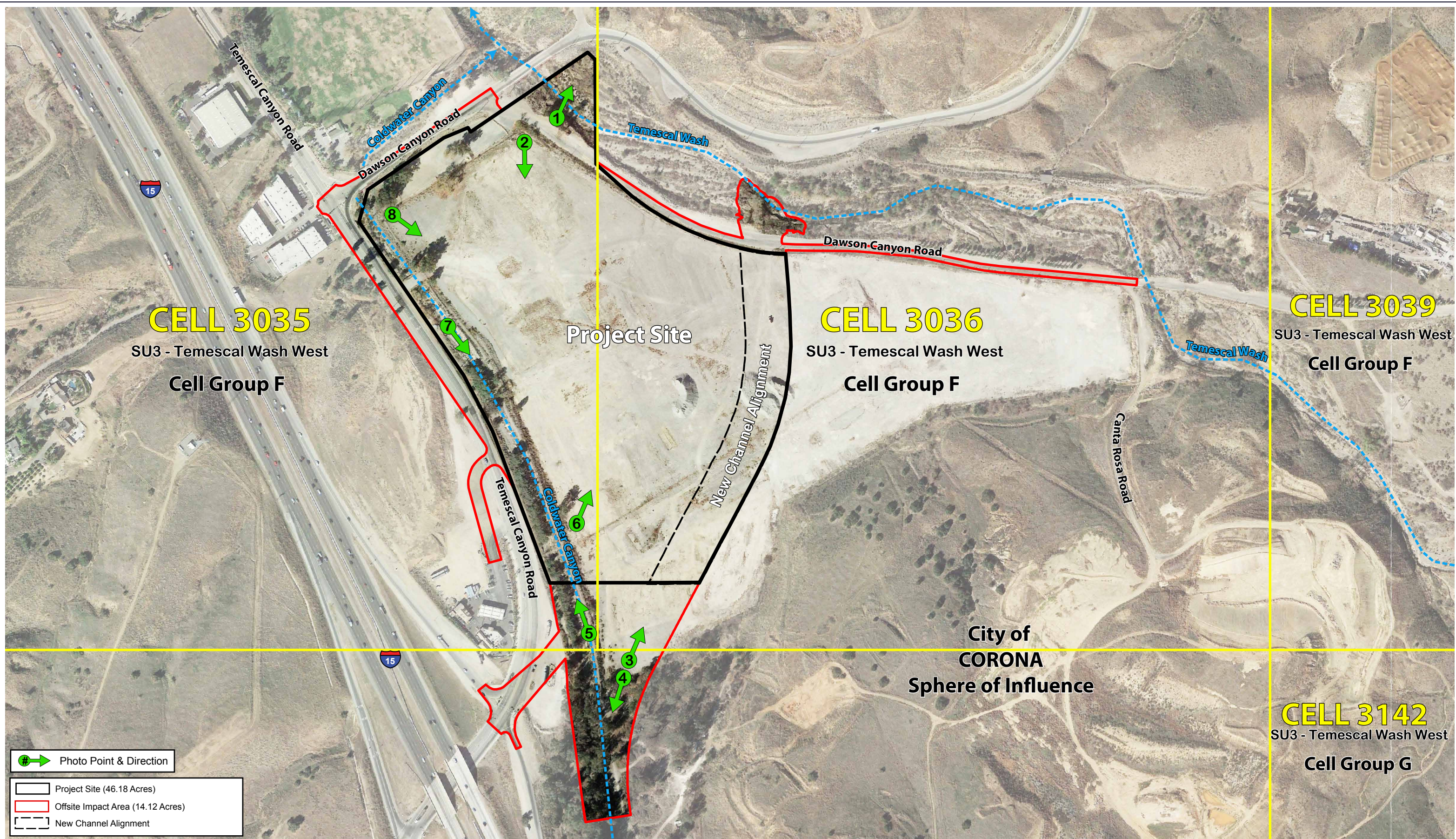


Project Site APN: 283-160-043. Offsite Impact Area APNs: Portions of 283-160-009, -030, -035, 283-170-012, -013, -015, -21, 283-190-013, -024, 283-200-008, and -009

**Figure 2 - Project Site Map**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Project Site*

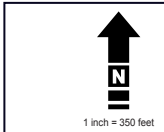




Project Site APN: 283-160-043. Offsite Impact Area APNs: Portions of 283-160-009, -030, -035, 283-170-012, -013, -015, -21, 283-190-013, -024, 283-200-008, and -009

**Figure 3 - MSHCP Criteria Area and Photographic Key Map**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site*





## 2.2 Project Description

The Temescal Valley Commerce Center Project would construct and operate one (1) last mile delivery station warehouse building that would total approximately 183,456 square feet (s.f.) and include associated improvements (e.g., parking areas, landscaping, walls/fences, utility infrastructure). As previously stated, the Project would require that the reach of Coldwater Canyon located adjacent to Temescal and Dawson Canyon Roads be redirected to its historic alignment in the eastern region of the Project Site. A 180-foot wide, 5.70-acre drainage easement will be granted to the County of Riverside. The proposed channel will be natural-bottom and outfall to Temescal Wash. The Riverside County Flood Control and Water Conservation District will maintain the channel and therefore, no habitat restoration activities are proposed. The proposed confluence with Temescal Wash is currently a relatively undisturbed channel that will exhibit limited impacts associated with installation of an outfall for the relocated Coldwater Creek Channel. The area where Coldwater Creek will discharge to the site includes a well-defined low-flow channel and a terrace which is well above the low-flow channel, with a steep slope to the top of the Temescal Wash Bank. The low-flow channel is unvegetated with an algal mat and areas with adjacent mulefat scrub and Goodding's black willow forest. Terraces above the low flow channel support areas of sparse alluvial scrub. As stated by Glenn Lukos Associates:

*“The proposed Temescal Business Park proposes to realign Coldwater Canyon Creek to its approximate historic location. The realignment would result in shifting the confluence approximately 1,000 feet upstream from the current discharge location. The realignment will result in potential impacts to riparian habitat within the 1,000-foot segment of Temescal Wash due to increased flows, and potential impacts to Coldwater Canyon Creek downstream of the site due to reduction of flows where an approximately 650-foot segment of Coldwater Canyon Creek, accounting for approximately 0.31 acre would exhibit reduced flows.*

*With the proposed realignment of Coldwater Canyon Creek, the total flow rate within Temescal Wash would be increased for the 1,000-foot reach between the proposed confluence and the existing confluence. This increase in flow also would result in an increase to water surface elevations and velocities. The increase in water surface elevations would range from 0.4 feet to 0.9 feet between the existing confluence location and the existing Dawson Canyon Road Bridge, 0.9 feet to 1.2 feet upstream of the bridge to the proposed confluence location, and transitioning from 0.5-foot increase to 0.0-foot increase upstream of the proposed confluence (with no measurable increase approximately 0.4 mile upstream of the proposed confluence). The increase in velocity would be approximately 0.5 feet per second (fps) in the reach from the existing confluence location to the proposed confluence location.*

*The area associated with the outfall that would discharge to Temescal Wash from the realigned Coldwater Canyon Creek supports riparian habitat, which extends immediately downstream consisting of black willow forest, mulefat scrub and alluvial scrub [see the attached Exhibit 5 from the application submitted to California Department of Fish and Wildlife]. Below this area, there are no areas consisting of riparian alliances with a mix of coastal sage scrub species, limited*

amounts of scalebroom and mulefat. Furthermore, the low-flow channel does not support vegetation. The species adjacent to the low-flow channel are commonly found in alluvial scrub that is highly adapted to high energy flows and the increase in velocities by 0.5 feet per second and depths ranging from 0.4 to 0.9 feet would not result in significant impacts to the vegetation. Coldwater Canyon Creek was realigned in the late 1960's or early 1970's with the construction of the concrete pipe manufacturing facility that previously occupied the Project site. The path of the creek was shifted from the approximate center of the site to the western edge of the site parallel to Temescal Canyon Road and much of the drainage adjacent to the site has been channelized through the installation of rip rap to maintain the drainage in its current channel." (Glenn Lukos Associates 2021b)

No fuel modification zones or weed abatement measures are required and therefore would not result in direct impacts to the proposed MSHCP Conservation Areas.

### 2.3 Existing Conditions

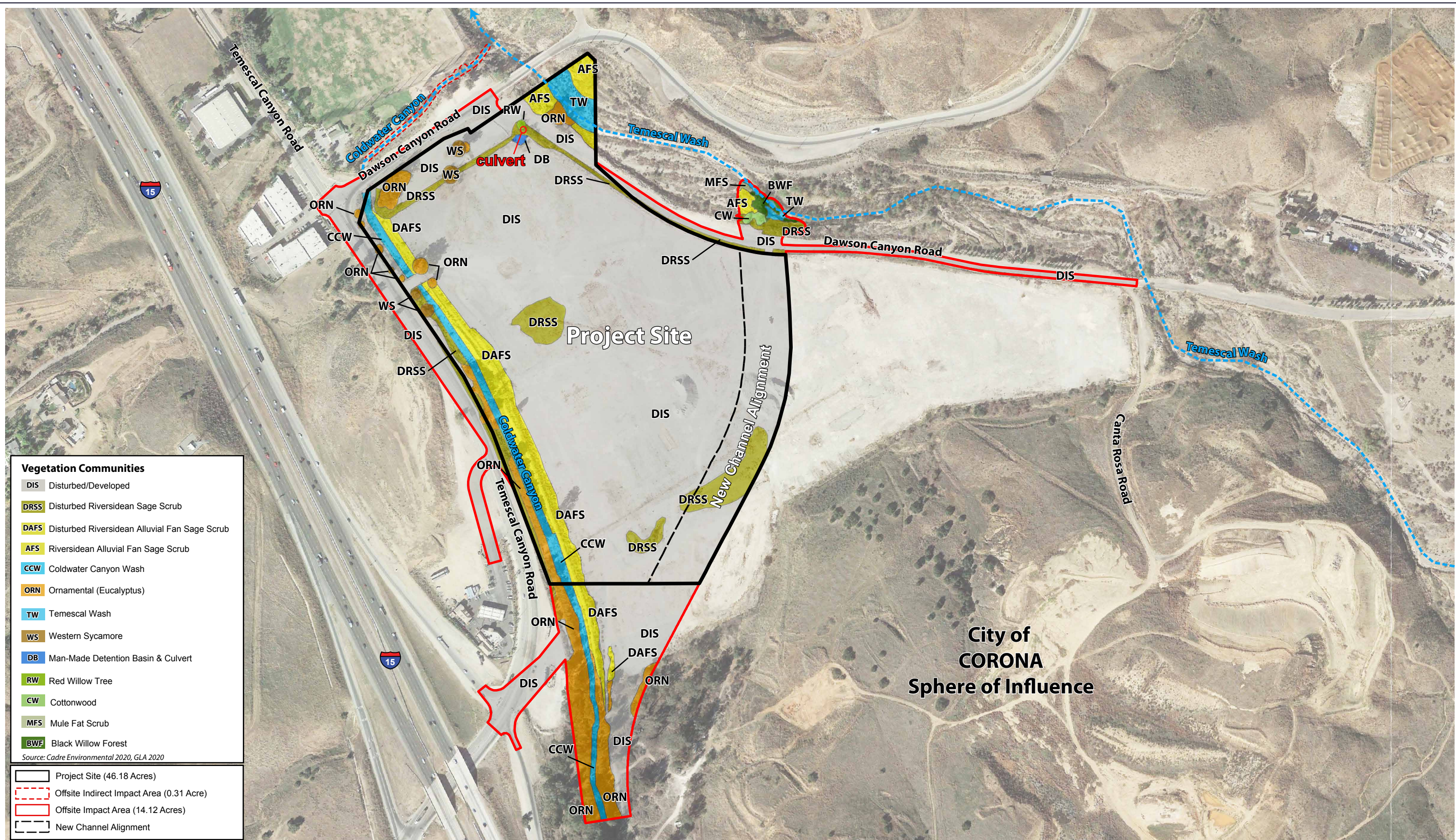
This document presents the results of a habitat assessment conducted on May 21<sup>st</sup>, 2019 and September 14<sup>th</sup>, 2020 by Cadre Environmental, formal jurisdictional delineation conducted by Glenn Lukos Associates in October/November 2020 and habitat assessment/focused surveys for sensitive plants conducted by Glenn Lukos Associates in 2019 and 2020 (Cadre Environmental 2020a, Glenn Lukos Associates 2020a, 2021a).

The majority of the Project Site is flat and disturbed as a result of historic impacts associated with the operation of a concrete pipe manufacturing facility. The Project Site is also bisected by Temescal Wash in the extreme northern corner and Coldwater Canyon along the western boundary. Remnant patches of Riversidean alluvial fan sage scrub, Riversidean sage scrub, and ornamental habitats persist as summarized in Table 1, *Vegetation Communities Acreages*, and illustrated in Figure 4, *Vegetation Communities Map* and Figures 5 to 8, *Current Project Site Photographs*.

**Table 1.  
Vegetation Communities Acreages**

<b>*Vegetation Type</b>	<b>Acres (onsite)</b>	<b>Acres (offsite)</b>	<b>Acres (total)</b>
Disturbed/Developed	37.41	9.71	47.12
Disturbed Riversidean Sage Scrub	2.87	0.72	3.59
Riversidean Alluvial Fan Sage Scrub	0.64	0.13	0.77
Disturbed Riversidean Alluvial Fan Sage Scrub	2.23	0.47	2.70
Ornamental & Native Trees	1.31	2.21	3.52
Coldwater Canyon	1.18	0.51	1.69
Temescal Wash	0.54	0.10	0.64
Black Willow Forest	0.00	0.17	0.17
Cottonwood	0.00	0.07	0.07
Mule Fat Scrub	0.00	0.03	0.03
<b>TOTALS</b>	<b>46.18</b>	<b>14.12</b>	<b>60.30</b>

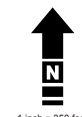
\*Source: Cadre Environmental 2020 GLA 2020a.



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**Figure 4 - Vegetation Communities Map**

Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site



1 inch = 350 feet



PHOTOGRAPH 1 - Northward view of Temescal Wash located within the northwestern region of the Project Site.



PHOTOGRAPH 2 - Southward view of the northwestern region of the Project Site.

Refer to Figure 3- MSHCP Criteria Area and Photograph Key Map

**Figure 5 - Current Project Site Photographs**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site*





PHOTOGRAPH 3 - Northeast view of offsite new channel alignment.



PHOTOGRAPH 4 - Southwest view of offsite new channel alignment.

Refer to Figure 3- MSHCP Criteria Area and Photograph Key Map

**Figure 6 - Current Project Site Photographs**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site*





PHOTOGRAPH 5 - Northeast view of Project Site from southeast corner.



PHOTOGRAPH 6 - Northeast view of Project Site from southwest corner.

Refer to Figure 3- MSHCP Criteria Area and Photograph Key Map

**Figure 7 - Current Project Site Photographs**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site*





PHOTOGRAPH 7 - Southeast view of Coldwater Canyon located onsite and adjacent to Temescal Canyon Road.



PHOTOGRAPH 8 - Southeast view of Project Site from northwest corner.

*Refer to Figure 3- MSHCP Criteria Area and Photograph Key Map*

**Figure 8 - Current Project Site Photographs**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site*



The Soil Survey of Western Riverside Area has the following soils mapped within the boundary of the Project Site as shown on Figure 9, *Soils Association Map*:

- TeG – Terrace escarpments.
- GdC – Garretson gravelly very fine sandy loam, 2 to 8 percent slopes.
- CmC – Cortina cobbly loamy sand, 2 to 8 percent slopes
- CnC - Cortina gravelly coarse sandy loam, 2 to 8 percent slopes
- CIC – Cortina gravelly loamy sand, 2 to 8 percent slopes
- SgC – San Emigdio loam, 2 to 8 percent slopes

## **Vegetation Communities**

### **Disturbed/Developed**

The majority of the Project Site is dominated by heavily disturbed and altered soils generally devoid of vegetation. Species documented within this habitat type include stinknet (*Oncosiphon piluliferum*), black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), red-stemmed filaree (*Erodium cicutarium*), white-stemmed filaree (*Erodium moschatum*), prickly lettuce (*Lactuca serriola*), Russian thistle (*Salsola tragus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), mule fat (*Baccharis salicifolia*), Boccone's sand spurry (*Spergularia bocconi*), poverty weed (*Iva axillaris*), common knotweed (*Polygonum arenastrum*), and salt heliotrope (*Heliotropium curassavicum*).

Developed regions include the paved portions of Temescal and Dawson Canyon Roads. The man-made detention basin and culvert was documented within the disturbed habitat in the northwest corner of the Project Site is generally devoid of vegetation. A single red willow (*Salix laevigata*) tree is located north of the basin.

### **Disturbed Riversidean Sage Scrub**

Disturbed Riversidean sage scrub occurs along the northern and adjacent to the western Project Site boundary. Common species documented within this habitat type include brittlebush (*Encelia farinosa*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), annual sunflower (*Helianthus annuus*) yellow sweetclover (*Melilotus officinalis*), caterpillar phacelia (*Phacelia cicutaria*), common sand aster (*Corethrogyne filaginifolia*), deerweed (*Acmispon glaber*), telegraph weed (*Heterotheca grandiflora*), clustered tarweed (*Deinandra fasciculata*) prickly sow thistle (*Sonchus asper*), horehound (*Marrubium vulgare*), Italian thistle (*Carduus pycnocephalus*), and pineapple weed (*Matricaria discoidea*).

### **Riversidean Alluvial Fan Sage Scrub**

Riversidean alluvial fan sage scrub including disturbed patches equally dominated by ruderal species is present within and adjacent to Temescal Wash and Coldwater Canyon. Species documented within these vegetation communities include scale broom (*Lepidospartum squamatum*), California buckwheat, mugwort (*Artemisia douglasiana*), tarragon (*Artemisia dracuncululus*), western lavender (*Verbena*



*lasiostachys*), coyote brush (*Baccharis pilularis*), sweetbush (*Bebbia juncea*), coast goldenbush (*Isocoma menziesii*), and California brickellbush (*Brickellia californica*).

### **Ornamental & Native Trees**

Eucalyptus (*Eucalyptus globulus*) woodland habitat and four (4) native western sycamore (*Platanus racemosa*) trees were documented within the Project Site along the western boundary primarily adjacent to Coldwater Canyon.

### **Black Willow Forest, Cottonwood and Mule Fat Scrub**

The offsite impact area located within Temescal Wash black willow forest, cottonwood trees and a patch of mule fat scrub. Species documented within these regions include black willow (*Salix gooddingii*), mule fat and Fremont's cottonwood trees (*Populus fremontii*).

Representative distribution and photographs of these habitat types are illustrated in Figure 4, *Vegetation Communities Map* and Figures 5 to 8, *Current Project Site Photographs*.

### **General Wildlife**

General wildlife species documented on site include but are not limited to red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), rock dove (*Columba livia*), American kestrel (*Falco sparverius*), northern mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), mourning dove (*Zenaida macroura*), western kingbird (*Tyrannus verticalis*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), cliff swallow (*Petrochelidon pyrrhonota*), American crow (*Corvus brachyrhynchos*), wrentit (*Chamaea fasciata*), greater roadrunner (*Geococcyx californianus*), California towhee (*Pipilo crissalis*), European starling (*Sturnus vulgaris*), house finch (*Haemorhous mexicanus*), house sparrow (*Passer domesticus*), desert cottontail rabbit (*Sylvilagus audubonii*), and coachwhip (*Masticophis flagellum*).

## **3. RIPARIAN, RIVERINE, VERNAL POOL MITIGATION (SECTION 6.1.2)**

### **3.1 Methods**

A formal jurisdictional delineation and MSHCP Section 6.1.2 assessment was conducted by Glenn Lukos Associates in October and November 2020 (Glenn Lukos Associates 2020a). The delineation determined the boundaries or absence of potential wetland and non-wetland waters of the United States subject to the regulatory jurisdiction of the U.S. Army Corps of Engineers (USACE) pursuant to Clean Water Act (CWA) Section 404; wetland and non-wetland waters of the State subject to the regulatory jurisdiction of the Regional Water Quality Control Board pursuant to CWA Section 401 and State Porter-Cologne Water Quality Control Act (Porter-Cologne); streambed and riparian habitat subject to the regulatory jurisdiction of the CDFW pursuant Sections 1600 *et seq.* of the California Fish and Game Code (CDFG Code); and Riparian/Riverine Areas and Vernal Pools defined in Section 6.1.2 of the Western Riverside County MSHCP.

### 3.2 Results/Impacts

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

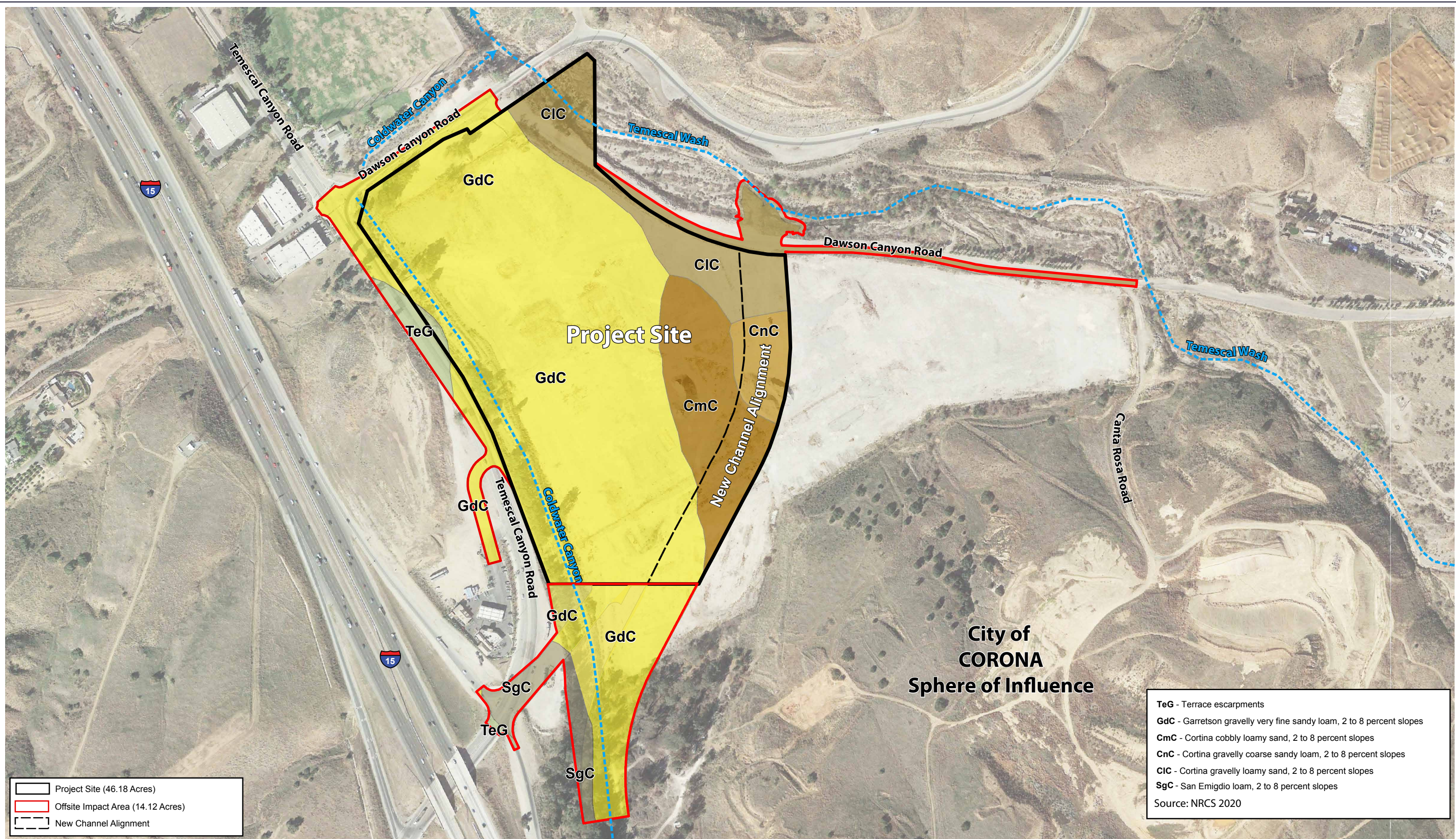
*“Riparian/Riverine Areas are lands which contain habitat dominated by trees, shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year.” (MSHCP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

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

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

No vernal pools were documented onsite based on a lack of suitable soils and characteristic vernal pool plant species. Although the one (1) 0.03-acre heavily disturbed basin located along the northwest boundary may be occupied by the common versatile fairy shrimp (*Branchinecta lindahli*), the basin is not expected to be occupied by the vernal pool fairy shrimp. The man-made detention basin and culvert was created in 2012 to capture seasonal overflow from Coldwater Canyon resulting from the unnatural flow pattern at the intersection of Temescal and Dawson Canyon Roads. Coldwater Canyon will be redirected to its historic alignment in the eastern region of the Project Site and the feature will no longer be hydrated by sheet flow. The Project Site is dominated by sandy loam substrates, and the feature does not provide long-term conservation value for any target MSHCP species.

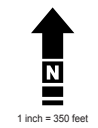
The following section is excerpted and/or summarized directly from the following document prepared by Glenn Lukos Associates “*Jurisdictional Delineation of the Corona Clay Project Site, an Approximate 46.18-Acre Property Located in the City of Corona Sphere of Influence, Riverside County*”, as outlined in Table 2, MSHCP Section 6.1.2 Riparian/Riverine Resources, and as shown in Figure 10, MSHCP Section 6.1.2 Riparian/Riverine Map.

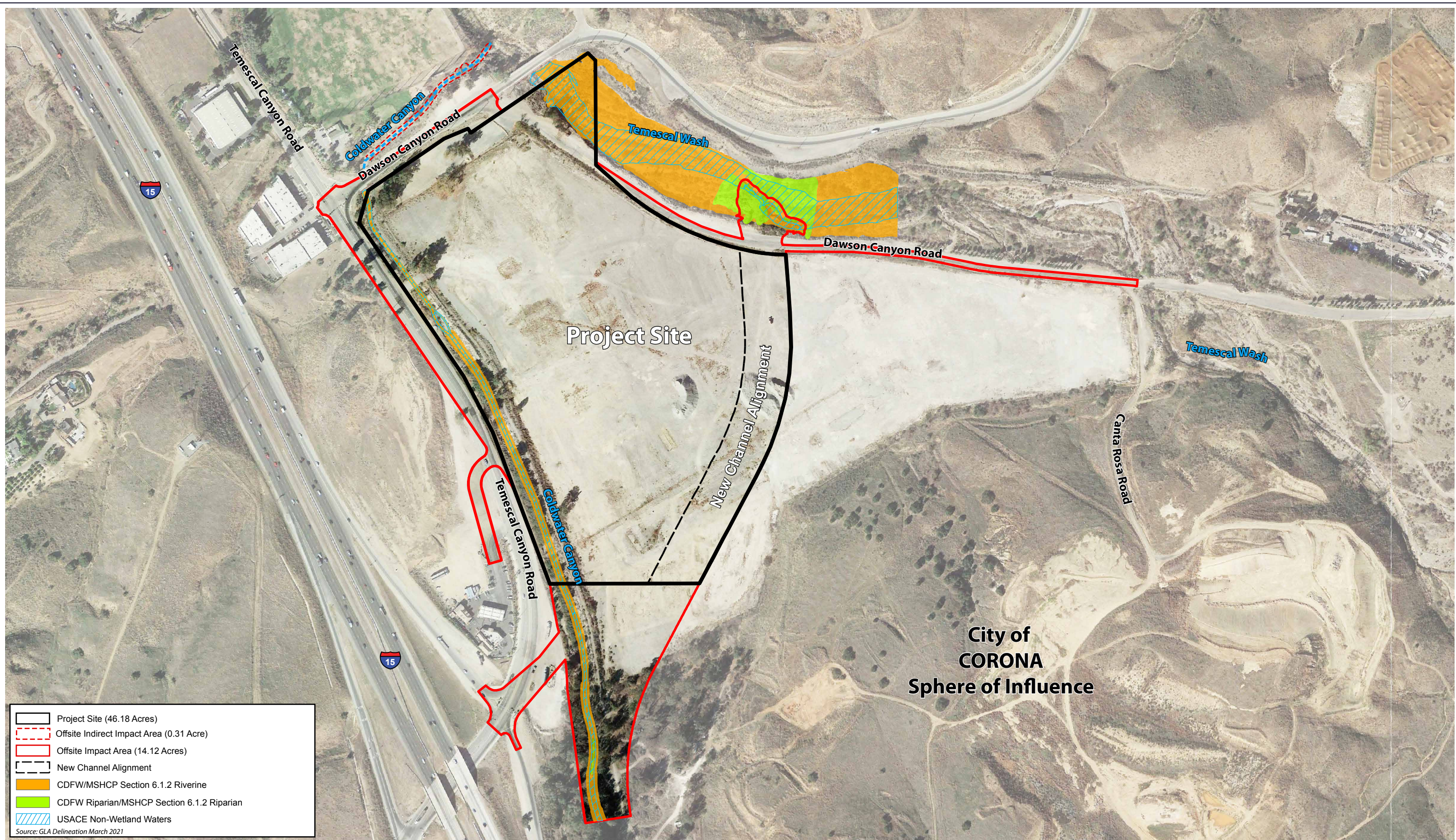


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**Figure 9 - Soils Association Map**

Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Center Project Site

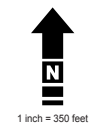




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**Figure 10 - Jurisdictional Resources Map**

*Determination of Biologically Equivalent or Superior Preservation  
Temescal Valley Commerce Project Site*



**Table 2.  
MSHCP Section 6.1.2 Riparian/Riverine Resources**

Drainage	Type	Location	Total (acres)
<b>Coldwater Canyon Creek</b>			
Coldwater Canyon Creek	Non-Riparian Intermittent	Onsite	1.22
Coldwater Canyon Creek	Non-Riparian Intermittent	Offsite	1.30
Coldwater Canyon Creek	Riparian Intermittent	Offsite	0.02
<b>Coldwater Canyon Creek Total</b>			<b>2.54</b>
<b>Temescal Wash</b>			
Temescal Wash	Non-Riparian Intermittent	Onsite	1.02
Temescal Wash	Non-Riparian Intermittent	Offsite	0.22
Temescal Wash	Intermittent – Alluvial Scrub	Offsite	0.13
Temescal Wash	Intermittent – Black Willow	Offsite	0.17
Temescal Wash	Intermittent – Cottonwood	Offsite	0.07
Temescal Wash	Intermittent – Mulefat Scrub	Offsite	0.03
<b>Temescal Total</b>			<b>1.64</b>

Source: GLA 2020a

For purposes of assessing existing conditions and impacts, all resources delineated as CDFW regulated were characterized as MSHCP Section 6.1.2 Riparian and Riverine resources. CDFW jurisdiction is associated with Coldwater Canyon Creek and Temescal Wash described above and is summarized by site-specific descriptions outlined below. CDFW jurisdiction includes all areas of USACE jurisdiction and extend beyond the OHWM to the top of bank or canopy of associated riparian habitat.

### **Coldwater Canyon Creek**

Coldwater Canyon Creek within the Project Site totals approximately 1.22 acres of CDFW jurisdiction, none of which consists of riparian habitat with the exception of a few scattered black willows and a few individuals of mule fat (*Baccharis salicifolia*). Coldwater Canyon Creek traverses along the western boundary of the site for approximately 1,847 linear feet before it extends offsite beneath Dawson Canyon Road through two 7 x 14-foot concrete box culverts. Coldwater Canyon Creek discharges northwest of the Project Site into Temescal Wash. The upstream offsite segment accounts for 1.32 acre, of which 0.02 acre consists of riparian habitat and extends from upstream of the site to the property boundary totaling 967 liner feet.

Coldwater Canyon Creek, both onsite and offsite, exhibits a well-defined channel and signs of intermittent flow with top the of bank ranging from 17 to 50 feet in width. Vegetation associated with the creek bottom and lower portions of the bank include native and non-native species, including: scale broom (*Lepidospartum squamatum*), brittlebush (*Encelia farinosa*), mugwort (*Artemisia vulgaris*), stinkweed (*Dittrichia graveolens*), oleander (*Nerium oleander*), castor bean (*Ricinus communis*), poison oak (*Toxicodendron diversilobum*), salt cedar (*Tamarix*), tarragon (*Artemisia dracunculus*),

sweetbush (*Bebbia juncea*), mulefat (*Baccharis salicifolia*), a canopy of blue-gum eucalyptus (*Eucalyptus globulus*), California sagebrush (*Artemisia californica*), and a few scattered black willow (*Salix gooddingii*) individuals. The top bank supports upland scrub species including sweet bush, scale broom, California sage brush and California buckwheat.

A total of 2.54-acres of CDFW/MSHCP Section 6.1.2 Riparian and Riverine resources within Cold Water Canyon will be permanently impacted as a result of project initiation as summarized in Tables 3, *MSHCP Section 6.1.2 Riparian/Riverine Resources Impacts*, and shown in Figure 11, *MSHCP Section 6.1.2 Riparian/Riverine Impact Map*. The Project would require that the reach of Coldwater Canyon located adjacent to Temescal and Dawson Canyon Roads be redirected to its historic alignment in the eastern region of the Project Site. A 180-foot wide, 5.70-acre drainage easement will be granted to the County of Riverside.

Coldwater Canyon Creek was realigned in the late 1960's or early 1970's with the construction of the concrete pipe manufacturing facility that previously occupied the Project site. The path of the creek was shifted from the approximate center of the site to the western edge of the site parallel to Temescal Canyon Road and much of the drainage adjacent to the site has been channelized through the installation of rip rap to maintain the drainage in its current channel. With the realignment, the current channel would be filled during site grading and the drainage would be realigned. With the realignment of the channel and filling of the existing drainage, flows that currently continue downstream from the bridge at Dawson Canyon Road, continuing for approximately 650 feet to Temescal Wash. This 650-foot segment, that averages approximately 20 feet in width, would experience reduced discharge. (Glenn Lukos Associates. 2021b)

This segment consists largely of unvegetated channel that supports limited riparian habitat consisting of an approximately 0.04-acre patch of arroyo willow which occurs just above the confluence with Temescal Wash. Thus, the reduced discharge would not result in significant losses to riparian habitat, as it is likely, that the willows are supported by subsurface water and do not specifically depend of surface discharge. Nevertheless, CDFW and the RWQCB would likely consider the reduction in hydrology (as opposed to the increases experienced by Temescal Wash) to be a significant impact to the 650-foot segment of Coldwater Canyon Creek, which would remain untouched by the project. Indirect impacts to the offsite, downstream Coldwater Canyon Creek, due to reduction in stream discharge associated with realignment of Coldwater Canyon Creek accounting for 0.31-acre will be mitigated through the purchase of 0.31-acre of reestablishment and 0.31-acre of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 0.62-acre.

## **Temescal Wash**

The northwestern corner of the Project Site is traversed by segment of Temescal Wash which totals approximately 1.02 acre of CDFW jurisdictional streambed that includes a low-flow channel, and adjacent areas that exhibit occasional flows. Thus, the area of CDFW jurisdiction associated with Temescal Wash averages approximately 228 feet in width. Vegetation along the channel includes giant reed, scale broom, brittlebush,

stinkweed (*Dittrichia graveolens*, Upland (UPL)), castor bean (*Ricinus communis*, Facultative Upland (FACU)), salt cedar (*Tamarix*, Facultative (FAC)), tarragon (*Artemisia dracunculus*, UPL), sweetbush (*Bebbia juncea*, UPL), and mule fat (*Baccharis salicifolia*, FAC).

Before reaching the northwest corner of the site where the site is traversed by Temescal Wash, Temescal Wash parallels the northern project boundary of the site, remaining offsite. As a component of the Project, Coldwater Creek will be realigned and will discharge to Temescal Wash offsite near the Northeast corner of the site. As noted above, the area where Coldwater Creek will discharge to the site includes a well-defined low-flow channel and a terrace which is well above the low-flow channel, with a steep slope to the top of the Temescal Wash Bank. The low-flow channel is unvegetated with an algal mat and areas with adjacent mulefat scrub dominated by mule fat (*Baccharis salicifolia*, FAC) and Goodding's black willow forest dominated by Goodding's black willow (*Salix gooddingii*, Facultative Wetland (FACW)) and red willow (*Salix laevigata*, FACW) in the canopy with mulefat in the understory. Two large Fremont cottonwood trees (*Populus fremontii*, FAC) are growing from the toe of the steep slope.

A total of 0.39-acre of permanent and 0.23-acre of temporary CDFW/MSHCP Section 6.1.2 Riverine resources within Temescal Wash will be impacted as a result of project initiation. A total of 0.17-acre of permanent and 0.10-acre of temporary CDFW/MSHCP Section 6.1.2 Riparian resources within Temescal Wash (0.27-acre total) will be impacted as a result of project initiation. This riparian habitat was also documented as occupied by or potential habitat for the least Bell's vireo as summarized in Tables 3, *MSHCP Section 6.1.2 Riparian/Riverine Resources Impacts*, and shown in Figure 11, *MSHCP Section 6.1.2 Riparian/Riverine Impact Map*. As outlined below, the MSHCP identifies four (4) objectives (presented as *italics/underlined*) for the protection of least Bell's vireo habitat located within the riparian corridor, followed by an analysis of MSHCP project consistency.

1. "Include within the MSHCP Conservation Area at least 9,430 acres of suitable habitat" (MSHCP 2004). Permanent and temporary impacts to 0.27-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Temescal Wash will be subject to additional mitigation through reestablishment of 0.34-acre of black willow, 0.14-acre cottonwood and 0.06-acre of mule fat scrub (0.54-acre total) resulting in a 2:1 replacement of Section 6.1.2 Riparian habitat within Temescal Wash.
2. "Include within the MSHCP Conservation Area at least 8 core areas and interconnecting linkages" (MSHCP 2004). Permanent and temporary impacts to 0.27-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Temescal Wash will be subject to additional mitigation through reestablishment of 0.34-acre of black willow, 0.14-acre cottonwood and 0.06-acre of mule fat scrub (0.54-acre total) resulting in a 2:1 replacement of Section 6.1.2 Riparian habitat within Temescal Wash. The reach of Temescal Wash where the reestablishment will occur represents potential conservation land.
3. "Include within the MSHCP Conservation Area additional areas within the Criteria Area identified as important to the least Bell's vireo. If survey results are positive,

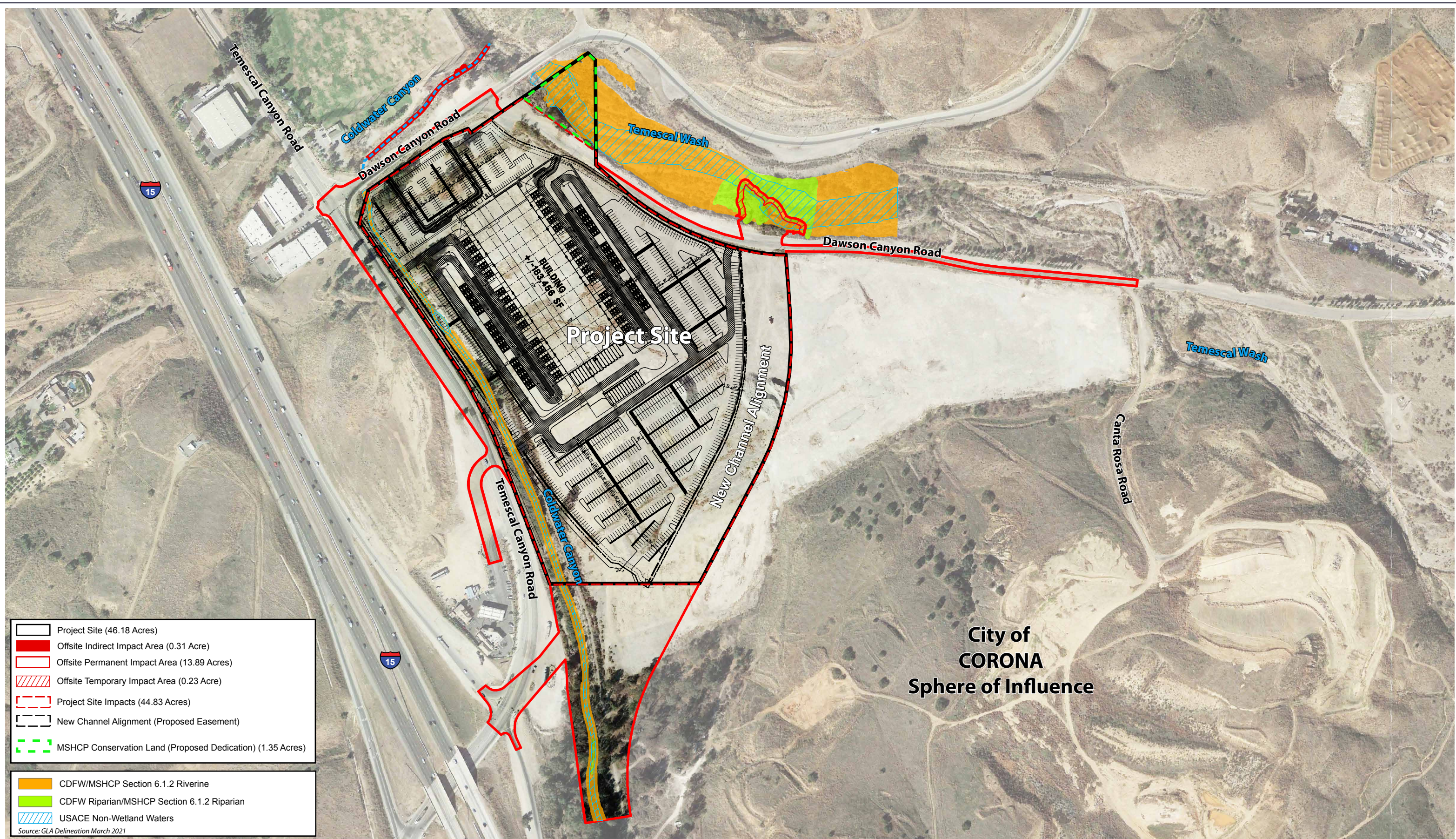
90% of the occupied portions of the property that provide for long-term conservation value shall be conserved. This will involve including 100 meters of undeveloped landscape adjacent to the habitat conserved” (MSHCP 2004). Permanent and temporary impacts to 0.27-acre of occupied habitat following implementation of all proposed mitigation measures (0.54-acre of riparian reestablishment) would not adversely impact conservation of core areas of linkages for the species. All MSHCP Urban/Wildlands Interface Guidelines measures will be implemented to ensure the species is not indirectly impacted by the proposed development and following proposed restoration activities within the temporary impact area.

4. “Within the MSHCP Conservation Area, maintain (once every 3 years) the continued use of, and successful reproduction at 75% percent of known vireo occupied habitat (including any nesting locations identified in the MSHCP Conservation Area in the future)” (MSHCP 2004). Based on recent as well as historic observations of least Bell’s vireo within Temescal Wash, the species is expected to breed within the permanent and temporary offsite impact area following completion of reestablishment measures which meet the minimum success criteria.

In addition to implementing all four (4) least Bell’s vireo objectives listed above, initial vegetation clearing of occupied or potential least Bell’s vireo habitat will occur outside of the nesting season (March 15<sup>th</sup> to September 15<sup>th</sup>). Potential indirect impacts to suitable least Bell’s vireo habitat within Temescal Wash during and following completion of construction and riparian reestablishment will be avoided by implementing all Urban/Wildlands Interface guidelines presented in Section 6.1.4 of the MSHCP and Section 3.3.2 of this report.

Construction activities conducted during the least Bell’s vireo breeding season will be monitored by biologist to ensure no direct and/or indirect impacts occur to the species in the vicinity of the project including noise monitoring to ensure that noise levels do not exceed 60 dB within 300 feet of least Bell’s vireo habitat during the nesting period.

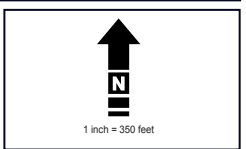




- Project Site (46.18 Acres)
  - Offsite Indirect Impact Area (0.31 Acre)
  - Offsite Permanent Impact Area (13.89 Acres)
  - Offsite Temporary Impact Area (0.23 Acre)
  - Project Site Impacts (44.83 Acres)
  - New Channel Alignment (Proposed Easement)
  - MSHCP Conservation Land (Proposed Dedication) (1.35 Acres)
- 
- CDFW/MSHCP Section 6.1.2 Riverine
  - CDFW Riparian/MSHCP Section 6.1.2 Riparian
  - USACE Non-Wetland Waters
- Source: GLA Delineation March 2021

Project Site APN: 283-160-043. Offsite Impact Area APNs: Portions of 283-160-009, -030, -035, 283-170-012, -013, -015, -21, 283-190-013, -024, 283-200-008, and -009

**Figure 11 - Jurisdictional Resources Impact Map**  
*Determination of Biologically Equivalent or Superior Preservation*  
 Temescal Valley Commerce Project Site



**Table 3.  
MSHCP Section 6.1.2 Riparian/Riverine Resources Impacts**

Drainage	Type	Location	Total (Acres)	Temporary Impact (Acres)	Permanent Impact (Acres)
<b>Coldwater Canyon Creek</b>					
Coldwater Canyon Creek	Non-Riparian Intermittent	Onsite	1.22	0.00	1.22
Coldwater Canyon Creek	Non-Riparian Intermittent	Offsite	1.30	0.00	1.30
Coldwater Canyon Creek	Riparian Intermittent	Offsite	0.02	0.00	0.02
<b>Coldwater Canyon Creek Total</b>			<b>2.54</b>	<b>0.00</b>	<b>2.54</b>
<b>Temescal Wash</b>					
Temescal Wash	Non-Riparian Intermittent	Onsite	1.02	0.0	0.0
Temescal Wash	Non-Riparian Intermittent	Offsite	0.22	0.08	0.14
Temescal Wash	Intermittent – Alluvial Scrub	Offsite	0.13	0.05	0.08
Temescal Wash	Intermittent – Black Willow	Offsite	0.17	0.08	0.09
Temescal Wash	Intermittent – Cottonwood	Offsite	0.07	0.0	0.07
Temescal Wash	Intermittent – Mulefat Scrub	Offsite	0.03	0.02	0.01
<b>Temescal Total</b>			<b>1.64</b>	<b>0.23</b>	<b>0.39</b>

Source: GLA 2020a Source:

Permanent impacts to 2.93-acre (0.25-acre riparian, 2.68-acre riverine) and temporary impacts to 0.23-acre (0.08-acre riverine, 0.15-acre riparian) of MSHCP Section 6.1.2 Riparian/Riverine resources (3.16-acres total) will be mitigated following review and approval of the following DBESP by the County of Riverside EPD, Regional Conservation Authority (RCA) and wildlife agencies.

Offsite permanent (0.05-acre) and temporary (0.08-acre) impacts to Riversidean alluvial fan sage scrub (0.13-acre total within the 3.16-acre impact area) within Temescal Wash as a result of the proposed realignment of Coldwater Canyon will be mitigated at a ratio of 3:1 (0.39-acre) through the reestablishment of Riversidean alluvial fan sage scrub in the temporary offsite impact area as well as disturbed habitats within Temescal Wash

### **3.3 Mitigation and Equivalency**

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset permanent impacts to 2.93-acres (0.25-acre riparian, 2.68-acre riverine) and temporary impacts to 0.23-acre (0.08-acre riverine, 0.15-acre riparian) of MSHCP Section 6.1.2 riparian and riverine resources (3.16-acres total) as follows.

1. Mitigation for permanent impacts to 2.93-acres of riverine habitat within Coldwater Canyon Creek and Temescal Wash would include 2.93-acres of reestablishment and 2.93-acres of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 5.86-acres.
2. Mitigation for temporary impacts to 0.23-acre of riverine habitat within Temescal Wash would be mitigated with 0.23-acre of reestablishment and 0.23 acre of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 0.46-acre.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset indirect impacts to 0.31-acre of Coldwater Canyon as follows:

3. Indirect impacts to the offsite, downstream Coldwater Canyon Creek, due to reduction in stream discharge associated with realignment of Coldwater Canyon Creek accounting for 0.31-acre will be mitigated through 0.31-acre of reestablishment and 0.31-acre of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 0.62-acre.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset 0.27-acre of 3.16-acres of MSHCP Section 6.1.2 riparian and riverine resources impacts to least Bell's vireo habitat as follows:

4. Permanent and temporary impacts to 0.27-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Temescal Wash will be subject to additional mitigation through reestablishment of 0.34-acre of black willow, 0.14-acre cottonwood and 0.06-acre of mule fat scrub (0.54-acre total) resulting in a 2:1 replacement of Section 6.1.2 Riparian habitat within Temescal Wash.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset 0.13-acre of impacts to MSHCP Section 6.1.2 Riversidean alluvial fan sage scrub as follows:

5. Offsite permanent (0.05-acre) and temporary (0.08-acre) impacts to Riversidean alluvial fan sage scrub (0.13-acre total) within Temescal Wash as a result of the proposed realignment of Coldwater Canyon will be mitigated at a ratio of 3:1 (0.39-acre) through the reestablishment of Riversidean alluvial fan sage scrub in the temporary offsite impact area as well as disturbed habitats within Temescal Wash.

The River Park Mitigation Bank proposes to re-establish (recreate former but no longer existing) alkali plain wetland system habitat and rehabilitate (repair existing but degraded) alkali plain wetland system habitat for a grand total of 583 acres of restoration of various types of alkali plain wetland system plant communities. As stated by the United States Army Corps of Engineers (USACE):

*“The Riverpark Mitigation Bank is a proposed 619-acre mitigation bank located along the San Jacinto River (SJR) in western Riverside County (Figures 1 and 2). The Bank property is specifically located just*

*downstream of the Ramona Expressway and immediately upstream of Nuevo Road. The site is depicted on the U.S. Geological Survey (USGS) Perris and Romoland Quadrangle Rancho San Jacinto Nuevo y Potrero Land Grant (Figure 3) in unincorporated Riverside County, California (33° 49' 8.4"N, -117° 9' 18"W)."* (USACE 2015)

*"The primary objective of the proposed mitigation bank would be to replace functions and services of aquatic resources and associated habitats that have been degraded or destroyed as a result of activities conducted in compliance or in violation of Section 404 of the CWA. The proposed mitigation bank would provide mitigation for both permanent and temporary impacts to waters of the U.S. In addition, the proposed mitigation bank may be used to offset environmental losses resulting from unavoidable impacts related to regulated activities by the California Department of Fish and Wildlife and the San Diego and Santa Ana Regional Water Quality Control Boards. Specific objectives include: • Restoration of fluvial processes on site within the San Jacinto River floodplain. • Restoration of alkali playa and vernal pool habitat. • Expansion of existing sensitive plant populations across the site. • Removal of ongoing agricultural activities on the site. • Removal of existing berms and the low flow channel. • Permanent protection of the site through transfer of fee title to the Western Riverside Regional Conservation Authority (RCA). • Permanent management of the site through funding of a non-wasting endowment."* (USACE 2015)

*"Due to its location along the San Jacinto River and its high potential for successful restoration upon elimination of the artificial low flow channel and berms created by historic agricultural activities, the proposed mitigation bank location has been identified by several state and Federal agencies as a high-priority restoration site."* (USACE 2015)

Rough-Step Unit 7 - A grading/clearance permit was issued for this property in 1989 (LU/APP/Pmt. No. 10900) prior to the 1994 vegetation mapping or 2004 adoption of the Western Riverside County MSHCP. With the exception of Riversidean alluvial fan sage scrub (RAFSS) located within Temescal Wash, the 7.70-acre of RAFSS mapped onsite in 1994 is disturbed or developed (Temescal Canyon and Dawson Canyon Roads). The project also includes the dedication of a 1.35-acre reach of Temescal Canyon Wash within which 1.18-acre is RAFSS. All offsite permanent (0.05-acre) and temporary (0.08-acre) impacts to RAFSS (0.13-acre total) within Temescal Wash as a result of the proposed realignment of Coldwater Canyon will be mitigated at a ratio of 3:1 (0.39-acre) through the reestablishment of RAFSS in the temporary offsite impact area as well as disturbed habitats within Temescal Wash.

As described in the Jurisdictional Delineation Report prepared by GLA, dated March 2, 2021, the project will impact two drainage courses: Coldwater Canyon Creek and a limited area of Temescal Wash associated with installation of a storm water outfall structure and associated rip rap. Each is addressed below relative to the lost functions and values and the replacement functions and values associated with the proposed mitigation.

## **Coldwater Canyon Creek**

Within the project site, the entire segment of Coldwater Canyon Creek was channelized in the 1960s when the drainage was relocated from the approximate center of the site to its current location between the previous industrial operations and Temescal Canyon Road. The eastern bank is lined with rip rap while the western bank is vegetated with sage scrub or with a canopy of non-native eucalyptus in the upper segment and has been lined with rip on the western bank in the lower portion. The channelized drainage is straight and exhibits no sinuosity; rather it functions as a flood control channel albeit with inadequate capacity during large storm events. The inadequate capacity is one of the factors that is driving relocation of the channel to its approximate historic location where the channel capacity will be substantially expanded. Before considering the increase in regional wetland functions associated with the proposed mitigation at the Riverpark Mitigation Bank, it is important to emphasize that the Coldwater Canyon Creek Channel is being relocated and the hydrologic and biogeochemical functions will not be lost but will be expanded with the increased size of the channel following construction/relocation. The project is not including relocation of the channel as a component of the project mitigation because the new expanded channel will be transferred to Riverside County Flood Control; nevertheless, the channel will provide expanded hydrologic and biogeochemical functions currently provided by the existing channel. Habitat functions, due to the limited value of the existing channel will be unchanged.

The existing segment of Coldwater Canyon Creek within the Study Area consist of a well-defined channel with signs of intermittent flow. Widths at top the of bank range from 12 to 51 feet. Vegetation associated with the creek bottom include a mix of native and non-native species: limited patches of mulefat (*Baccharis salicifolia*), occasional mugwort (*Artemisia douglasiana*) individuals, invasive exotic stinkweed (*Dittrichia graveolens*) is common, non-natives oleander (*Nerium oleander*) and castor bean (*Ricinus communis*), and non-native invasive salt cedar (*Tamarix ramosissima*). The rip rap lined eastern bank supports limited amounts of scale broom (*Lepidospartum squamatum*), poison oak (*Toxicodendron diversilobum*), and tarragon (*Artemisia dracuncululus*), with the dominant plants on the banks consisting of sweetbush (*Bebbia juncea*), brittlebush (*Encelia farinosa*), and California sagebrush (*Artemisia californica*), and a few scattered black willow (*Salix gooddingii*) individuals. The top of bank supports a canopy of blue-gum eucalyptus (*Eucalyptus globulus*), which in some areas exhibits 100-percent cover.

Overall, the functions of Coldwater Canyon Creek are limited by the previous channelization and the lack of native riparian alliances of any extent. Thus, the low value Coldwater Canyon Creek will be replaced with a much higher value resources within a regionally important ecosystem.

## **Temescal Wash**

Temescal Wash is a relatively undisturbed channel that will exhibit limited impacts associated with installation of an outfall for the relocated Coldwater Creek Channel. The area where Coldwater Creek will discharge to the site includes a well-defined low-flow channel and a terrace which is well above the low-flow channel, with a steep slope

to the top of the Temescal Wash Bank. The low-flow channel is unvegetated with an algal mat and areas with adjacent mulefat scrub dominated by mulefat (*Baccharis salicifolia*, FAC) and Goodding's black willow forest dominated by Goodding's black willow (*Salix gooddingii*, FACW) and red willow (*Salix laevigata*, FACW) in the canopy with mulefat in the understory. Terraces above the low flow channel support areas of sparse alluvial scrub dominated by sweetbush (*Bebbia juncea*, UPL), mulefat (*Baccharis salicifolia*, FAC), and scale broom (*Lepidospartum squamatum*, FACU).

Coldwater Canyon Creek does provide wildlife movement opportunities; however, Temescal Wash is more important for wildlife movement. Coldwater Canyon Creek is immediately adjacent to Temescal Canyon Road; whereas Temescal Wash is separated from Temescal Canyon Road by over 800 feet at its nearest point.

As noted above, Coldwater Canyon Creek will be realigned such that it will connect upstream areas to Temescal Wash with a channel that is currently wider than the existing channel.

### **Riverpark Mitigation Bank & Offsite Reestablishment Functions and Values**

Reestablishment and rehabilitation associated with the Riverpark Mitigation Bank resulted in a functional lift for: groundwater recharge and flood protection which have been significantly enhanced by allowing for overbank flows during small to medium storm events and replacing agricultural lands with native vegetation has significantly improved particulate retention, cycling of elements and compounds, and nutrient and pollutant uptake. Most notably, the existing and reestablished sensitive plant and animal populations and habitats have been significantly enhanced following Riverpark Bank implementation. The Riverpark Bank is an approved bank and recognized as an important resource for the region within an area that was previously under threat of development.

Permanent and temporary impacts to 0.27-acre of riparian habitat occupied or representing suitable habitat for the least Bell's vireo within Temescal Wash will be subject to additional mitigation through reestablishment of 0.34-acre of black willow, 0.14-acre cottonwood and 0.06-acre of mule fat scrub (0.54-acre total) resulting in a 2:1 replacement of Section 6.1.2 Riparian habitat within Temescal Wash as shown in Figure 12, *Proposed Restoration Map*. The riparian habitats will be restored to equivalent or superior conditions resulting in a functional lift through implementation of a habitat mitigation and monitoring plan (HMMP). The HMMP must be reviewed and approved by the RCA, the California Department of Fish and Wildlife (CDFW), and the U.S. Fish and Wildlife Service (USFWS), the latter two collectively referred to as the "Wildlife Agencies". The HMMP will at a minimum include the following:

- Baseline assessment of existing vegetation/habitat, with measurements including native plant cover (to include species richness), non-native plant cover (to include species richness), non-native grasses versus forbs, invasive plant cover, and soil compaction within the proposed temporary impact footprint as well as several adjacent reference plots.
- Removal of any remaining rooted non-native vegetation, debris, and any foreign aggregate (asphalt, concrete, etc.).

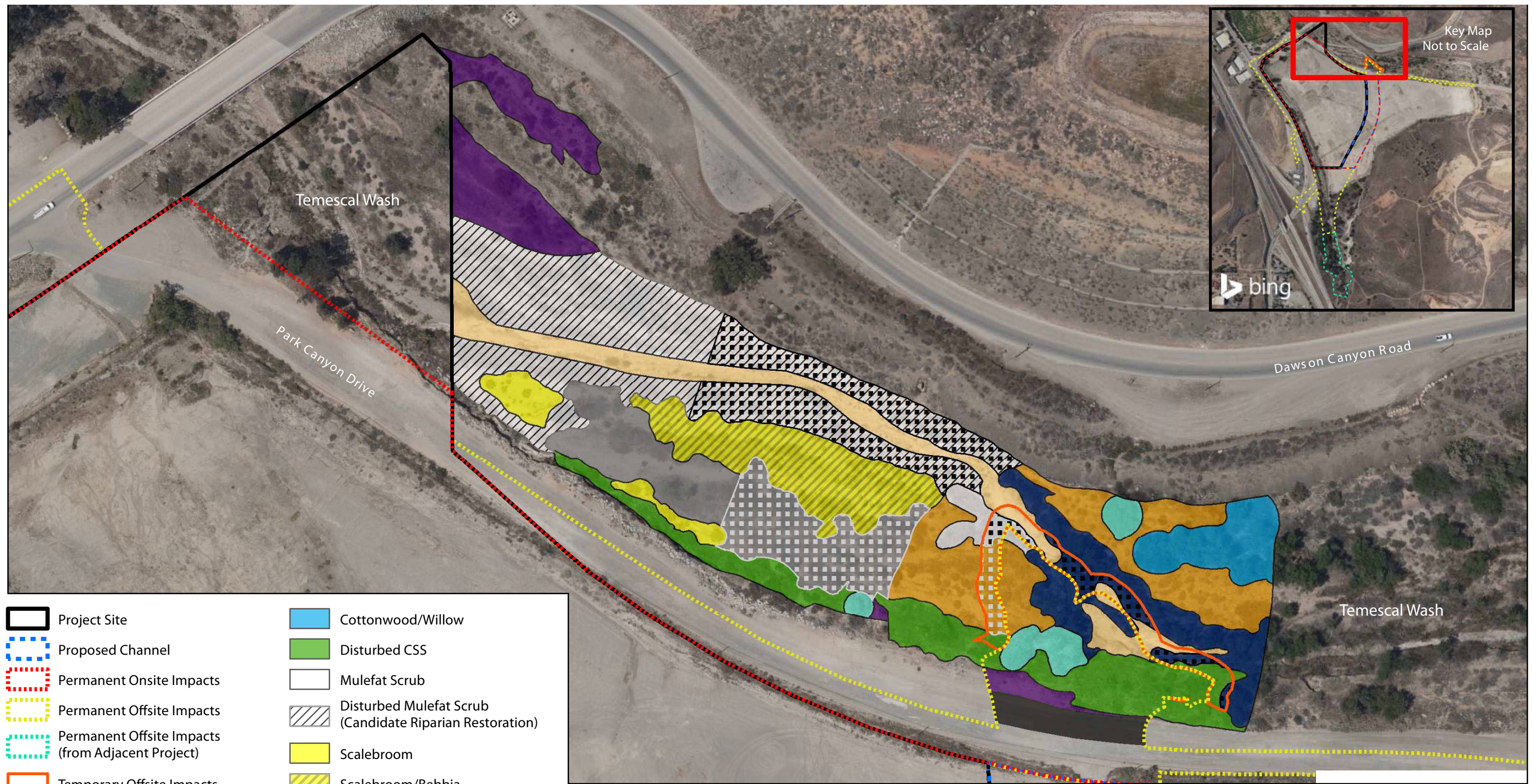
- Decompaction of the upper 4-6 inches of soil if needed based on soil compaction readings.
- Wetting of the soil surface with a water truck prior to seeding.
- Hydroseeding with native seed palette.
- Post-seeding wetting with water truck.
- Monitoring and maintenance by biologist during a minimum 90-day plant establishment period, including assessment of the same attributes recorded during the baseline assessment.
- Maintenance will end when the biologist determines the area has achieved equivalent or superior conditions to the baseline.
- Report prepared by a qualified biologist sent to RCA land manager upon completion of maintenance period.
- Quarterly monitoring reports prepared by a qualified biologist will continue until RCA land manager determines that the area has stabilized at an equivalent or superior condition compared to the baseline, expected within one and half to two years. However, if maintenance is needed during this time period, the monitoring and maintenance must cover three years as set forth in the HMMP.
- Annual monitoring of least Bell's vireo following reestablishment of riparian habitat for at least three (3) years or until the species is detected.
- Following reestablishment of riparian habitat, a lot line adjustment of the restored habitat will be processed, approved and dedicated as conservation, fee title to the RCA.

### **3.3.1 Direct Effects**

Direct impacts are considered to be those that involve the loss, modification, or disturbance of natural resources or habitats (i.e., vegetative communities or substrate) that in turn, directly affect plant and wildlife species dependent on that habitat. Direct impacts include the destruction of individual plants or wildlife of low mobility (i.e., plants, amphibians, reptiles, and small mammals). The collective loss of individuals may also directly affect area-wide population numbers or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Permanent impacts to 2.93-acre (0.25-acre riparian, 2.68-acre riverine) and temporary impacts to 0.23-acre (0.08-acre riverine, 0.15-acre riparian) of MSHCP Section 6.1.2 Riparian/Riverine resources (3.16-acres total) as summarized in Table 4, *MSHCP Section 6.1.2 Resources Impacts*, and illustrated on Figure 11, *MSHCP Section 6.1.2 Riparian/Riverine Impact Map*. As previously stated, the Project would require that the reach of Coldwater Canyon located adjacent to Temescal and Dawson Canyon Roads be redirected to its historic alignment in the eastern region of the Project Site. A 180-foot wide, 5.70-acre drainage easement will be granted to the County of Riverside.

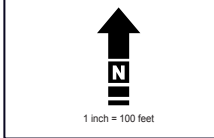
Offsite permanent (0.05-acre) and temporary (0.08-acre) impacts to Riversidean alluvial fan sage scrub (0.13-acre total within the 3.16-acre impact area) within Temescal Wash as a result of the proposed realignment of Coldwater Canyon will be mitigated at a ratio of 3:1 (0.39-acre) through the reestablishment of Riversidean alluvial fan sage scrub in the temporary offsite impact area as well as disturbed habitats within Temescal Wash.



- |   |  |
|---|--|
| Project Site                                      | Cottonwood/Willow  |
| Proposed Channel                                  | Disturbed CSS  |
| Permanent Onsite Impacts                          | Mulefat Scrub  |
| Permanent Offsite Impacts                         | Disturbed Mulefat Scrub (Candidate Riparian Restoration) |
| Permanent Offsite Impacts (from Adjacent Project) | Scalebroom   |
| Temporary Offsite Impacts                         | Scalebroom/Bebbia  |
| Proposed Riparian Restoration                     | Unvegetated Streambed                                    |
| Proposed RAFSS Restoration                        | Bare (Candidate RAFSS Restoration)                       |
| Alluvial Scrub                                    | Disturbed  |
| Black Willow Forest                               | Road   |
| Cottonwood  |  |

Source: GLA 2021

**Figure 12 - Proposed Restoration Map**  
*Determination of Biologically Equivalent or Superior Preservation*  
 Temescal Valley Commerce Project Site





### 3.3.2 Indirect Effects

Indirect impacts are considered to be those impacts associated with the project that involve the effects of alteration of the existing habitat and an increase in human population and or landuse within the Project Site. These impacts are commonly referred to as “edge effects” and may result in changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to the Project Site.

Indirect impacts also include the effects of increases in ambient levels of sensory stimuli (e.g., noise and light), unnatural predators (e.g., domestic cats and other non-native animals), competitors (e.g., exotic plants and non-native animals), and trampling and unauthorized recreational use due to the increase in human population. Other permanent indirect effects may occur that are related to water quality and storm water management, including trash/debris, toxic materials, and dust.

The MSHCP Urban/Wildlands Interface guidelines presented in Section 6.1.4 are intended to address indirect effects associated with locating commercial, mixed uses and residential developments in proximity to an MSHCP Conservation Area. The Project Site is not currently located adjacent to an existing MSHCP Conservation Area. However, final reserve design may result in conserved lands being established both north and east of the Project Site. Therefore, as addressed below all proposed Urban/Wildlands Interface Guidelines and Best Management Practices (BMP) will be implemented.

#### **Water Quality/Hydrology/Vegetation**

The project will comply with all applicable water quality regulations, including obtaining and complying with those conditions established in (WDRs) and a National Pollutant Discharge Elimination System (NPDES) permits. Both of these permits include the treatment of all surface runoff from paved and developed areas, the implementation of applicable Best Management Practices (BMPs) during construction activities and the installation and proper maintenance of structural BMPs to ensure adequate long-term treatment of water before entering into any stream course. The Project would also require that the reach of Coldwater Canyon located adjacent to Temescal and Dawson Canyon Roads be redirected to its historic alignment in the eastern region of the Project Site. A 180-foot wide, 5.70-acre drainage easement will be granted to the County of Riverside. No significant impacts are anticipated.

Coldwater Canyon Creek was realigned in the late 1960’s or early 1970’s with the construction of the concrete pipe manufacturing facility that previously occupied the Project site. The path of the creek was shifted from the approximate center of the site to the western edge of the site parallel to Temescal Canyon Road and much of the drainage adjacent to the site has been channelized through the installation of rip rap to maintain the drainage in its current channel. With the realignment, the current channel would be filled during site grading and the drainage would be realigned. With the realignment of the channel and filling of the existing drainage, flows that currently continue downstream from the bridge at Dawson Canyon Road, continuing for approximately 650 feet to Temescal Wash. This 650-foot (0.31-acre) segment, that

averages approximately 20 feet in width, would experience reduced discharge. (Glenn Lukos Associates. 2021b)

This segment consists largely of unvegetated channel that supports limited riparian habitat consisting of an approximately 0.04-acre patch of arroyo willow which occurs just above the confluence with Temescal Wash. Thus, the reduced discharge would not result in significant losses to riparian habitat, as it is likely, that the willows are supported by subsurface water and do not specifically depend of surface discharge. Nevertheless, the reduction in hydrology (as opposed to the increases experienced by Temescal Wash) would represent a significant impact to the 650-foot segment of Coldwater Canyon Creek, which would remain untouched by the project. Indirect impacts to the offsite, downstream Coldwater Canyon Creek, due to reduction in stream discharge associated with realignment of Coldwater Canyon Creek accounting for 0.31-acre will be mitigated through the purchase of 0.31-acre of reestablishment and 0.31-acre of rehabilitation credits from the Riverpark Mitigation Bank for a ratio of 2:1, totaling 0.62-acre. With the proposed mitigation, potentially significant indirect impacts would be reduced to less-than-significant. (Glenn Lukos Associates. 2021b)

### **Toxics**

Storm water treatment systems will be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant material, or other elements that could degrade or harm downstream biological or aquatic resources. Toxic sources within the Project Site would be limited to those commonly associated with warehouse development, such as pesticides, insecticides, herbicides, fertilizers, and vehicle emissions. In order to mitigate the potential effects of these toxics, the project will incorporate structural BMPs, as required in association with compliance with WDRs and the NPDES permit system, in order to reduce or prevent the level of toxins introduced into the Temescal Wash and the surrounding areas.

Specifically, in terms of safeguarding against release of toxins, the project will possess an underground water quality system. All onsite water will flow through storm drain lines into underground rock lined chambers. There, the water will desilt and settle, then run through bio-filtration units. For the most part, most storms will not make it into the channel. For big events, as the chambers fill, they will release water that has been run through the system. No significant impacts are anticipated.

### **Lighting**

Night lighting associated with the proposed development will be directed away from potential conserved open space habitat including Temescal Wash and proposed realignment of Coldwater Canyon located north and east of the Project Site. No significant impacts are anticipated.

### **Noise**

Because the proposed project development will not result in noise levels that exceed residential, commercial or mixed-use noise standards established for Riverside County, wildlife within open space habitats west of the Project Site will not be subject to noise

that exceeds these established standards. Short-term construction-related noise impacts will be reduced by the implementation of the following:

- During all Project Site excavation and grading on-site, the construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.
- The construction contractor shall limit all construction-related activities that would result in high noise levels according to the construction hours to be determined by County of Riverside staff.
- The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes shall not pass sensitive land uses or residential dwellings.

Construction activities conducted during the least Bell's vireo breeding season will be monitored by biologist to ensure no direct and/or indirect impacts occur to the species in the vicinity of the project including noise monitoring to ensure that noise levels do not exceed 60 dB within 300 feet of least Bell's vireo habitat during the nesting period.

No significant impacts are anticipated.

### **Invasive Species**

The landscape plans for the residential, commercial and mixed development shall avoid the use of invasive species for the portions of the development areas adjacent to the open space areas west of the Project Site. Invasive plants that should be avoided are included in Table 6-2 of the MSHCP, *Plants That Should Be Avoided Adjacent to the MSHCP Conservation Area*.

### **Barriers**

Barriers are intended to reduce or minimize unauthorized public access and associated impacts to protected resources. The Project Site is a commercial warehouse project which will be completely fenced preventing staff from entering potential conserved lands both north and west of the property. No barriers within Temescal Wash or Coldwater Canyon are proposed.

Implementation of all Urban/Wildlands Interface guidelines will minimize adverse project indirect impacts and ensure consistency with MSHCP Section 6.1.4 guidelines.

## **4. NARROW ENDEMIC PLANT SPECIES MITIGATION (SECTION 6.1.3)**

The MSHCP has determined that all of the sensitive species potentially occurring onsite or within the offsite Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for narrow endemic plants if suitable habitat is documented and the assessment area is located within a predetermined "Survey Area" (MSHCP 2004).

The Project Site occurs partially within a predetermined Survey Area for nine (9) MSHCP narrow endemic plant species including (RCA GIS Data Downloads 2020).

- Munz's onion (*Allium munzii*) [Federally Endangered (FE)/State Threatened, CRPR List 1B.1];
- San Diego ambrosia (*Ambrosia pumila*) [FE, CRPR 1B.1];
- slender-horned spineflower (*Dodecahema leptoceras*) [FE/SE, CRPR 1B.1];
- multi-stemmed dudleya (*Dudleya multicaulis*) [CRPR List 1B.2];
- spreading navarretia (*Navarretia fossalis*) [FT/SE, CRPR List 1B.1];
- California Orcutt grass (*Orcuttia californica*) [FE/SE, CRPR List 1B.1];
- San Miguel savory (*Clinopodium chandleri*, formerly *Satureja chandleri*) [CRPR List 1B.2];
- Hammitt's clay-cress (*Sibaropsis hammittii*) [CRPR 1B.2];
- Wright's trichocoronis (*Trichocoronis wrightii* var. *wrightii*) [CRPR List 2.1].

#### 4.1 Methods

Reconnaissance surveys of the Project Site and offsite impact areas were conducted by Ruben Ramirez, Cadre Environmental on May 21<sup>st</sup>, 2019 and September 14<sup>th</sup>, 2020 in order to characterize and identify potential wildlife habitats, and to establish the accuracy of the data identified in the literature search and previous surveys.

An initial habitat assessment/survey for sensitive plants was conducted by Glenn Lukos Associates on August 20<sup>th</sup> 2019 and additional focused surveys were conducted on March 5<sup>th</sup> and August 12<sup>th</sup> 2020. (Glenn Lukos Associates 2021a).

Existing biological resources within and adjacent to the Project Site were initially investigated through a review of pertinent literature and online data. The California Natural Diversity Database (CNDDDB 2020), and CNPS (2020). In addition, soil, local floras, and consultation with local experts were utilized in the identification of species, soils, or habitats that could support the target MSHCP sensitive plants within or adjacent to the Project Site. These and other references are listed below and in References.

Prior to conducting fieldwork, a thorough archival review was conducted using the following baseline resources:

- California Native Plant Society 8<sup>th</sup> Inventory Online (2020);
- California Natural Diversity Data Base for the USGS 7.5' Lake Mathews Quadrangle (CNDDDB 2020a);
- Soil Survey of Western Riverside Area (Knecht 1971; USDA-NRCS 2020);
- Vegetation Alliances of Western Riverside County, California (Klein and Evens 2005);
- Vascular Flora of Western Riverside County (Roberts et al. 2004); and
- Reports prepared by the Regional Conservation Authority, Western Riverside County (<http://www.wrc-rca.org/about-rca/monitoring/monitoring-surveys/>).

## 4.2 Results/Impacts

The following section is excerpted and/or summarized based on the results of the following document “*Rare Plant Habitat Assessment and Focused Surveys for HANS 190024 – Temescal Canyon Road and Dawson Canyon Road Warehouse Site (APN 283-160-043, Riverside County, California (Glenn Lukos Associates 2021a)*”

The Project Site includes a large mostly flat area that has been subject to past mining and associated support operations. The majority of the Project Site is dominated by heavily disturbed and altered soils generally devoid of vegetation. Species documented within this habitat type include mostly non-native annuals typical of long-term disturbance on the site, including invasive species such as stinknet and stink wort (*Dittrichia graveolens*). Other non-native species common on the site include black mustard, tocalote, red-stemmed filaree, white-stemmed filaree, prickly lettuce, Russian thistle, and foxtail chess. Occasional native species include mule fat (*Baccharis salicifolia*), Boccone's sand spurry (*Spergularia bocconi*), poverty weed, common knotweed, and salt heliotrope.

The western edge of the Project Site is traversed by Coldwater Canyon, which historically extended across the central portion of the site and was re-aligned and channelized prior to 1980 along the western site boundary. Vegetation associated with the creek bank and channel consists of native and non-native species, including: scale broom, brittlebush, mugwort, stink wort, oleander (*Nerium oleander*), castor bean (*Ricinus communis*) poison oak (*Toxicodendron diversilobum*), salt cedar (*Tamarix, ramosissima*), tarragon (*Artemisia dracunculus*), sweetbush (*Bebbia juncea*), mulefat, a canopy of blue-gum eucalyptus, California sagebrush, and a few scattered black willow (*Salix gooddingii*) individuals.

Consistent with the disturbed conditions across most of the site, a review of historic aerial photographs beginning in 1994 extending through the present shows intense land uses during this period. An aerial from 1980 depicts land use very similar to December 2003 and March 2011 that show the intensity of the land use on the site that persisted for over 30 years until the operations on site were abandoned in 2014. The site has been vacant since 2014. The intense land uses during this period resulted in elimination of nearly all native habitat from the site, except for a narrow strip of disturbed Riversidean alluvial fan sage scrub on the eastern edge of Coldwater Canyon. Since the mining operation was abandoned, small patches of native vegetation that has colonized localized areas and support highly opportunistic species that include brittlebush, California sagebrush, California buckwheat, annual sunflower, yellow sweetclover, caterpillar phacelia, common sand aster, deerweed, telegraph weed, clustered tarweed and non-natives such as prickly sow thistle, horehound, Italian thistle, and pineapple weed.

### Habitat/Suitability Assessment for NEPSA Plants

The Project Site occurs partially within a predetermined Survey Area for nine (9) MSHCP narrow endemic plant species including Munz's onion, San Diego ambrosia, many-stemmed dudleya, spreading navarretia, slender-horned spineflower, San Miguel

savory, Hammitt's clay-cress, California Orcutt grass, and Wright's trichocoronis (RCA GIS Data Downloads 2020).

Suitable soils and/or habitat conditions are not present for (5) five of the NEPSA species including Munz's onion and Hammitt's clay-cress due to lack of suitable clay soils, many-stemmed dudleya, due to a lack of suitable soils and habitat, spreading navarretia and California Orcutt grass due to a lack of vernal pools. Also, as discussed in detail below, suitable habitat and soils are lacking for Wright's trichocoronis.

Potentially Suitable soil conditions and limited areas of native vegetation were documented onsite for four (4) NEPSA species, San Diego ambrosia, slender horned spineflower, San Miguel savory and Wright's trichocoronis. The potential need for these focused MSHCP sensitive plant surveys are addressed below pursuant to MSHCP Section 6.1.3.

As discussed below, three of the plants determined to have potential for presence on the site occur within streams and associated floodplains. Thus, it is important to note that the segment of Coldwater Canyon Creek which crossed the site until it was developed (during the 1970s) was realigned and channelized with steep banks, eliminating any floodplain functions. The channel bottom exhibit scour and support mostly non-native herbaceous species, while the top of the eastern bank supports disturbed scrub and the top of the western bank supports a windrow of blue gum eucalyptus with no native understory.

**San Diego ambrosia** – According to the U.S. Fish and Wildlife Service 5-Year Review<sup>1</sup> this species is an herbaceous perennial that produces aerial stems from their underground rhizomes in early spring after winter rains, and flower between May and October. This species occurs primarily on upper terraces of rivers and drainages but can also occur in other settings, including disturbed grasslands, which are lacking from the site. The only suitable habitat would be the terraces of Temescal Wash or Coldwater Canyon Creek. Coldwater Canyon and Temescal Wash was thoroughly surveyed during the jurisdictional delineation with all plant species recorded. The survey occurred in August during the peak of the blooming period and this easily identified species was not detected. No additional surveys are needed.

**Slender-horned Spineflower** – is usually found in drought prone alluvial benches subject to only rare flood events as noted by USFWS in the 2010 5-Year Review of the species.<sup>2</sup> The habitat that supports most occurrences of this species has generally been categorized as alluvial scrub. This shrub habitat is found on sandy and gravelly soils in sandy wash systems where intermittent, scouring flood events occur. Importantly for this evaluation, USFWS reports that plants are typically found in alluvial fan scrub on benches and terraces away from active channels in areas receiving little surface disturbance from flooding, but subject to sheet or overland flows. The association of the species with older alluvial benches and terraces indicates the need or tolerance of infrequent flood events to maintain suitable habitat conditions. A few

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<sup>1</sup> U.S. Fish and Wildlife Service. 2010. *Ambrosia pumila* (San Diego ambrosia) 5-Year Review: Summary and Evaluation

<sup>2</sup> U.S. Fish and Wildlife Service. 2010. *Dodecahema leptoceras* (slender-horned spineflower) 5-Year Review: Summary and Evaluation

occurrences of this species are found on low alluvial benches or braids within active channels.

As noted above, Coldwater Canyon is a realigned channel lacking in benches or braids that are typical of the habitat for this species as this drainage consist of a channel with high steep constructed banks that do not contain terraces or benches typical for this species. Therefore, Coldwater Canyon does not exhibit potential for supporting this species.

According to USFWS in the 5-Year Recover Plan, the occurrence of this species in the Temescal Wash was presumed extant as of 2010 although the site was impacted by vandalism in 1989 and freeway construction. This occurrence is approximately five miles upstream of the Project Site and Corona Lake impounds Temescal Wash upstream of the site, substantially reducing potential for dispersal to the segment of Temescal Wash that crosses the corner of the site. Temescal Wash was thoroughly surveyed during the jurisdictional delineation with all plant species recorded. The survey occurred in August during the peak of the blooming period and this easily identified species was not detected. No additional surveys are needed.

**Wright's trichocoronis** – California Native Plant Society reports that this species occurs in alkaline meadows and seeps; marshes and swamps, riparian forests and vernal pools<sup>3</sup>, while the Jepson Herbarium reports the species from “moist places, drying riverbeds”.<sup>4</sup> The only documented occurrences of this species in Western Riverside County occur within the San Jacinto River drainage and floodplain, which is exhibits suitable conditions including floodplain areas that exhibit seasonal ponding and drying riverbeds. Coldwater Canyon does not exhibit suitable conditions for this species lack all of the habitat requirements for this species which has no potential to occur.

**San Miguel Savory** – this species occurs in the Santa Ana Mountains to the southeast of the Project Site, where it occurs primarily on shaded slopes and within canyons in chaparral or oak woodland. The Project Site contains no potential for this species.

Following the habitat assessment, focused surveys and review of species distribution and habitat requirements, no MSHCP Narrow Endemic Plant Species are expected to occur within the Project Site impact area as shown in Table 4, *Potential MSHCP Narrow Endemic Plant Assessment* (Glenn Lukos Associates 2021a)

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<sup>3</sup> <http://www.rareplants.cnps.org/detail/1520.html>

<sup>4</sup> [http://ucjeps.berkeley.edu/eflora/eflora\\_display.php?tid=79193](http://ucjeps.berkeley.edu/eflora/eflora_display.php?tid=79193)

**Table 4.  
Potential MSHCP Narrow Endemic Plant Assessment**

<b>Species Name</b> ( <i>Scientific Name</i> )	<b>Habitat Description</b>	<b>Comments</b>
Status		
<b>MSHCP Narrow Endemic Species</b>		
<b>California Orcutt grass</b> ( <i>Orcuttia californica</i> )  FE/SE CRPR 1B.1 MSHCP Covered	Vernal pools.	<u>No Potential</u> – Not expected to occur on site due to the lack of suitable vernal pool habitat. (Glenn Lukos Associates 2021a)
<b>Hammitt’s clay-cress</b> ( <i>Sibaropsis hammittii</i> )  CRPR 1B.2 MSHCP Covered	Occurs within chaparral and grassland habitats in association with clay substrates.	<u>No Potential</u> – Not expected to occur on site based on a lack of suitable clay and clay associated substrates, vegetation and historic disturbed conditions of the Project Site. (Glenn Lukos Associates 2021a)
<b>Many-stemmed dudleya</b> ( <i>Dudleya multicaulis</i> )  CRPR 1B.2 MSHCP Covered	Chaparral, coastal sage scrub, valley and foothill grassland. Often occurring in clay soils.	<u>No Potential</u> – Not expected to occur on site due to a lack of suitable habitat, including suitable clay and clay associated substrates, in conjunction with historic mining disturbance on the Site. (Glenn Lukos Associates 2021a)
<b>Munz’s onion</b> ( <i>Allium munzii</i> )  FE/ST CRPR 1B.1 MSHCP Covered	Restricted to mesic clay soils in western Riverside County, California within southern needlegrass grassland annual grassland, open coastal sage scrub, or occasionally, in cismontane juniper woodlands.	<u>No Potential</u> – Not expected to occur on site due to a lack of suitable habitat, including suitable clay and clay associated substrates, in conjunction with historic mining disturbance on the Site. (Glenn Lukos Associates 2021a)
<b>San Diego ambrosia</b> ( <i>Ambrosia pumila</i> )  FE CRPR 1B.1 MSHCP Covered	Chaparral, coastal sage scrub, valley and foothill grassland, vernal pools. Often in disturbed habitats.	<u>No Potential</u> – Not expected to occur on site. Study Area is located north of known range for the species and not detected during focused surveys. (Glenn Lukos Associates 2021a)
<b>San Miguel savory</b> ( <i>Clinopodium chandleri</i> (formerly <i>Satureja chandleri</i> ))  CRPR 1B.12 MSHCP Covered	Occurs in chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grasslands from 120 to 1,075 meters (394 to 3,526 feet).	<u>No Potential</u> – No potential to occur on site due to lack of suitable habitat. (Glenn Lukos Associates 2021a)



<b>Species Name</b> ( <i>Scientific Name</i> )	<b>Habitat Description</b>	<b>Comments</b>
Status		
<b>Slender-horned spineflower</b> ( <i>Dodecahema leptoceras</i> )  FT CRPR 1B.1 MSHCP Covered	Sandy soils in alluvial scrub, chaparral, cismontane woodland.	<u>No Potential</u> – Not expected to occur due to lack of suitable habitat. (Glenn Lukos Associates 2021a)
<b>Spreading navarretia</b> ( <i>Navarretia fossalis</i> )  FT CRPR 1B.1 MSHCP Covered	Vernal pools, playas, chenopod scrub, marshes and swamps (assorted shallow freshwater).	<u>No Potential</u> – Not expected to occur on site due to the lack of suitable vernal pool habitat. (Glenn Lukos Associates 2021a)
<b>Wright's trichocoronis</b> ( <i>Trichocoronis wrightii</i> var. <i>wrightii</i> )  CRPR 2.1 MSHCP Covered	Alkaline soils in meadows and seeps, marshes and swamps, riparian scrub, vernal pools.	<u>No Potential</u> – Not expected to occur on site due to the lack of suitable vernal pool or seasonal marsh habitat. (Glenn Lukos Associates 2021a)
<p><b>California Native Plant Society (CNPS): California Rare Plant Rank (CRPR)</b>  CRPR 1A – plants presumed extinct in California  CRPR 1B – plants rare, threatened, or endangered in California, but more common elsewhere  CRPR 2A – plants presumed extirpated in California but common elsewhere  CRPR 2B – plants rare, threatened, or endangered in California but more common elsewhere  CRPR 3 – plants about which we need more information, a review list  CRPR 4 – plants of limited distribution, a watch list  .1 – Seriously endangered in California  .2 – Fairly endangered in California  .3 – Not very endangered in California</p> <p><b>Federal (USFWS) Protection and Classification</b>  FE – Federally Endangered  FT – Federally Threatened  FC – Federal Candidate for Listing</p> <p><b>State (CDFW) Protection and Classification</b>  SE – State Endangered  ST – State Threatened</p>		

### 4.3 Mitigation and Equivalency

No impact and no mitigation proposed. As referenced in HANS 190024, all 1.35 acres of the Project Site located within the Temescal Wash floodprone area and identified as MSHCP Proposed Conservation Area will be dedicated as conserved land. The conserved lands represent suitable habitat for several MSHCP planning species.

The County of Riverside will condition the project to convey the proposed conservation area to the RCA prior to any project ground disturbance.

### 4.3.1 Direct Effects

No impact and no mitigation proposed. As referenced in HANS 190024, all 1.35 acres of the Project Site located within the Temescal Wash floodprone area and identified as MSHCP Proposed Conservation Area will be dedicated as conserved land. The conserved lands represent suitable habitat for several MSHCP planning species.

The County of Riverside will condition the project to convey the proposed conservation area to the RCA prior to any project ground disturbance.

### 4.3.2 Indirect Effects

No impact and no mitigation proposed. As previously stated, the Project Site is not currently located adjacent to an existing MSHCP Conservation Area. However, final reserve design may result in conserved lands being established both north and east of the Project Site. Therefore, as addressed below all proposed Urban/Wildlands Interface Guidelines and Best Management Practices (BMP) will be implemented.

## 5. CRITERIA AREA SPECIES MITIGATION (SECTION 6.3.2)

The MSHCP has determined that all of the sensitive species potentially occurring onsite or within the offsite Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required for criteria area species if suitable habitat is documented onsite and the assessment areas are located within a predetermined "Survey Area" (MSHCP 2004).

### 5.1 Criteria Area Species Survey Area – Plants

The Project Site occurs completely within an MSHCP Criteria Area Plant Survey Area for seven (7) species including:

- Parish's brittlebush (*Atriplex parishii*) [California Rare Plant Ranking (CRPR) List 1B.1];
- Davidson's saltscale (*Atriplex serenana* var.  *davidsonii*) [CRPR List 1B.2];
- thread-leaved brodiaea (*Brodiaea filifolia*) [Federally Threatened (FT)/State Endangered (SE), CRPR List 1B.1];
- smooth tarplant (*Centromadia pungens* ssp.  *laevis*) [CRPR 1B.1];
- round-leaved filaree (*Erodium macrophyllum*) [CRPR List 2.1];
- Coulter's goldfields (*Lasthenia glabrata* ssp.  *coulteri*) [CRPR List 1B.1];
- little mousetail (*Myosurus minimus* ssp.  *apus*) [CRPR List 3.1].

Following the habitat assessment and review of species distribution and habitat requirements, a single MSHCP criteria area plant species has potential to occur within the Project Site impact area, smooth tarplant, as shown in Table 6, *Potential MSHCP Criteria Area Plant Assessment* (Glenn Lukos Associates 2021a). However, the species was not observed during general biological surveys (Glenn Lukos Associates 2021a).

### 5.1.1 Methods

Reconnaissance surveys of the Project Site and offsite impact areas were conducted by Ruben Ramirez, Cadre Environmental on May 21<sup>st</sup>, 2019 and September 14<sup>th</sup>, 2020 in order to characterize and identify potential wildlife habitats, and to establish the accuracy of the data identified in the literature search and previous surveys. A habitat assessment for sensitive plants was conducted by Glenn Lukos Associates on August 20<sup>th</sup> 2019 (Glenn Lukos Associates 2021a).

Existing biological resources within and adjacent to the Project Site were initially investigated through a review of pertinent literature and online data. The California Natural Diversity Database (CNDDDB 2020), and CNPS (2020). In addition, soil, local floras, and consultation with local experts were utilized in the identification of species, soils, or habitats that could support the target MSHCP sensitive plants within or adjacent to the Project Site. These and other references are listed below and in References.

Prior to conducting fieldwork, a thorough archival review was conducted using the following baseline resources:

- California Native Plant Society 8<sup>th</sup> Inventory Online (2020);
- California Natural Diversity Data Base for the USGS 7.5' Lake Mathews Quadrangle (CNDDDB 2020a);
- Soil Survey of Western Riverside Area (Knecht 1971; USDA-NRCS 2020);
- Vegetation Alliances of Western Riverside County, California (Klein and Evens 2005);
- Vascular Flora of Western Riverside County (Roberts et al. 2004); and
- Reports prepared by the Regional Conservation Authority, Western Riverside County (<http://www.wrc-rca.org/about-rca/monitoring/monitoring-surveys/>).

### 5.1.2 Results/Impacts

Following the habitat assessment and review of species distribution and habitat requirements, a single MSHCP criteria area plant species has potential to occur within the Project Site impact area, smooth tarplant, as shown in Table 5, *Potential MSHCP Criteria Area Plant Assessment* (Glenn Lukos Associates 2021a). However, the species was not observed during general biological surveys (Glenn Lukos Associates 2021a).

**Table 5.  
Potential MSHCP Criteria Area Plant Assessment**

Species Name (Scientific Name)  Status	Habitat Description	Comments
<b>MSHCP Criteria Area Species</b>		
<b>Coulter's goldfields</b> ( <i>Lasthenia glabrata</i> ssp. <i>coulteri</i> )  CRPR 1B.1 MSHCP Covered	Playas, vernal pools, marshes and swamps (coastal salt).	<u>No Potential</u> – Not expected to occur on site due to a lack of suitable habitat, including suitable clay and clay associated substrates, in conjunction with historic mining disturbance on the Site. (Glenn Lukos Associates 2021a)
<b>Davidson's saltscale</b> ( <i>Atriplex serenana</i> var. <i>davidsonii</i> )  CRPR 1B.2 MSHCP Covered	Alkaline soils in coastal sage scrub, coastal bluff scrub and alkali sink scrub.	<u>No Potential</u> – Not expected to occur on site due to a lack of suitable habitat, including suitable clay and clay associated substrates, in conjunction with historic mining disturbance on the Site. (Glenn Lukos Associates 2021a)
<b>Little mousetail</b> ( <i>Myosurus minimus</i> ssp. <i>apus</i> )  CRPR 3.1 MSHCP Covered	Little mousetail is widespread in California. It occurs in alkaline vernal pools, and vernal alkali plains and grasslands, and blooms March to June.	<u>No Potential</u> – Not expected to occur on site due to a lack of suitable habitat vernal pool or vernal marsh habitat in conjunction with historic mining on the Site. (Glenn Lukos Associates 2021a)
<b>Parish's brittlescale</b> ( <i>Atriplex parishii</i> )  CRPR 1B.1 MSHCP Covered	Occurs on alkali or saline flats, alkali meadows, and in or along the margins of vernal pools or playa depressions.	<u>No Potential</u> – Not expected to occur onsite based on the absence of suitable alkali clay soils, associated habitats and historic disturbed conditions of the Site. (Glenn Lukos Associates 2021a)
<b>Round-leaved filaree</b> ( <i>Erodium macrophyllum</i> )  CRPR 1B.2 MSHCP Covered	Open areas in cismontane woodland and valley and foothill grasslands, which are often associated with heavy clay soils below 3,600 feet elevation.	<u>No Potential</u> – Not expected to occur onsite based on a lack of suitable clay and clay associated substrates, vegetation and historic disturbed conditions of the Project Site. (Glenn Lukos Associates 2021a)

<b>Species Name</b> ( <i>Scientific Name</i> )	<b>Habitat Description</b>	<b>Comments</b>
Status		
<b>Smooth tarplant</b> ( <i>Centromadia pungens</i> ssp. <i>laevis</i> )  CRPR 1B.1 MSHCP Covered	Alkaline soils in chenopod scrub, meadows and seeps, playas, and disturbed habitats.	<u>Limited Potential</u> - to occur onsite although not observed during general biological surveys. (Glenn Lukos Associates 2021a)
<b>Thread-leaved brodiaea</b> ( <i>Brodiaea filifolia</i> )  FT/SE CRPR 1B.1 MSHCP Covered	Typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline flats of riparian areas, vernal pools, mesic southern needlegrass grassland, mixed native-annual grassland, and alkali grassland plant communities in association with clay, clay loam, or alkaline silty-clay soils.	<u>No Potential</u> – Not expected to occur onsite based on a lack of suitable clay and clay associated substrates, vegetation and historic disturbed conditions associated with mining activities on the Site. (Glenn Lukos Associates 2021a)
<b>California Native Plant Society (CNPS): California Rare Plant Rank (CRPR)</b> CRPR 1A – plants presumed extinct in California CRPR 1B – plants rare, threatened, or endangered in California, but more common elsewhere CRPR 2A – plants presumed extirpated in California but common elsewhere CRPR 2B – plants rare, threatened, or endangered in California but more common elsewhere CRPR 3 – plants about which we need more information, a review list CRPR 4 – plants of limited distribution, a watch list .1 – Seriously endangered in California .2 – Fairly endangered in California .3 – Not very endangered in California <b>Federal (USFWS) Protection and Classification</b> FE – Federally Endangered FT – Federally Threatened FC – Federal Candidate for Listing <b>State (CDFW) Protection and Classification</b> SE – State Endangered ST – State Threatened		

### 5.1.3 Mitigation and Equivalency

No impact and no mitigation proposed. As referenced in HANS 190024, all 1.35 acres of the Project Site located within the Temescal Wash floodprone area and identified as MSHCP Proposed Conservation Area will be dedicated as conserved land. The conserved lands represent suitable habitat for several MSHCP planning species. The County of Riverside will condition the project to convey the proposed conservation area to the RCA prior to any project ground disturbance.

### 5.2 Criteria Area Species Survey Area – Burrowing Owl

The MSHCP has determined that all of the sensitive species potentially occurring onsite have been adequately covered (MSHCP Table 2-2 Species Considered for

Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required wildlife species if suitable habitat is documented onsite and/or if the property is located within a predetermined “Survey Area” (MSHCP 2004).

The Project Site occurs partially within a predetermined Survey Area for the burrowing owl. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented adjacent to the property including foraging habitat documented throughout the Project Site. Therefore, focused surveys were conducted by Cadre Environmental during the spring and summer of 2019 and 2021.

### **5.2.1 Methods**

#### **Burrowing Owl Habitat Assessment and Focused Surveys**

In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. Step II is comprised of two parts, Part A: Focused Burrow Surveys and Part B: Focused Burrowing Owl Surveys.

Each step is briefly outlined below, followed by the methodology and results of each survey conducted within the Project Site. All initial habitat assessment, burrow and focused surveys were conducted by Ruben Ramirez.

Surveys were conducted during weather that is conducive to observing owls outside their burrows and detecting burrowing owl sign. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. None of the surveys were conducted within five (5) days of measurable precipitation.

In addition to the MSHCP guidelines, field notes were taken daily. These notes recorded the date, location, animal species observed, and general habitat characteristics of each area and habitat examined that day.

#### Step I – Habitat Assessment

Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present onsite. Cadre Environmental conducted the habitat assessment on May 21<sup>st</sup>, 2019. Upon arrival at the Project Site, and prior to initiating the assessment survey, Cadre Environmental used binoculars to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, such as ground squirrels (*Otospermophilus beecheyi*) or badgers (*Taxidea*

*taxus*), but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, or wood debris piles, or openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

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

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

### Step II – Locating Burrows and Burrowing Owls

Concurrent with the initial habitat assessment, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP protocol, which is described below under Part A. Focused Burrow Survey. The MSHCP protocol indicated that no more than 100 acres should be surveyed per day/per biologist.

#### Part A: Focused Burrow Survey

A systematic survey for burrows, including burrowing owl sign, was conducted by walking across all suitable habitats mapped within the Project Site on May 21<sup>st</sup>, 2019. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 20 meters (approximately 66 ft.) apart to the extent possible, and owing to the terrain and safety concerns along the northern Project Site boundary. Transect routes were also adjusted to account for topography and in general ground surface visibility. All observations of suitable burrows or dens, natural or man-made, or sightings of burrowing owl, were recorded and mapped during the survey.

#### Part B: Focused Burrowing Owl Surveys

Eight (8) focused burrowing owl surveys (in addition to the initial focused burrow survey – Step II, Part A) were conducted on May 31<sup>st</sup>, June 20<sup>th</sup>, July 10<sup>th</sup>, August 10<sup>th</sup>, 2019, April 10<sup>th</sup>, 30<sup>th</sup>, May 20<sup>th</sup> and June 9<sup>th</sup>, 2021 from one hour before sunrise to two hours after sunrise (Cadre Environmental 2020, 2021). During visual surveys, all potentially suitable burrow or structure entrances were investigated for signs of owl occupation, such as feathers, tracks, or pellets, and carefully observed to determine if burrowing owls utilize these features, when present. All burrows are monitored at a short distance from the entrance, and at a location that would not interfere with potential owl behavior, when present. In addition to monitoring potential burrow locations, all suitable habitats

in the Project Site were walked along transects averaging 20 meters (approximately 66 feet) between centerlines to the extent possible.

### **5.2.2 Results/Impacts**

The Project Site occurs partially within a predetermined Survey Area for the burrowing owl. Suitable burrowing owl burrows potentially utilized for refugia and/or nesting were documented adjacent to the property including foraging habitat documented throughout the Project Site. Therefore, focused surveys were conducted by Cadre Environmental during the spring and summer of 2019 and 2021. No burrowing owl or characteristic sign such as white-wash, feathers, tracks, or pellets were detected within or immediately adjacent to the Project Site during the 2019 or 2021 survey effort (Cadre Environmental 2020, 2021).

### **5.2.3 Mitigation and Equivalency**

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

Following submittal, review and approval of the 30-day burrowing owl preconstruction survey report by the City of County of Riverside and compliance with all species-specific conservation goals, if detected within or adjacent to the Project Site, the project will be consistent with MSHCP Section 6.3.2.

## **5.3 Criteria Area Species Survey Area – Mammals**

The MSHCP has determined that all of the sensitive species potentially occurring onsite or within the offsite Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required if suitable habitat for mammals is documented onsite and the property is located within a predetermined “Survey Area” (MSHCP 2004).

The Project Site and offsite Project Site do not occur within a predetermined Survey Area for mammal species. Compliance with Section 6.1.3 respective of MSHCP mammals is not applicable to the proposed Project Site or offsite Project Site.



### **5.3.1 Methods**

Compliance with Section 6.1.3 respective of MSHCP mammals is not applicable to the proposed Project Site or offsite Project Site.

### **5.3.2 Results/Impacts**

Compliance with Section 6.1.3 respective of MSHCP mammals is not applicable to the proposed Project Site or offsite Project Site.

### **5.3.3 Mitigation and Equivalency**

Compliance with Section 6.1.3 respective of MSHCP mammals is not applicable to the proposed Project Site or offsite Project Site.

## **5.4 Criteria Area Species Survey Area – Amphibians**

The MSHCP has determined that all of the sensitive species potentially occurring onsite or within the offsite Project Site have been adequately covered (MSHCP Table 2-2 Species Considered for Conservation Under the MSHCP Since 1999, 2004). However, additional surveys may be required if suitable habitat for amphibian species is documented onsite and the property is located within a predetermined “Survey Area” (MSHCP 2004).

### **5.4.1 Methods**

Compliance with Section 6.1.3 respective of MSHCP amphibians is not applicable to the proposed Project Site or offsite Project Site.

### **5.4.2 Results/Impacts**

Compliance with Section 6.1.3 respective of MSHCP amphibians is not applicable to the proposed Project Site or offsite Project Site.

## **6. REFERENCES**

Cadre Environmental. 2021. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Focused Burrowing Owl & Least Bell’s Vireo Surveys for the 46.17-Acre Temescal & Dawson Canyon Road Warehouse Project Site, Unincorporated Riverside County, Western Riverside County, California.

Cadre Environmental. 2020. General MSHCP Biological Resources Habitat Assessment /Constraints Analysis for the 46.18-Acre Temescal & Dawson Canyon Road Warehouse Project Site, Unincorporated Riverside County, Western Riverside County, California.

Cadre Environmental. 2019. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Focused Burrowing Owl & Least Bell's Vireo Surveys for the 70-Acre Corona Clay Company Project Site, City of Corona Sphere of Influence, Unincorporated Western Riverside County, California.

California Department of Fish and Wildlife. 2012. Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency.

County of Riverside. 2006. Burrowing Owl Survey Instructions – Western Riverside Multiple Species Habitat Conservation Plan Area.

Glenn Lukos Associates. 2020. Jurisdictional Delineation of the Corona Clay Project Site, an Approximate 46.18-Acre Property Located in the City of Corona Sphere of Influence, Riverside County, California (Updated March 2021).


Glenn Lukos Associates. 2021a. Rare Plant Habitat Assessment and Focused Surveys for HANS 190024 – Temescal Canyon Road and Dawson Canyon Road Warehouse Site (APN 283-160-043, Riverside County, California (Updated March 2021).

Glenn Lukos Associates. 2021b. Evaluation of Impacts to Riparian Habitat Associated with Changes to Hydrology for Temescal Wash and Coldwater Canyon Creek Associated with the Proposed Temescal Business Park, Corona, Riverside County.

Riverside County Integrated Project (RCIP) Multiple Species Habitat Conservation Plan (MSHCP), March 2004.

United States Department of Agriculture. 2020. Custom Soil Resources Report for Western Riverside Area, California. Natural Resources Conservation Service. <https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, accessed November 2020.

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

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