MSHCP Determination of Biologically Equivalent or Superior Preservation

Alessandro Project Site
City of Moreno Valley, Riverside County, California

Prepared for:
Compass Danbe Real Estate Partners
523 Main St
El Segundo, CA 90245
Attn: Mark Bachli

Prepared by:
MIG, Inc.
1500 Iowa Avenue, Suite 110
Riverside, California 92507
Contact: Jonathan Campbell (310) 903-7876
jcampbell@migcom.com

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1.0 EXECUTIVE SUMMARY

This following document presents the results of a Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis conducted by MIG, Inc. (MIG) for the Compass Danbe Real Estate Partners-owned Alessandro project. The DBESP analysis is based on existing conditions, MSHCP Section 6.1.2 assessments, focused surveys and MSHCP compliance determination outlined in the following documents prepared by MIG:

- Burrowing Owl Focused Survey Report, Alessandro Project Site (MIG, Inc. 2020a).
- Least Bell's Vireo Focused Survey Report, Alessandro Project Site (MIG, Inc. 2020b).
- Alessandro Project Site Jurisdictional Delineation Report & Impact Analysis (MIG, Inc 2021).
- MSHCP General Biological Resources Assessment & Compliance Analysis (MIG, Inc. 2020d)

A total of 1.22-acre of permanent impacts will occur within the two drainages as a result of project initiation. Of this area, 0.41 acre represents MSHCP riparian resources, and 0.81 acres represents MSHCP riverine resources To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset permanent impacts to all 1.22-acre of MSHCP Section 6.1.2 riparian and riverine resources located within the two (2) unnamed drainages as described below.

To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset permanent impacts to MSHCP Section 6.1.2 Riparian and Riverine resources by:

1. Permanent impacts to 0.41-acre of MSHCP Section 6.1.2 riparian resources would be mitigated at a ratio of 2:1 through purchase of 0.82 acre of rehabilitation credits from the Riverpark Mitigation Bank.
2. Permanent impacts to 0.81-acre of MSHCP Section 6.1.2 riverine resources would be mitigated at a ratio of 1:1 through purchase of 0.81 acre of re-establishment credits from the Riverpark Mitigation Bank.

2.0 INTRODUCTION

This document presents the results of a Determination of Biologically Equivalent or Superior Preservation analysis conducted by MIG, Inc. (MIG) for the Compass Danbe Real Estate Partners-owned Alessandro Project Site located in Moreno Valley, Riverside County, California, 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 Site

The 17.66-acre (2.65-acre offsite) Project Site is located immediately south of Alessandro Boulevard in the City of Moreno Valley, Riverside County, California, Assessor Parcel Numbers (APNs) 297-170-002 and 279-170-003 (Figure 1 and Figure 2). Offsite impacts extend into the Alessandro right-of-way to the north and APNs 297-170-088 and 279-170-089 to the south (Figure 2). The Project Site occurs within the U.S.

Geological Survey (USGS) 7.5' series Riverside East Quadrangle, Township 3 South, Range 4 West, Section 12. The Project Site lies in a mostly developed landscape in Moreno Valley. To the north and south of the Project Site is residential and commercial development. Directly east and west of the Project Site are small parcels of annually disked land, but beyond those parcels the general landscape is developed.

The Project Site is located entirely within the MSHCP Reche Canyon/Badlands Area Plan and is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area.

2.2 Project Description

The proposed action includes the construction of two industrial warehouse buildings with a combined footprint of 372,309 square feet. Building 1 is 277,181 square feet and Building 2 is 95,128 square feet. Landscaping will be installed around the perimeter of the parcels and the buildings; and interspersed in the parking areas. Both buildings provide parking spaces for automobiles, ADA, Clean Air recharging, and trailer parking spaces according to the City of Moreno Valley parking standards. The entire 17.66 acres will be developed.

2.3 Existing Conditions

The Project Site is heavily disturbed and annually disked as part of weed abatement requirements. The Project Site is flat and bordered to the south by industrial buildings, north by high density residential development, and east and west by disturbed lands. Two (2) drainage features bisect the property in a north to south direction which currently sustains disturbed wetland and riparian vegetation as described below. A summary of the acreages of each mapped vegetation community or land cover type is provided in Table 1.

Table 1. Project Site Plant Communities and Land Cover Types

Plant Communities/Land Cover Type	Onsite Area (acres)	Offsite Area (acres)	TOTAL Impacts (acres)
Disturbed/Non-Native Grassland	16.38	0.00	16.38
Wet Meadow	0.81	0.00	0.81
Black Willow Woodland	0.39	0.00	0.39
Developed	0.05	2.65	2.70
Disturbed Wetland – Cattail	0.02	0.00	0.02
Ornamental (individual tree)	0.01	0.00	0.01
Mule Fat (individual shrub)	0.001	0.00	0.001
Total	17.66	2.65	20.31

Vegetation Communities

Vegetation communities were mapped in the field onto a color aerial photograph (Figure 3) and were evaluated to determine if they are considered sensitive under federal, state, or local regulations or policies. Vegetation communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations. Vegetation community names and hierarchical structure follows the CDFW "List of California Terrestrial Natural Communities" or Holland (1986) classification systems. Distribution of

onsite vegetation communities and representative photographs are provided as Figure 3, and 4 (a-b). The species listed below represent those individuals identified onsite during the field surveys listed in this report.

Disturbed/Non-Native Grassland

The majority of the Project Site is characterized as disturbed/non-native grassland and experiences annual dicking activities. Dominant plant species observed within this vegetation community include hairy vetch (*Vicia villosa*), black mustard *(Brassica nigra*), field bindweed *(Convolvulus arvensis*), kochia (*Bassia scoparia*), prickly lettuce (*Lactuca serriola*), jointed charlock (*Raphanus sativus*), Italian rye (*Lolium multiflorum*), horseweed (*Erigeron canadensis*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), tumbling pigweed (*Amaranthus albus*), common wild oat (*Avena fatua*), prickly sow thistle (*Sonchus asper*), jimsonweed (*Datura wrightii*), telegraph weed (*Heterotheca grandiflora*), cheeseweed (*Malva parviflora*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), mayweed (*Anthemis cotula*), prostrate knotweed (*Polygonum aviculare*), Spanish lotus (*Acmispon americanus*), and western witchgrass (*Panicum capillare*).

Wet Meadow

The seasonally inundated swales associated with Drainage A and B are characterized as wet meadow based on a review of historic aerial photography. Dominant plant species observed within this region are similar to those listed above in disturbed/non-native grassland.

Black Willow Woodland

The northern region of Drainage A is dominated by black willow woodland. Common species documented within this vegetation community include Gooding's willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), and an understory of non-native grasses and ruderal species as described above.

Developed

Developed regions of the Project Site include a culvert structure located at the southern terminus of Drainage A and existing paved roads located within the offsite impact areas.

Disturbed Wetland – Cattail

Two small patches of disturbed wetland-cattail habitat are located in the northern region of both Drainage A and B, immediately adjacent to Alessandro Boulevard. Dominant plant species observed within this vegetation community include curly dock (Rumex crispus), common cattail (*Typha latifolia*), tall nutsedge (*Cyperus eragrostis*), annual beard grass (*Polypogon monspeliensis*), Mexican fan palm (*Washingtonia robusta*), dallis grass (*Paspalum dilatatum*), barnyard grass (*Echinochloa crus-galli*), and tarragon (*Artemisia dracunculus*).

Ornamental

A single ornamental tree, Mexican palo verde (*Parkinsonia aculeata*) is located adjacent to the black willow woodland.

Mule Fat

A single mule fat (*Baccharis salicifolia*) shrub is located near the northeast corner of the Project Site.

Soils

The Natural Resources Conservation Service (NRCS) has identified one soil series within the Project Site (Figure 5), and is described below (NRCS 2020). The National List and California List of Hydric Soils was reviewed to determine if the soil type within the Project Site is hydric. The mapped soil series is not classified as a hydric soil on the National List or California List of Hydric soils (NRCS 2020).

Monserate sandy loam, 0 to 5 percent slopes.

The Monserate series is a member of the fine-loamy, mixed, thermic family of Typic Durixeralfs. This soil type has an impermeable layer (duripan) approximately 28 inches below the surface, which can form a perched water table when water is present, since infiltration through this soil layer is very slow. This may be a strong influence on the Disturbed Wetland–Cattail that are present onsite, and allow for willow and other hydrophytic vegetation to persist in the swales.

The soils formed in alluvium derived principally from granitic rocks. Monserate soils have brown and yellowish red, slightly acid, sandy loam A horizons, reddish brown, neutral, sandy clay loam B2t horizons underlain by a silica-cemented duripan. Monserate soils are found in the interior valleys in the western part of southern California. Monserate soils are moderately well to well drained with slow to rapid runoff. Permeability is moderately slow below 10 to 20 inches and very slow in the duripan.

Drainages

There are two small emergent disturbed cattail wetlands that connect with, and flow into, two ephemeral drainage swales within the Project Site limits (Figure 2). The primary sources of hydrology that support these features are runoff from storm flows, as well as nuisance flows (irrigation overspray, etc.) from surrounding residential and commercial areas. The underlying duripan found within Monserate soils keeps water present in the disturbed wetlands-cattail, and retains moisture sufficient for willows to grow, since the duripan can create a perched water table.

The drainage features are the remnants of natural braided channels that were present prior to urbanization. Evidence of these channels are visible in aerial photography in 1977 (UCSB 2020). The present-day drainage swales convey runoff through overland flow into culverts that terminate at a detention basin, approximately 0.75 mile east of the Project Site, located at Brodiaea Avenue and Gilbert Street.

The drainage swales within the Project Site are not confluent with the Sunnymead or Perris Valley Storm Drain Channels based on stormwater facility maps published by the Riverside County Flood Control and Water Conservation District.

The Sunnymead Storm Drain Channel is the nearest named hydrologic feature and is located offsite, and approximately 0.3 mile west of the Project Site. The Sunnymead Channel is confluent with the Perris Valley Storm Drain Channel which is located approximately 2.4 miles southeast of the Project Site. The Perris Valley Storm Drain Channel is confluent to the San Jacinto River, which flows into Lake Elsinore. Lake Elsinore generally acts as a sink, although high water flows are occasionally diverted through the Elsinore Spillway

Channel to Temescal Creek. Temescal Creek flows to the Santa Ana River (nearest Traditional Navigable Water [TNW]) and finally to the Pacific Ocean.

3.0 RIPARIAN, RIVERINE, VERNAL POOL MITIGATION (SECTION 6.1.2)

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the FESA, as well as a NCCP under the NCCP Act of 2001. The MSHCP is being used to allow the participating jurisdictions to authorize "Take" of covered plant and wildlife species identified within the Plan Area. As projects are proposed within a Western Riverside 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 the California Environmental Quality Act (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."*

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".*

Although not expressly defined, it is assumed that the Army Corps of Engineer's 1987 Manual for delineating wetlands should be used in determining the presence of wetland indicators in vernal pools. With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

3.1 Methods

MSHCP Riparian, Riverine, and Vernal Pool Resources Assessment

MIG's senior biologist Jonathan Campbell, PhD performed the field investigation on April 21st, 2020 to evaluate the extent of jurisdictional features subject to the MSHCP Section 6.1.2 riparian, riverine and vernal pool resources. The limits of riparian/riverine features were recorded in the field within accessible areas using aerial maps and Google earth

Specifically, habitats were assessed to determine if MSHCP riparian/riverine resources and vernal pools, pursuant to section 6.1.2 of the MSHCP are present onsite. MSHCP riparian/riverine resources are defined as,

> "*those lands that 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. Vernal pools are 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"* (MSHCP 2004).

In addition, stock ponds, ephemeral pools, and other areas of potential fairy shrimp habitat are identified and mapped, where present.

Focused Riparian Bird Surveys

Low potential habitat for least Bell's vireo (*Vireo bellii pusillus*) was initially identified onsite in the black willow woodland vegetation community (Figure 3, Vegetation Communities Map). Focused protocol surveys were conducted in spring/summer 2020 to determine the presence/absence of this species on the Project Site. The *Least Bell's Vireo Survey Report for the Alessandro Project Site* is provided in Appendix B.

An initial habitat assessment for potential least Bell's vireo habitat was conducted on May 21st, 2020. As described below, all vegetation communities onsite were mapped and assessed for suitability for least Bell's vireo. A single vegetation community including black willow woodland was characterized as representing low potential habitat for the species. Therefore, focused United States Fish and Wildlife Service (USFWS) protocol surveys were initiated. As stated by the USFWS:

> *"Under normal circumstances, all riparian areas and any other potential vireo habitats should be surveyed at least eight (8) times during the period from April 10 to July 31. However, we may concur, on a case by case basis, with a reduced effort if unusual circumstances dictate that this is a prudent course of action. For instance, intensive surveys of small, marginal or extralimital habitats by experienced personnel may well result in defensible conclusions that eight (or more) individual surveys are unnecessary. Under such unusual circumstances, we will consider requests for reductions in the prescribed number of individual surveys. In any case, site visits should be conducted at least 10 days apart to maximize the detection of, for instance, late and early arrivals, females, particularly "non-vocal" birds of both sexes, and nesting pairs.*
>
> 1) *Although the period from April 10 to July 31 encompasses the period during which most vireo nesting activity occurs, eight surveys are generally sufficient to detect most (if not all) vireo adults in occupied habitats. Precise vireo censuses and estimations of home range likely will not be possible unless surveys are conducted outside of this time window. Although focused surveys conducted in accordance with these guidelines substantially reduce the risk of an unauthorized take* that could potentially occur as a result of land development or other projects, individual project proponents may wish to conduct surveys that are more rigorous than those that would otherwise*

result from strict adherence to these survey guidelines. If additional information (e.g., extent of occupied habitat, total numbers of adult and juvenile vireos in study area) is desired or necessary, surveys should be extended to August 31 and conducted in such a manner as to collect the data necessary to prepare reports that reflect the methods and standards established in the current scientific literature on this subject. In particular, information collected after July 15 will reflect a broader extent to the riparian habitat and other adjacent habitat types that the vireo typically utilizes during the latter phase of the breeding season, especially when the young become independent of the adults.

2) *Surveys should be conducted by a qualified biologist familiar with the songs, whisper songs, calls, scolds, and plumage characteristics of adult and juvenile vireos. These skills are essential to maximize the probability of detecting vireos and to avoid potentially harassing the species in occupied habitats.*

3) *Surveys should be conducted between dawn and 11:00 a.m. Surveys should not be conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather that individually or collectively may reduce the likelihood of detection.*

4) *Surveyors should not survey more than 3 linear kilometers or more than 50 hectares of habitat on any given survey day. Although surveyors should generally station themselves in the best possible locations to hear or see vireos, care should be taken not to disturb potential or actual vireo habitats and nests or the habitat of any sensitive or listed riparian species.*

5) *All vireo detections (e.g., vocalization points, areas used for foraging, etc.) should be recorded and subsequently plotted to estimate the location and extent of habitats utilized. These data should be mapped on the appropriate USGS quadrangle map.*

6) *Data pertaining to vireo status and distribution (e.g., numbers and locations of paired or unpaired territorial males, ages and sexes of all birds encountered) should be noted and recorded during each survey. In addition, surveyors should look for leg bands on vireo adults and juveniles if, in fact, it is possible to do so without disturbing or harassing the birds. If leg bands or other markers are observed, then surveyors should record and report the detection and associated circumstances to us by telephone, facsimile, or electronic mail as soon as possible. Reports should include the colors and relative locations of any and all bands detected, the age and sex of the marked bird, and the precise location of the detection.*

7) *The numbers and locations of all brown-headed cowbirds (Molothrus ater) detected within vireo territories should be recorded during each survey and subsequently reported to us. In addition, all detections of the State and federally endangered southwestern willow flycatcher (Empidonax trallii extimus, flycatcher) and State endangered yellow-billed cuckoo (Coccyzus americanus, cuckoo) should be recorded and reported. Any and all cuckoo and flycatcher adults, young, or nests should not be approached, and taped vocalizations of these species should not be used unless*

> *authorized in advance by scientific permits to take* issued by us (if appropriate) and the California Department of Fish and Game. Flycatcher presence/absence surveys require a recovery permit issued by us per section 10(a)(1)(A) of the Endangered Species Act."* (USFWS 2001)

A total of eight (8) focused least Bell's vireo surveys were conducted on May 21st, 31st, June 10th, 20th, 30th, July 10th, 20th, and 30th, 2020 by Senior Biologist Jonathan Campbell, PhD and Ruben Ramirez throughout the black willow woodland documented onsite and described below. All surveys were conducted during times and conditions conducive to observing least Bell's vireo.

No least Bell's vireo was detected during the 2020 surveys.

3.2 Results/Impacts

The Project Site contain two ephemeral drainages, willow woodland, and two small patches of disturbed wetland–cattail that are subject to the jurisdiction of the MSHCP Section 6.1.2. A total of eight sample points (SP1 to SP8) were examined to identify MSHCP jurisdictional wetland features. Table 2 provides a summary of MSHCP Section 6.1.2 riparian and riverine acreage impacts.

A total of 1.22 acre of MSHCP riparian and riverine were mapped onsite (see Table 2 below).

Table 2. MSHCP Section 6.1.2 Riparian and Riverine Impacts

MSHCP Jurisdictional Resources	Impacts Acres[1]
Riverine	0.81 acre
Riparian/Aquatic	0.41 acre
MSHCP Riparian/Riverine Total	1.22 acre

[1]Note: Values are approximate due to rounding.

Disturbed Wetland – Cattail

Two (2) patches of disturbed wetlands-cattail, totaling 0.02 acre, each situated on the north end of the two drainage swales met the definition of MSHCP Section 6.1.2 riparian (aquatic) resources.

Black Willow Woodland

Black willow woodland is found just downstream of the disturbed wetlands-cattail along the western Drainage A and forms a broad woodland habitat. A small patch is also present on the upstream end of Drainage B. These areas constitute 0.39 acre of riparian habitat and is regulated by the MSHCP Section 6.1.2 riparian resources to the outer dripline of the trees.

Drainage A

Directly downstream of the black willow woodland, woody vegetation disappears and is dominated by an array of grasses and forbs. The dominant plant species range from FAC to UPL and do not meet the criteria of hydrophytic vegetation and hydric soil characteristics are absent. These areas remain green for much longer duration than the surrounding area, indicating the presence of soil moisture, resulting from the urban

hydrologic input. Examination of historic aerial photographs confirmed a defined bed and bank under non-disked conditions, indicating that wetland hydrology is present. This drainage would be considered ephemeral in nature and extends for 218 linear feet beyond the willow woodland until it terminates in a concrete drainage inlet (already impacted jurisdictional feature) and exits the Project Site. The total drainage length is 546 feet. The width of jurisdiction was determined by the presence of hydrology and review of historic aerials, for a total of 0.49 acre of jurisdiction. This drainage is regulated by the MSHCP riverine habitat.

Drainage B

Drainage B Is located directly downstream and adjacent to the eastern patch of disturbed wetland-cattail. Like Drainage A, woody vegetation is absent and grasses and forbs are dominant. The Project Site limits are regularly disked, so this occurs under highly disturbed conditions. The dominant plant species are mostly FACU, but range from a few FACW to UPL species. This drainage does not meet the criteria of hydrophytic vegetation and hydric soil characteristics are absent. Like Drainage A, these areas remain green for much longer duration than the surrounding area, indicating the presence of soil moisture, resulting from the urban hydrologic input. Examination of historic aerial photographs confirmed a defined bed and bank under non-disked conditions. Wetland hydrology is present. This drainage would be considered ephemeral in nature and extends for 603 linear feet until it terminates off-site in a concrete inlet. The width of jurisdiction was determined by the presence of hydrology and review of historic aerials, for a total of 0.32 acre of jurisdiction. This drainage is regulated by the MSHCP as riverine habitat.

No vernal pool resources, seasonal depressions or associated clay substrates were documented onsite. No vernal pools or suitable resources for the vernal pool fairy shrimp (*Branchinecta lynchi*) and Riverside fairy shrimp (*Streptocephalus woottoni*) were documented onsite. No surveys are required.

No least Bell's vireo was detected during the 2020 surveys. No suitable habitat for the southwestern willow flycatcher (*Empidonax traillii extimus*) or western yellow-billed cuckoo (*Coccyzus americanus*) was detected within or adjacent to the Project Site. These species are not expected to be present. No surveys are required.

3.3 Mitigation and Equivalency

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.

A total of 1.22-acre of permanent impacts will occur within the two drainages as a result of project initiation. Of this area, 0.41 acre represents MSHCP riparian resources, and 0.81 acres represents MSHCP riverine resources To meet the criteria of a biologically equivalent or superior alternative, the applicant will offset permanent impacts to all 1.22-acre of MSHCP Section 6.1.2 riparian and riverine resources located within the two (2) unnamed drainages as described below.

1. Permanent impacts to 0.41-acre of MSHCP Section 6.1.2 riparian resources would be mitigated at a ratio of 2:1 through purchase of 0.82 acre of rehabilitation credits from the Riverpark Mitigation Bank.
2. Permanent impacts to 0.81-acre of MSHCP Section 6.1.2 riverine resources would be mitigated at a ratio of 1:1 through purchase of 0.81 acre of re-establishment credits from the Riverpark Mitigation Bank.

3.2.2 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.

Initiation of the proposed project will not result in temporary or permanent indirect edge effects to sensitive receptors as a result of noise or lighting levels. The Project Site is located immediately adjacent to developed and disturbed lands and do not provide suitable resources or open space habitat for common or sensitive species.

The ultimate Project Site storm water conveyed and released into the existing concrete drainage inlets will be in compliance with National Pollutant Discharge Elimination System (NPDES) regulations and County of Riverside Water Quality Management Plan (WQMP) as required of the developer of the proposed project and the City of Moreno Valley for treatment of storm water prior to discharge.

4.0 NARROW ENDEMIC PLANT SPECIES MITIGATION SECTION (6.1.3)

This analysis of potential biological resources located on the Project Site includes a review of available background information in and around the vicinity of the Project Site and completion of multiple field and focused surveys conducted from May to August 2020.

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 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 does not occur within a predetermined Survey Area for MSHCP narrow endemic plant species. Compliance with Section 6.1.3 respective of MSHCP narrow endemic plants is not applicable to the proposed Project Site.

4.1 Methods

Compliance with Section 6.1.3 respective of MSHCP narrow endemic plants is not applicable to the proposed Project Site.

4.2 Results/Impacts

Compliance with Section 6.1.3 respective of MSHCP narrow endemic plants is not applicable to the proposed Project Site.

4.3 Mitigation and Equivalency

Compliance with Section 6.1.3 respective of MSHCP narrow endemic plants is not applicable to the proposed Project Site.

4.3.1 Direct Effects

Compliance with Section 6.1.3 respective of MSHCP narrow endemic plants is not applicable to the proposed Project Site.

4.3.2 Indirect Effects

Compliance with Section 6.1.3 respective of MSHCP narrow endemic plants is not applicable to the proposed Project Site.

5.0 CRITERIA AREA SPECIES MITIGATION (SECTION 6.3.2)

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 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 does not occur within a predetermined Survey Area for MSHCP criteria area plant species. Compliance with Section 6.1.3 respective of MSHCP criteria area plants is not applicable to the proposed Project Site.

5.1.1 Methods

Compliance with Section 6.1.3 respective of MSHCP criteria area plants is not applicable to the proposed Project Site.

5.1.2 Results/Impacts

Compliance with Section 6.1.3 respective of MSHCP criteria area plants is not applicable to the proposed P Project Site.

5.1.3 Mitigation and Equivalency

Compliance with Section 6.1.3 respective of MSHCP criteria area plants is not applicable to the proposed Project Site.

5.2 Criteria Area Species Survey Area – Burrowing Owl

The Project Site occurs within a predetermined Survey Area for the burrowing owl. Based on the presence of low potential habitat documented during the May 21st, 2020 habitat assessment within and adjacent to the Project Site, focused surveys for burrowing owl were conducted. The surveys were conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (2006). Survey protocol consists of three steps: Step I – Habitat Assessment; Step II – Locating Burrows and Burrowing Owls; and Step III – Reporting Requirements. Each step conducted during this survey is briefly outlined below. Surveys were conducted during weather that is conducive to observing burrowing owls outside of their burrows and detecting burrowing owl sign. All surveys were conducted from two hours before sunset to one hour after or from one hour before to two hours after sunrise. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Surveys were not conducted within five days of measurable precipitation.

5.2.1 Methods

Step I – Habitat Assessment

Step 1 of the burrowing owl focused survey consists of walking the Project Site to determine if suitable habitat is present. This initial habitat assessment was conducted on May 21st, 2020 by MIG Senior Biologist Jonathan Campbell, PhD. Upon arrival at the Project Site and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically across each habitat type while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat include, but are not limited to: native and non-native grassland, grassland interspersed with shrubland along ecotonal areas, shrublands with low density shrub cover, concrete rubble, and earthen berms. 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 near man-made structures. A majority of the habitat mapped onsite represents low potential habitat for burrowing owl.

According to the MSHCP (2006) 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.

Step II – Locating Burrows and Burrowing Owls

If any burrows are found during the Part A – Focused Burrow Survey, Part B – Focused Burrowing Owl Surveys are required to determine presence or absence of the species. The Part B effort consists of at least four focused surveys to search for signs of occupation at the burrows, or observations of burrowing owls. Focused surveys are to be conducted within the breeding season between March 1st and August 31st. A review of local documentation suggests that no burrowing owls have been historically identified within the extent of the Project Site boundary. In addition to the breeding season survey conducted on May 21st, 2020, three additional breeding season surveys were conducted throughout the Project Site on June 20th, July 10th, and 30th, 2020. All surveys were conducted during times and conditions conducive to observing burrowing owl. A thorough investigation of the potentially suitable burrows concluded that no evidence of burrowing owl activity was present in any of the onsite burrow complexes.

Part A: Focused Burrow Survey

Due to the presence of low potential burrowing owl habitat, focused burrow surveys, including documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl, were conducted as part of the protocol on May 21st, 2020.

The systematic surveys for burrows, including burrowing owl signs, were conducted by walking across all potential habitat mapped at the Project Site. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 30 meters (approximately 100 feet) apart. The burrow survey began within two hours prior to sunset. Accordingly, due to the presence of suitable burrowing owl burrows onsite, Step II, Part B – Focused Burrowing Owl Surveys are required.

Part B: Focused Burrowing Owl Surveys

5.2.2 Results/Impacts

Both low potential burrowing owl habitat and burrowing owl burrows were identified within the Project Site during the Step I – Habitat Assessment performed on May 21st, 2020 and the Step II, Part A – Focused Burrow Survey performed on May 21st, 2020. Three additional Step II, Part B – Focused Burrowing Owl Surveys were therefore performed during the breeding season on June 20th, July 10th, and 30th, 2020 throughout the Project Site. No evidence of burrowing owl activity was observed during any of the surveys.

5.2.3 Mitigation and Equivalency

A 30-day preconstruction survey will be required immediately prior to the initiation of construction within the Project Site to ensure protection for this species and compliance with the conservation goals as outlined in the MSHCP. If burrowing owls are detected onsite during the 30-day preconstruction survey, during the breeding season (February 1st to August 31st) then construction activities shall be limited to beyond 300 feet of the active burrows until a qualified biologist has confirmed that nesting efforts are competed or not initiated. In addition to monitoring breeding activity, if construction is proposed to be initiated during the breeding season or active relocation is proposed, a burrowing owl mitigation plan will be developed based on the City

of Moreno Valley, CDFW and USFWS requirements for the relocation of individuals to the Lake Mathews Preserve.

Following submittal, review and approval of the 30-day burrowing owl preconstruction survey report by the City of Moreno Valley and compliance with all species-specific conservation goals, if detected within or adjacent to the Project Site, the project will be compliant 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 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 does 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.

5.3.1 Methods

Compliance with Section 6.1.3 respective of MSHCP mammals is not applicable to the proposed 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.

5.3.3 Mitigation and Equivalency

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

5.4 Criteria Area Species Survey Area – Amphibians

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 if suitable habitat for amphibian species is documented onsite and the property is located within a predetermined "Survey Area" (MSHCP 2004).

The Project Site does not occur within a predetermined Survey Area for amphibian species. Compliance with Section 6.1.3 respective of MSHCP amphibians is not applicable to the proposed Project Site.

5.4.1 Methods

Compliance with Section 6.1.3 respective of MSHCP amphibians is not applicable to the proposed 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.

5.4.3 Mitigation and Equivalency

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

6.0 REFERENCES

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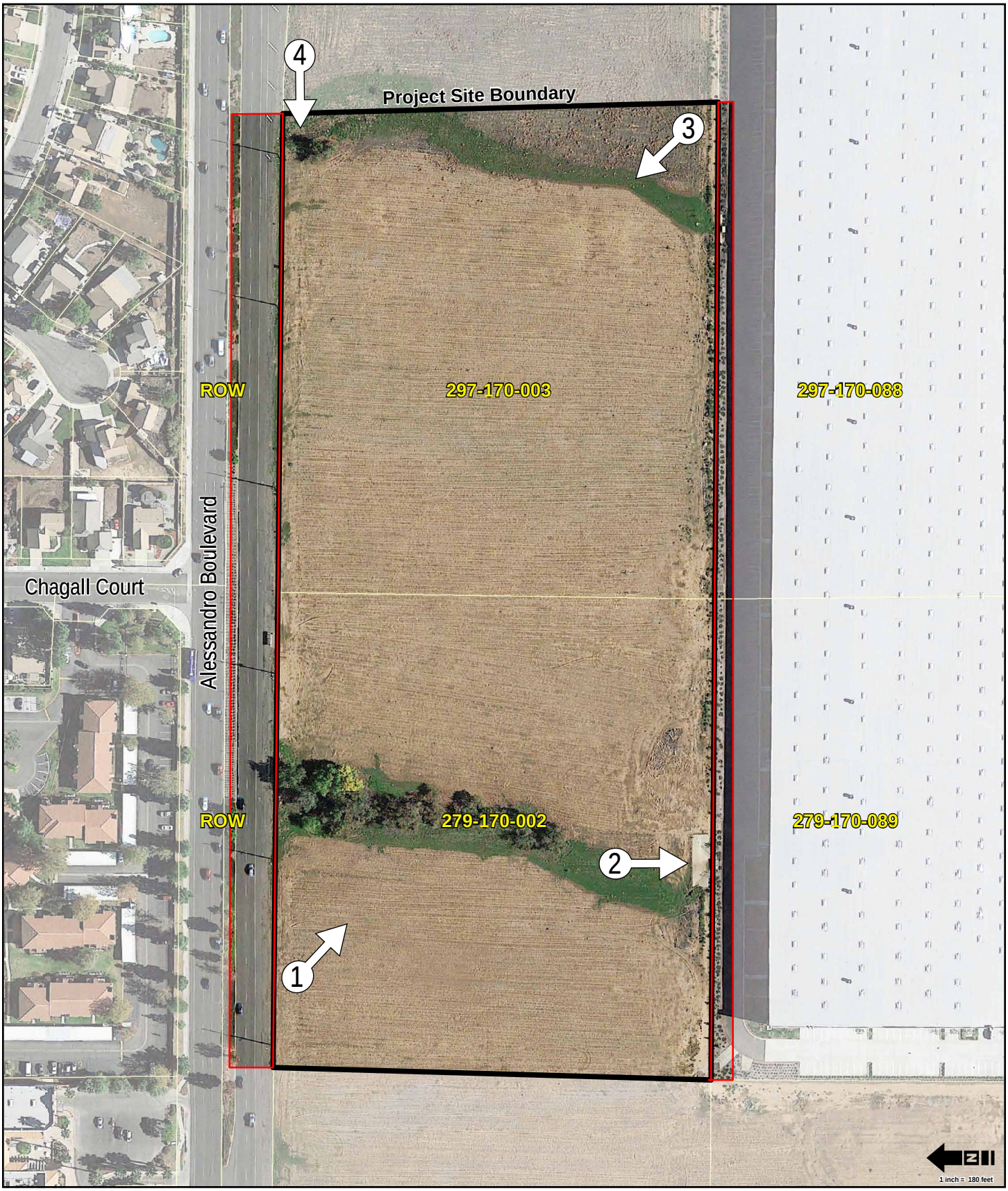
FIGURES

Figure 1 Regional Location Map

Alessandro Project Site, City of Moreno Valley, CA

MIG



Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

(#) Photo Point & Direction

Figure 2 Project Site Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

BW Black Willow Woodland

DG Disturbed (Non-native Grassland)

DV Developed

WM Wet Meadow

OR Ornamental (Mexican palo verde)

DW Disturbed Wetland - Cattail

MF Mule Fat (individual shrub)

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 3 Vegetation Communities Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

Photograph 1 - Southeast view of Project Site from northwest corner adjacent to Alessandro Boulevard.

Photograph 2 - Southward view of down drain located at end of the end of Drainage A

Figure 4a Current Project Site Photographs

Alessandro Project Site, City of Moreno Valley, CA

Photograph 3 - Northwest view of Project Site from southeast corner. The Project Site is dominated by annually disked disturbed non-native grassland.

Photograph 4 - Westward view of Drainage B from northeast corner of Project Site near Alessandro Boulevard.

Figure 4b Current Project Site Photographs

Alessandro Project Site, City of Moreno Valley, CA

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

MmB - Monserate Sandy Loam (NRCS 2020)

Figure 5 Soils Associations Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

Figure 8 MSHCP Section 6.1.2 Jurisdiction Resources Impact Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

APPENDICES

Appendix A
Burrowing Owl Focused Survey Report, Alessandro Project Site

Burrowing Owl Focused Survey Report

Alessandro Project Site
City of Moreno Valley, Riverside County, California

Prepared for:
Compass Danbe Real Estate Partners
523 Main St
El Segundo, CA 90245

Prepared by:
MIG
1650 Spruce Street, Suite 102
Riverside, California 92507

October 2020

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1.0 INTRODUCTION

This report presents the results of focused burrowing owl (*Athene cunicularia*) surveys conducted at the 17.66-acre (2.65-acre offsite) Alessandro project site (Project Site) in the City of Moreno Valley, Riverside County, California. The Project Site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) planning area. The MSHCP is a regional multi-jurisdictional habitat conservation program that addresses multiple species' habitat needs in western Riverside County. According to MSHCP guidelines, surveys for the burrowing owl are to be conducted as part of the environmental review process. Specifically, the MSHCP Additional Surveys Needs and Procedures identify a burrowing owl Survey Area within the MSHCP Plan Area. The Project Site occurs within this predetermined Survey Area. Suitable low potential habitat was identified on the Project Site during an initial site reconnaissance conducted in May 21st, 2020. Subsequently, focused burrowing owl surveys were conducted during the breeding season in order to comply with MSHCP requirements. The purpose of this report is to document the results of the burrowing owl habitat assessment and focused burrow and burrowing owl surveys.

1.1 Project Location

The 17.66-acre (2.65-acre offsite) Project Site is located immediately south of Alessandro Boulevard in the City of Moreno Valley (City), Riverside County, California, Assessor Parcel Numbers (APNs) 297-170-002 and 279-170-003 (Figure 1 and Figure 2). Offsite impacts extend into the Alessandro right-of-way to the north and APNs 297-170-088 and 279-170-089 to the south (Figure 2). The Project Site occurs within the U.S. Geological Survey (USGS) 7.5' series Riverside East Quadrangle, Township 3 South, Range 4 West, Section 12.

The Project Site is located entirely within the MSHCP Reche Canyon/Badlands Area Plan and is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area.

2.0 METHODS AND RESULTS

The survey was conducted in accordance with the Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area (2006). Survey protocol consists of three steps: Step I – Habitat Assessment; Step II – Locating Burrows and Burrowing Owls; and Step III – Reporting Requirements. Each step conducted during this survey is briefly outlined below. Surveys were conducted during weather that is conducive to observing burrowing owls outside of their burrows and detecting burrowing owl sign. All surveys were conducted from two hours before sunset to one hour after or from one hour before to two hours after sunrise. Surveys were not conducted during rain, high winds (> 20 mph), dense fog, or temperatures over 90 °F. Surveys were not conducted within five days of measurable precipitation.

2.1 Step 1 – Habitat Assessment

Step 1 of the burrowing owl focused survey consists of walking the Project Site to determine if suitable habitat is present. This initial habitat assessment was conducted on May 21st, 2020 by MIG Senior Biologist Jonathan Campbell, PhD (Table 1. Summary of Focused Survey Weather Conditions during the Nesting Season). Upon arrival at the Project Site and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to ascertain owl presence.

All suitable areas of the Project Site were surveyed on foot by walking slowly and methodically across each habitat type while recording/mapping areas that may represent suitable owl habitat onsite. Primary indicators of suitable burrowing owl habitat include, but are not limited to: native and non-native grassland, grassland interspersed with shrubland along ecotonal areas, shrublands with low density shrub cover, concrete rubble, and earthen berms. 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 near man-made structures. A majority of the habitat mapped onsite represents low potential habitat for burrowing owl.

According to the MSHCP (2006) 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.

The largest area and center of the Project Site is characterized as "disturbed/non-native grassland" and currently offers limited habitat value to plants and wildlife. The Project Site is heavily disturbed and annually disked as part of weed abatement requirements. The Project Site is flat and bordered to the south by industrial buildings, north by high density residential development, and east and west by disturbed lands. Two (2) drainage features bisect the property in a north to south direction which currently sustains disturbed wetland and riparian vegetation as described below. Natural community names and hierarchical structure follows List of Alliances and Associations (CDFW September 2010) which have been refined and augmented where appropriate to better characterize the habitat types observed onsite when not addressed by the classification system. Scientific nomenclature and common names used for plants in this report follows Hickman (1993). Vertebrate taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (1998 and supplemental) for birds, and Jones et al. (1992) for mammals. The onsite plant communities are as follows (Figure 3, Vegetation Communities Map, Figures 4a/4b, Current Project Site Photographs):

Disturbed/Non-Native Grassland

The majority of the Project Site is characterized as disturbed/non-native grassland and experiences annual dicking activities. Dominant plant species observed within this vegetation community include hairy vetch (*Vicia villosa*), black mustard *(Brassica nigra*), field bindweed *(Convolvulus arvensis*), kochia (*Bassia scoparia*), prickly lettuce (*Lactuca serriola*), jointed charlock (*Raphanus sativus*), Italian rye (*Lolium multiflorum*), horseweed (*Erigeron canadensis*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), tumbling pigweed (*Amaranthus albus*), common wild oat (*Avena fatua*), prickly sow thistle (*Sonchus asper*), jimsonweed (*Datura wrightii*), telegraph weed (*Heterotheca grandiflora*), cheeseweed (*Malva parviflora*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), mayweed (*Anthemis cotula*), prostrate knotweed (*Polygonum aviculare*), Spanish lotus (*Acmispon americanus*), and western witchgrass (*Panicum capillare*).

Black Willow Woodland

The northern region of Drainage A is dominated by black willow woodland. Common species documented within this vegetation community include Gooding's willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), and an understory of non-native grasses and ruderal species as described above.

Developed
Developed regions of the Project Site include a culvert structure located at the southern terminus of Drainage A and existing paved roads located within the offsite impact areas.

Disturbed Wetland – Cattail
Two small patches of disturbed wetland-cattail habitat are located in the northern region of both Drainage A and B, immediately adjacent to Alessandro Boulevard. Dominant plant species observed within this vegetation community include curly dock (Rumex crispus), common cattail (*Typha latifolia*), tall nutsedge (*Cyperus eragrostis*), annual beard grass (*Polypogon monspeliensis*), Mexican fan palm (*Washingtonia robusta*), dallis grass (*Paspalum dilatatum*), barnyard grass (*Echinochloa crus-galli*), and tarragon (*Artemisia dracunculus*).

Ornamental
A single ornamental tree, Mexican palo verde (*Parkinsonia aculeata*) is located adjacent to the black willow woodland.

Mule Fat
A single mule fat (*Baccharis salicifolia*) shrub is located near the northeast corner of the Project Site.

Results from the Step I - Habitat Assessment indicate that the disturbed/non-native grassland (described above) represent low potential habitat for the burrowing owl. Accordingly, due to the presence of potential habitat onsite, Step II – Locating Burrows and Burrowing Owls is required. In addition, due to the presence of potential habitat onsite, a pre-construction survey within 30 days of any project-related or construction-related activities is therefore required.

2.2 Step II – Locating Burrows and Burrowing Owls

Part A – Focused Burrow Survey

Due to the presence of low potential burrowing owl habitat, focused burrow surveys, including documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl, were conducted as part of the protocol on May 21st, 2020 (Table 1. Summary of Focused Survey Weather Conditions during the Nesting Season).

The systematic surveys for burrows, including burrowing owl signs, were conducted by walking across all potential habitat mapped at the Project Site. Pedestrian survey transects were spaced to allow 100% visual coverage of the ground surface. The distances between transect centerlines were no more than 30 meters (approximately 100 feet) apart. The burrow survey began within two hours prior to sunset. Accordingly, due to the presence of suitable burrowing owl burrows onsite, Step II, Part B – Focused Burrowing Owl Surveys are required.

General wildlife species documented onsite or within the vicinity of the Project Site include but are not limited to red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), song sparrow (*Melospiza melodia*), house sparrow (Passer domesticus), Nuttall's woodpecker (*Picoides nuttallii*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), cliff swallow (*Petrochelidon pyrrhonota*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris),*

American crow (*Corvus brachyrhynchos*), western meadowlark (*Sturnella neglecta*) common raven (*Corvus corax*), house sparrow (*Passer domesticus*), American goldfinch (*Spinus tristis*), house finch (*Haemorhous mexicanus*), western tanager (*Piranga ludoviciana*), and desert cottontail (*Sylvilagus audubonii*).

Part B – Focused Burrowing Owl Surveys

If any burrows are found during the Part A – Focused Burrow Survey, Part B – Focused Burrowing Owl Surveys are required to determine presence or absence of the species. The Part B effort consists of at least four focused surveys to search for signs of occupation at the burrows, or observations of burrowing owls. Focused surveys are to be conducted within the breeding season between March 1st and August 31st. A review of local documentation (CNDDB 2020) suggests that no burrowing owls have been historically identified within the extent of the Project Site boundary. In addition to the breeding season survey conducted on May 21st, 2020, three additional breeding season surveys were conducted throughout the Project Site on June 20th, July 10th, and 30th, 2020 (Figure 5, Burrowing Owl Survey Area Map). All surveys were conducted during times and conditions conducive to observing burrowing owl (Table 1. Summary of Focused Survey Weather Conditions during the Breeding Season). A thorough investigation of the potentially suitable burrows concluded that no evidence of burrowing owl activity was present in any of the onsite burrow complexes.

Table 1. Summary of Focused Survey Weather Conditions during the Breeding Season

Date	Time Start/End	Temperature (°F)	Wind Speed (mph)	Conditions
5/21/2020	6:30AM – 7:30AM	72	2-5	Clear
6/20/2020	6:00AM – 9:00AM	68	0-4	Clear
7/10/2020	6:00AM – 9:00AM	66	4-8	Clear
7/30/2020	6:00AM – 9:00AM	66	2-8	Clear

2.3 Step III – Reporting Requirements

This report represents the third step of the burrowing owl focused survey, the preparation of a report that provides the results of each step of the survey protocol. After completion of appropriate surveys, a final report shall be submitted to the City of Moreno Valley, which discusses the survey methodology, transect width, duration, conditions, and results of the survey.

2.4 Preconstruction Surveys

All project sites containing burrows or suitable habitat (based on Step I/Habitat Assessment), whether owls were found or not, require pre-construction surveys that shall be conducted within 30 days prior to ground disturbance to avoid direct take of burrowing owls (MSHCP Species-Specific Objective 6).

3.0 Conclusions and Recommendations

Both low potential burrowing owl habitat and burrowing owl burrows were identified within the Project Site during the Step I – Habitat Assessment performed on May 21st, 2020 and the Step II, Part A – Focused Burrow Survey performed on May 21st, 2020. Three additional Step II, Part B – Focused Burrowing Owl Surveys were therefore performed during the breeding season on June 20th, July 10th, and 30th, 2020 throughout the Project Site. No evidence of burrowing owl activity was observed during any of the surveys.

A pre-construction burrowing owl survey will need to be completed within 30 days prior to any project-related or construction-related disturbances to onsite areas.

4.0 REFERENCES

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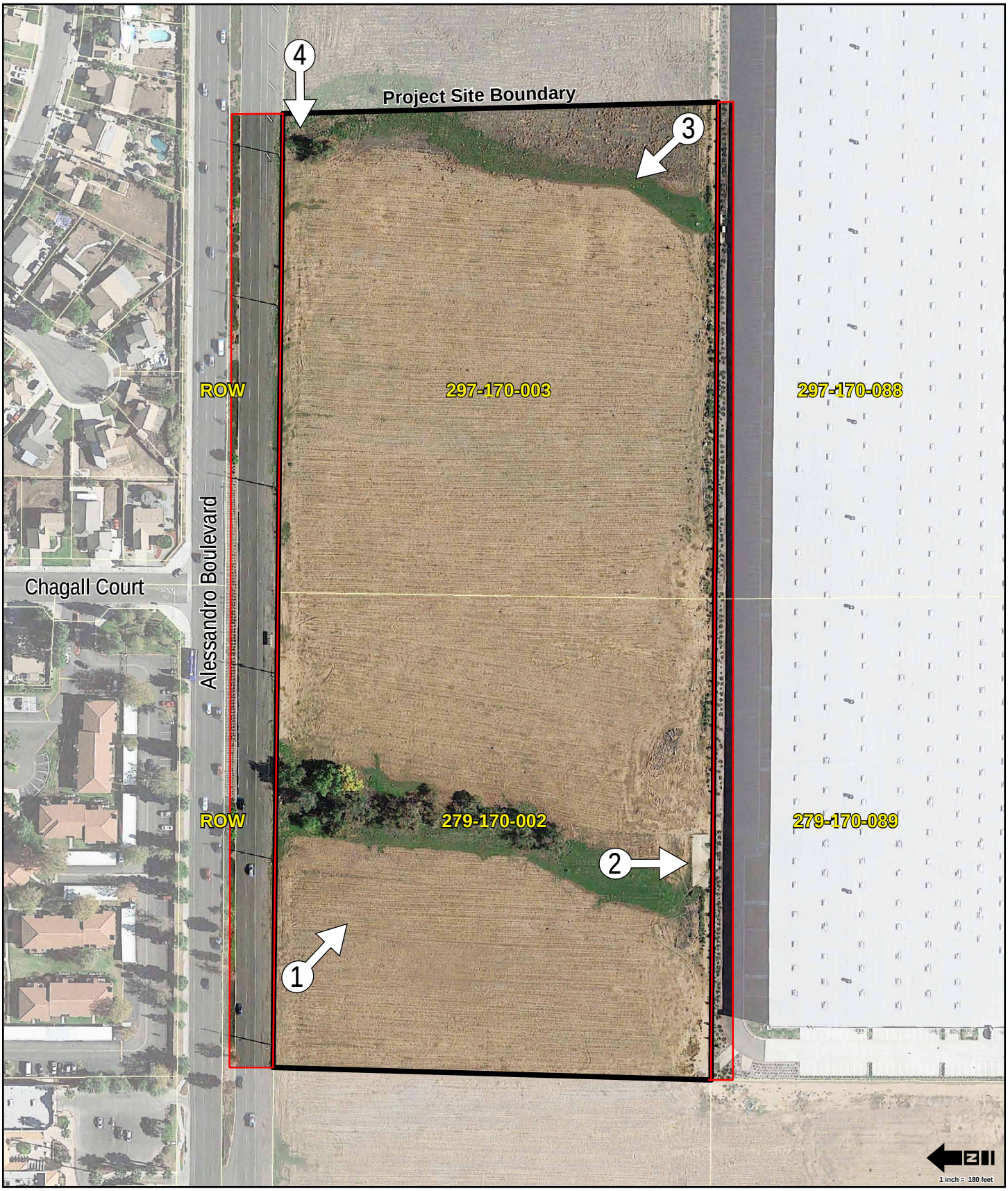
FIGURES

Figure 1 Regional Location Map

Alessandro Project Site, City of Moreno Valley, CA



Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

(#) Photo Point & Direction

Figure 2 Project Site Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

BW Black Willow Woodland

DG Disturbed (Non-native Grassland)

DV Developed

OR Ornamental (Mexican palo verde)

DW Disturbed Wetland - Cattail

MF Mule Fat (individual shrub)

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 3 Vegetation Communities Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

Photograph 1 - Southeast view of Project Site from northwest corner adjacent to Alessandro Boulevard.

Photograph 2 - Southward view of down drain located at end of the end of Drainage A

Figure 4a Current Project Site Photographs

Alessandro Project Site, City of Moreno Valley, CA

Photograph 3 - Northwest view of Project Site from southeast corner. The Project Site is dominated by annually disked disturbed non-native grassland.

Photograph 4 - Westward view of Drainage B from northeast corner of Project Site near Alessandro Boulevard.

Figure 4b Current Project Site Photographs

Alessandro Project Site, City of Moreno Valley, CA

Figure 5 Burrowing Survey Area Map

Alessandro Project Site, City of Moreno Valley, CA

Appendix B
Least Bell's Vireo Focused Survey Report, Alessandro Project Site

Least Bell's Vireo Focused Survey Report

Alessandro Project Site
City of Moreno Valley, Riverside County, California

Prepared for:
Compass Danbe Real Estate Partners
523 Main St
El Segundo, CA 90245

Prepared by:
MIG
1650 Spruce Street, Suite 102
Riverside, California 92507

October 2020

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1.0 INTRODUCTION

This report presents the results of focused least Bell's vireo (*Vireo bellii pusillus*) surveys conducted at the 17.66-acre (2.65-acre offsite) Alessandro project site (Project Site) in the City of Moreno Valley, Riverside County, California. The Project Site is located within the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) planning area. The MSHCP is a regional multi-jurisdictional habitat conservation program that addresses multiple species' habitat needs in western Riverside County. According to MSHCP Section 6.1.2 guidelines, surveys for riparian birds are to be conducted as part of the environmental review process, if suitable habitat is present. Suitable low potential habitat was identified on the Project Site during an initial site reconnaissance conducted in May 21st, 2020 for the least Bell's vireo. Subsequently, focused surveys were conducted during the breeding season in order to comply with MSHCP Section 6.1.2 requirements. The purpose of this report is to document the results of the least Bell's vireo assessment and focused surveys.

1.1 Project Location

The 17.66-acre (2.65-acre offsite) Project Site is located immediately south of Alessandro Boulevard in the City of Moreno Valley (City), Riverside County, California, Assessor Parcel Numbers (APNs) 297-170-002 and 279-170-003 (Figure 1 and Figure 2). Offsite impacts extend into the Alessandro right-of-way to the north and APNs 297-170-088 and 279-170-089 to the south (Figure 2). The Project Site occurs within the U.S. Geological Survey (USGS) 7.5' series Riverside East Quadrangle, Township 3 South, Range 4 West, Section 12.

The Project Site is located entirely within the MSHCP Reche Canyon/Badlands Area Plan and is not located within an MSHCP Criteria Area, Cell Group, or Linkage Area.

2.0 METHODS AND RESULTS

An initial habitat assessment for potential least Bell's vireo habitat was conducted on May 21st, 2020. As described below, all vegetation communities onsite were mapped and assessed for suitability for least Bell's vireo. A single vegetation community including black willow woodland was characterized as representing low potential habitat for the species. Therefore, focused United States Fish and Wildlife Service (USFWS) protocol surveys were initiated. As stated by the USFWS:

> *"Under normal circumstances, all riparian areas and any other potential vireo habitats should be surveyed at least eight (8) times during the period from April 10 to July 31. However, we may concur, on a case by case basis, with a reduced effort if unusual circumstances dictate that this is a prudent course of action. For instance, intensive surveys of small, marginal or extralimital habitats by experienced personnel may well result in defensible conclusions that eight (or more) individual surveys are unnecessary. Under such unusual circumstances, we will consider requests for reductions in the prescribed number of individual surveys. In any case, site visits should be conducted at least 10 days apart to maximize the detection of, for instance, late and early arrivals, females, particularly "non-vocal" birds of both sexes, and nesting pairs.*
>
> *1) Although the period from April 10 to July 31 encompasses the period during which most vireo nesting activity occurs, eight surveys are generally sufficient to detect most*

(if not all) vireo adults in occupied habitats. Precise vireo censuses and estimations of home range likely will not be possible unless surveys are conducted outside of this time window. Although focused surveys conducted in accordance with these guidelines substantially reduce the risk of an unauthorized take that could potentially occur as a result of land development or other projects, individual project proponents may wish to conduct surveys that are more rigorous than those that would otherwise result from strict adherence to these survey guidelines. If additional information (e.g., extent of occupied habitat, total numbers of adult and juvenile vireos in study area) is desired or necessary, surveys should be extended to August 31 and conducted in such a manner as to collect the data necessary to prepare reports that reflect the methods and standards established in the current scientific literature on this subject. In particular, information collected after July 15 will reflect a broader extent to the riparian habitat and other adjacent habitat types that the vireo typically utilizes during the latter phase of the breeding season, especially when the young become independent of the adults.*

2) *Surveys should be conducted by a qualified biologist familiar with the songs, whisper songs, calls, scolds, and plumage characteristics of adult and juvenile vireos. These skills are essential to maximize the probability of detecting vireos and to avoid potentially harassing the species in occupied habitats.*

3) *Surveys should be conducted between dawn and 11:00 a.m. Surveys should not be conducted during periods of excessive or abnormal cold, heat, wind, rain, or other inclement weather that individually or collectively may reduce the likelihood of detection.*

4) *Surveyors should not survey more than 3 linear kilometers or more than 50 hectares of habitat on any given survey day. Although surveyors should generally station themselves in the best possible locations to hear or see vireos, care should be taken not to disturb potential or actual vireo habitats and nests or the habitat of any sensitive or listed riparian species.*

5) *All vireo detections (e.g., vocalization points, areas used for foraging, etc.) should be recorded and subsequently plotted to estimate the location and extent of habitats utilized. These data should be mapped on the appropriate USGS quadrangle map.*

6) *Data pertaining to vireo status and distribution (e.g., numbers and locations of paired or unpaired territorial males, ages and sexes of all birds encountered) should be noted and recorded during each survey. In addition, surveyors should look for leg bands on vireo adults and juveniles if, in fact, it is possible to do so without disturbing or harassing the birds. If leg bands or other markers are observed, then surveyors should record and report the detection and associated circumstances to us by telephone, facsimile, or electronic mail as soon as possible. Reports should include the colors and relative locations of any and all bands detected, the age and sex of the marked bird, and the precise location of the detection.*

7) *The numbers and locations of all brown-headed cowbirds (Molothrus ater) detected within vireo territories should be recorded during each survey and subsequently reported to us. In addition, all detections of the State and federally endangered southwestern willow flycatcher (Empidonax trallii extimus, flycatcher) and State endangered yellow-billed cuckoo (Coccyzus americanus, cuckoo) should be recorded and reported. Any and all cuckoo and flycatcher adults, young, or nests should not be approached, and taped vocalizations of these species should not be used unless authorized in advance by scientific permits to take* issued by us (if appropriate) and the California Department of Fish and Game. Flycatcher presence/absence surveys require a recovery permit issued by us per section 10(a)(1)(A) of the Endangered Species Act."* (USFWS 2001)

A total of eight (8) focused least Bell's vireo surveys were conducted on May 21st, 31st, June 10th, 20th, 30th, July 10th, 20th, and 30th, 2020 by Senior Biologist Jonathan Campbell, PhD and Ruben Ramirez throughout the black willow woodland documented onsite and described below. All surveys were conducted during times and conditions conducive to observing least Bell's vireo (Table 1. Summary of Focused Survey Weather Conditions during the Breeding Season).

Table 1. Summary of Focused Survey Weather Conditions during the Breeding Season

Date	Time Start/End	Temperature (°F)	Wind Speed (mph)	Conditions
5/21/2020	7:30AM – 9:00AM	74	0-5	Clear
5/31/2020	8:00AM – 9:30AM	70	3-5	Clear
6/10/2020	6:00AM – 9:00AM	66	2-8	Clear
6/20/2020	6:00AM – 9:00AM	68	0-4	Clear
6/30/2020	6:00AM – 9:00AM	64	0-4	Clear
7/10/2020	6:00AM – 9:00AM	66	4-8	Clear
7/20/2020	6:00AM – 9:00AM	70	2-8	Clear
7/30/2020	6:00AM – 9:00AM	66	2-8	Clear

The largest area and center of the Project Site is characterized as "disturbed/non-native grassland" and currently offers limited habitat value to plants and wildlife. The Project Site is heavily disturbed and annually disked as part of weed abatement requirements. The Project Site is flat and bordered to the south by industrial buildings, north by high density residential development, and east and west by disturbed lands.

Two (2) drainage features bisect the property in a north to south direction which currently sustains disturbed wetland and riparian vegetation as described below. Natural community names and hierarchical structure follows List of Alliances and Associations (CDFW September 2010) which have been refined and augmented where appropriate to better characterize the habitat types observed onsite when not addressed by the classification system. Scientific nomenclature and common names used for plants in this report follows Hickman (1993). Vertebrate taxonomy follows Stebbins (2003) for amphibians and reptiles, the American Ornithologists' Union (1998 and supplemental) for birds, and Jones et al. (1992) for mammals. The onsite plant communities are as follows (Figure 3, Vegetation Communities Map, Figures 4a/4b, Current Project Site Photographs):

Disturbed/Non-Native Grassland

The majority of the Project Site is characterized as disturbed/non-native grassland and experiences annual dicking activities. Dominant plant species observed within this vegetation community include hairy vetch (*Vicia villosa*), black mustard *(Brassica nigra*), field bindweed *(Convolvulus arvensis*), kochia (*Bassia scoparia*), prickly lettuce (*Lactuca serriola*), jointed charlock (*Raphanus sativus*), Italian rye (*Lolium multiflorum*), horseweed (*Erigeron canadensis*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), tumbling pigweed (*Amaranthus albus*), common wild oat (*Avena fatua*), prickly sow thistle (*Sonchus asper*), jimsonweed (*Datura wrightii*), telegraph weed (*Heterotheca grandiflora*), cheeseweed (*Malva parviflora*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), mayweed (*Anthemis cotula*), prostrate knotweed (*Polygonum aviculare*), Spanish lotus (*Acmispon americanus*), and western witchgrass (*Panicum capillare*).

Black Willow Woodland

The northern region of Drainage A is dominated by black willow woodland. Common species documented within this vegetation community include Gooding's willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), and an understory of non-native grasses and ruderal species as described above.

Developed

Developed regions of the Project Site include a culvert structure located at the southern terminus of Drainage A and existing paved roads located within the offsite impact areas.

Disturbed Wetland – Cattail

Two small patches of disturbed wetland-cattail habitat are located in the northern region of both Drainage A and B, immediately adjacent to Alessandro Boulevard. Dominant plant species observed within this vegetation community include curly dock (Rumex crispus), common cattail (*Typha latifolia*), tall nutsedge (*Cyperus eragrostis*), annual beard grass (*Polypogon monspeliensis*), Mexican fan palm (*Washingtonia robusta*), dallis grass (*Paspalum dilatatum*), barnyard grass (*Echinochloa crus-galli*), and tarragon (*Artemisia dracunculus*).

Ornamental

A single ornamental tree, Mexican palo verde (*Parkinsonia aculeata*) is located adjacent to the black willow woodland.

Mule Fat

A single mule fat (*Baccharis salicifolia*) shrub is located near the northeast corner of the Project Site.

General wildlife species documented onsite or within the vicinity of the Project Site include but are not limited to red-tailed hawk (*Buteo jamaicensis*), turkey vulture (*Cathartes aura*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), song sparrow (*Melospiza melodia*), house sparrow (Passer domesticus), Nuttall's woodpecker (*Picoides nuttallii*), Cassin's kingbird (*Tyrannus vociferans*), western kingbird (*Tyrannus verticalis*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), cliff swallow (*Petrochelidon pyrrhonota*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris),* American crow (*Corvus brachyrhynchos*), western meadowlark (*Sturnella neglecta*) common raven (*Corvus corax*), house sparrow (*Passer domesticus*), American goldfinch (*Spinus tristis*), house finch (*Haemorhous mexicanus*), western tanager (*Piranga ludoviciana*), and desert cottontail (*Sylvilagus audubonii*).

3.0 CONCLUSIONS

No least Bell's vireo were detected onsite during the focused survey efforts conducted during the 2020 breeding season.

4.0 REFERENCES

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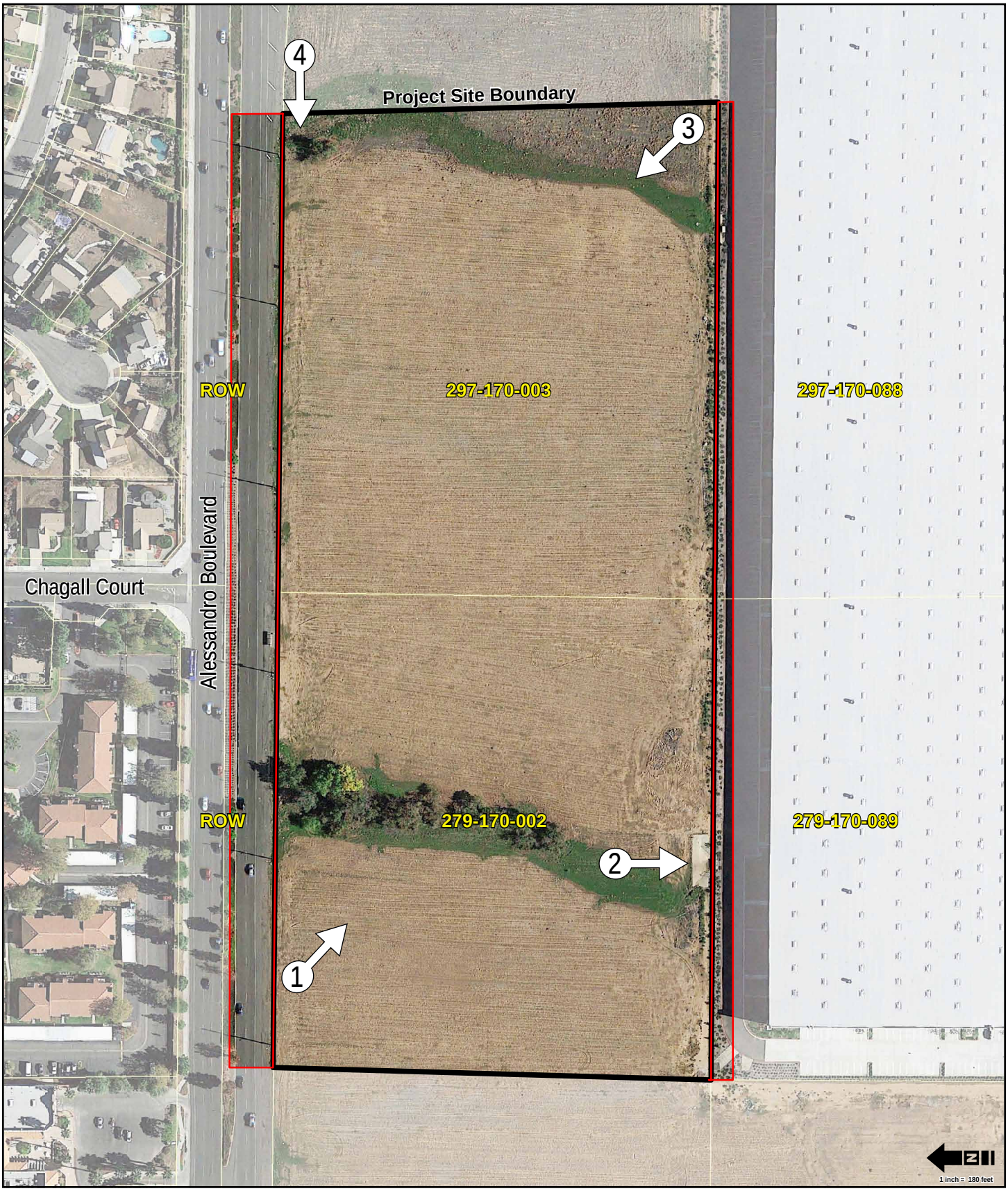
FIGURES

Figure 1 Regional Location Map

Alessandro Project Site, City of Moreno Valley, CA



Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

(#) Photo Point & Direction

Figure 2 Project Site Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

BW Black Willow Woodland

DG Disturbed (Non-native Grassland)

DV Developed

OR Ornamental (Mexican palo verde)

DW Disturbed Wetland - Cattail

MF Mule Fat (individual shrub)

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 3 Vegetation Communities Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

Photograph 1 - Southeast view of Project Site from northwest corner adjacent to Alessandro Boulevard.

Photograph 2 - Southward view of down drain located at end of the end of Drainage A

Figure 4a Current Project Site Photographs

Alessandro Project Site, City of Moreno Valley, CA

Photograph 3 - Northwest view of Project Site from southeast corner. The Project Site is dominated by annually disked disturbed non-native grassland.

Photograph 4 - Westward view of Drainage B from northeast corner of Project Site near Alessandro Boulevard.

Figure 4b Current Project Site Photographs

Alessandro Project Site, City of Moreno Valley, CA

Appendix C
Alessandro and Frederick Project Site Jurisdictional Delineation Report & Impact Analysis

Alessandro and Frederick Project Site
Jurisdictional Delineation Report & Impact Analysis
City of Moreno Valley, Riverside County, CA

Prepared for:
Compass Danbe Real Estate Partners
523 Main St
El Segundo, CA 90245

Prepared by:
MIG, Inc.
1500 Iowa Avenue, Suite 110
Riverside, California 92507
Contact: Jonathan Campbell (310) 903-7876
jcampbell@migcom.com

March 2021

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List of Abbreviated Terms

APN	Assessor's Parcel Number
AWRS	Arid West Regional Supplement
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CDFW	California Department of Fish and Wildlife
CWA	Clean Water Act
EPA	Environmental Protection Agency
°F	degrees Fahrenheit
FAC	Facultative
FACU	Facultative Upland
FACW	Facultative Wetland
FEMA	Federal Emergency Management Agency
GPS	Global Positioning System
HUC	Hydrologic Unit Code
LSAA	Lake and Streambed Alteration Agreement
MSCHP	Multiple Species Habitat Conservation Plan
NCDC	National Climatic Data Center
NOAA	National Oceanic and Atmospheric Administration
NRCS	Natural Resource Conservation Service
NTCHS	National Technical Committee for Hydric Soils
NWI	National Wetland Inventory
NWS	National Weather Service
OBL	Obligate
OHWM	Ordinary High Water Mark
RPW	Relatively Permanent Waters
RWQCB	Regional Water Quality Control Board
SP	Sample Point
TNW	Traditional Navigable Water
TOB	Top of Bank
UPL	Upland
US	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1 Introduction

On April 21, 2020, MIG, Inc. (MIG) conducted a routine-level delineation of jurisdictional waters, wetlands, riparian/riverine and vernal pool resources on the Compass Danbe Real Estate Partners-owned Alessandro Project Site (Project) located in Moreno Valley, Riverside County, California. The Project is located in the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP) Plan Area.

The purpose of this jurisdictional delineation is to identify the extend of local, federal and state wetlands and waters within the Project boundaries to support necessary documentation and analysis under the California Environmental Quality Control Act (CEQA), as well as resource-agency permitting process under Sections 401 and 404 of the Clean Water Act (CWA), Section 13260 of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), Section 1602 of the California Fish and Game Code and the MSHCP.

Details regarding each of these resource agencies as well as their regulatory authority, jurisdiction, permits, and regulatory processes are provided in Chapter 2, "Summary of Regulations."

The information and results presented herein document the investigation, best professional judgment and conclusions of MIG. It is correct and complete to the best of our knowledge. However, all jurisdictional determinations should be considered preliminary until reviewed and approved by the regulatory agencies.

1.1 Project Location

The 17.66-acre Project is located in the City of Moreno Valley, Riverside County, California and includes Assessor Parcel Numbers (APN): 297-170-002 and -003 (Figure 1 and Figure 2). The Project is south of Alessandro Boulevard, east of Frederick Street, and west of Graham Street. It is situated in the *Riverside East* U.S. Geological Survey (USGS) 7.5-minute quadrangle, Riverside County, Section 13, Township 3 South, Range 4 West (Figure 3). NAD83 Long/Lat is: -117.25391, 33.9151.

1.2 Applicant Information

Compass Danbe Real Estate Partners, LLC
523 Main St
El Segundo, CA 90245
Attn: Mark Bachli

1.3 Directions to the Project

Regional access to the Project is provided by taking the Alessandro Boulevard exit (exit 27-c) from Interstate 215 (I-215). Head east on Alessandro Boulevard and travel for approximately 1.5 miles to Frederick Street. The Project is located south of Alessandro Boulevard between Frederick and Graham Streets.

1.4 Project Description

The proposed Project includes the construction of two industrial warehouse buildings with a combined footprint of 372,309 square feet. Building 1 is 277,181 square feet and Building 2 is 95,128 square feet. Landscaping will be installed around the perimeter of the parcels and the buildings; and interspersed in the parking areas. Both buildings provide parking spaces for automobiles, ADA, Clean Air recharging, and trailer parking spaces according to the City's parking standards. The entire 17.66 acres will be developed.

1.5 Adjacent Land Uses

The Project lies in a mostly developed landscape in Moreno Valley. To the north and south of the Project is residential and commercial development. Directly east and west of the Project are small parcels of annually disced land, but beyond those parcels the general landscape is developed.

1.6 Field Delineator Contact Information

Jonathan Campbell
MIG, Inc.
500 Iowa Avenue, Suite 110
Riverside, California 92507
Contact: (310) 903-7876
jcampbell@migcom.com

2 Summary of Regulations

There are four primary agencies that regulate activities within creeks, wetlands and riparian areas in the City of Moreno Valley.

1) The U.S. Army Corps of Engineers Regulatory Program regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA).

2) The State Water Resources Control Board (SWRCB), administered by the Regional Water Quality Control Board regulates activities pursuant to Section 401 of the Federal CWA and the California Porter-Cologne Water Quality Control Act of 1969 (California Water Code).

3) The California Department of Fish and Wildlife (CDFW) regulates activities within streambeds, lakes, and wetlands pursuant to Division 2, Chapter 6, Section 1600 of the Fish and Game Code.

4) Western Riverside Regional Conservation Authority (RCA) regulates activities within riparian areas, riverine areas, and vernal pools pursuant to the Western Riverside MSHCP, Section 6.1.2.

If a proposed project impacts waters, wetlands, riparian/riverine or vernal pool habitat, the project limits must be evaluated to determine the presence of jurisdictional waters and wetlands.

2.1 Waters of the U.S.

The Army Corps of Engineers and the Environmental Protection Agency (EPA) have issued a set of guidance documents detailing the process for determining Clean Water Act (CWA) jurisdiction over waters of the U.S. (including wetlands) under the 2020 USACE Navigable Waters Protection Rule (2020 Rule). This supersedes all previous court decisions and rules. The EPA and USACE issued this Rule in January of 2020 and is in full effect at the time of this report preparation and is utilized for determining the jurisdiction over waters of the United States under the CWA. The complete set of guidance documents, summarized as key points below, were used to collect relevant data for evaluation to determine USACE jurisdiction over the project limits.

The 2020 Rule redefines "Waters of the United States" (WoUS) so that it includes only four simple categories of jurisdictional waters and provides clear exclusions for many water features that traditionally have not been regulated. The significant nexus test is no longer in effect.

These four categories protect the nation's navigable waters and the core perennial and intermittent tributary systems that flow into those waters.

(1) Territorial seas and traditional navigable waters (TNWs) [Category (a)(1)]

The 2020 Rule regulates territorial seas and traditional navigable waters include large rivers and lakes and tidally-influenced waterbodies used in interstate or foreign commerce.

(2) Tributaries [Category (a)(2)]

The 2020 Rule regulates tributaries and includes perennial and intermittent rivers and streams that contribute surface flow to traditional navigable waters in a typical year. These tributaries must have perennial or intermittent flow. Ephemeral drainages are no longer regulated under the 2020 Rule.

Tributaries can connect to a traditional navigable water or territorial sea in a typical year either directly or through other WoUS, through channelized non-jurisdictional surface waters, through artificial features (including culverts and spillways), or through natural features (including debris piles and boulder fields).

Ditches are to be considered tributaries only where they satisfy the flow conditions of the perennial and intermittent tributary definition and either were constructed in or relocate a tributary or were constructed in an adjacent wetland and contribute perennial or intermittent flow to a traditional navigable water in a typical year.

(3) Lakes, ponds, and impoundments of jurisdictional waters [Category (a)(3)]

Lakes, ponds, and impoundments of jurisdictional waters are jurisdictional where they contribute surface water flow to a traditional navigable water or territorial sea in a typical year either directly or through other WoUS through channelized non-jurisdictional surface waters, through artificial features (including culverts and spillways) or through natural features (including debris piles and boulder fields).

Lakes, ponds, and impoundments of jurisdictional waters are also jurisdictional where they are flooded by a WoUS in a typical year.

(4) Adjacent wetlands [Category (a)(4)]

Wetlands that physically touch other jurisdictional waters are “adjacent wetlands”. This includes marshland habitats in tidal estuaries.

Wetlands separated from a WoUS by only a natural berm, bank or dune are also “adjacent.”

Wetlands inundated by flooding from a WoUS in a typical year are “adjacent.”

Wetlands that are physically separated from a jurisdictional water by an artificial dike, barrier, or similar artificial structure are “adjacent” so long as that structure allows for a direct hydrologic surface connection between the wetlands and the jurisdictional water in a typical year, such as through a culvert, flood or tide gate, pump, or similar artificial feature.

An adjacent wetland is jurisdictional in its entirety when a road or similar artificial structure divides the wetland, as long as the structure allows for a direct hydrologic surface connection through or over that structure in a typical year.

The USACE generally takes jurisdiction within rivers and streams to the "ordinary high water mark (OHWM)," determined by erosion, the deposition of vegetation or debris, and changes in vegetation or soil characteristics.

The 2020 also outlines what are <u>not</u> WoUS. The following waters/features <u>are not jurisdictional under the 2020 Rule</u>:

- Waterbodies that are not included in the four categories of WoUS listed above.

- Groundwater, including groundwater drained through subsurface drainage systems, such as drains in agricultural lands.
- Ephemeral features, including ephemeral streams, swales, gullies, rills, and pools.
- Diffuse stormwater run-off and directional sheet flow over upland.
- Many farm and roadside ditches.
- Prior converted cropland retains its longstanding exclusion, but is defined for the first time in the 2020 Rule. The agencies are clarifying that this exclusion will cease to apply when cropland is abandoned (i.e., not used for, or in support of, agricultural purposes in the immediately preceding five years) and has reverted to wetlands.
- Artificially irrigated areas, including fields flooded for agricultural production, that would revert to upland should application of irrigation water to that area cease.
- Artificial lakes and ponds, including water storage reservoirs and farm, irrigation, stock watering, and log cleaning ponds, constructed or excavated in upland or in non-jurisdictional waters.
- Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters incidental to mining or construction activity, and pits excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel.
- Stormwater control features excavated or constructed in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater run-off.
- Groundwater recharge, water reuse, and wastewater recycling structures, including detention, retention and infiltration basins and ponds, that are constructed in upland or in non-jurisdictional waters
- Waste treatment systems have been excluded from the definition of WoUS since 1979 and will continue to be excluded under the 2020 Rule.

2.2 California Department of Fish and Wildlife Jurisdiction

Pursuant to Division 2, Chapter 6, Section 1602 of the Fish and Game Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream, or lake which supports fish or wildlife. A notification of a Lake or Streambed Alteration Agreement must be submitted to CDFW for "any activity" that may substantially change the bed, channel, or bank of any river, stream, or lake." In addition, CDFW has jurisdiction over riparian habitats associated with watercourses. Jurisdictional waters are delineated by the outer edge of riparian vegetation or at the top of the bank of a stream or lake, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources. The CDFW reviews proposed actions, and if necessary, submits to the applicant a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and the applicant is the Lake or Streambed Alteration Agreement (LSAA).

2.3 Regional and State Water Quality Control Board Jurisdiction

The SWRCB together with the local RWQCB are the principal state agency with primary responsibility for the coordination and control of water quality. In Riverside County, the Santa Ana Regional Water Quality Control Board regulates water quality activities, pursuant to Section 401(a)(1) of the federal CWA as well as the Porter Cologne Water Quality Control Act (Porter-Cologne) (Water Code Section 13260). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including but not limited to the construction or operation of facilities that may result in any discharge into navigable waters. The certification shall originate from the State in which the discharge originates or will originate, or, if appropriate, from the interstate water pollution control agency having jurisdiction over the navigable water at the point where the discharge originates or will originate. Any

such discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA.

In April 2019, the SWRCB adopted a "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" (Procedures). The Procedures consist of four major elements for State-regulated wetlands: 1) a wetland definition; 2) wetland delineation procedures; 3) a framework for determining if a feature that meets the wetland definition is a Water of the State; and 4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. In adopting the Procedures, the State Water Board directed staff to develop implementation guidance for potential applicants.

In April 21, 2020 the SWRCB issued the "Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" , providing guidance for implementing the 2019 Procedures. The wetland definition and delineation methods set forth in the Procedures apply to wetlands only, and not to non-wetland Waters of the State.

Wetland Waters of the State

The Procedures define an area as wetland if, under normal circumstances:

1) The area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;
2) The duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and
3) The area's vegetation is dominated by hydrophytes or the area lacks vegetation.

This modified three-parameter definition is similar to the federal definition in that it identifies three wetland characteristics that determine the presence of a wetland: wetland hydrology, hydric soils and hydrophytic vegetation. Unlike the federal definition however, the Procedures' wetland definition allows for the presence of hydric substrates as a criteria for wetland identification (not just wetland soils) and wetland hydrology for an area devoid of vegetation (less than 5% cover) to be considered a wetland. However, if any vegetation is present then the USACE delineation procedures would apply to the vegetated component (i.e., hydrophytes must dominate). When determining the boundary of wetlands (vegetated or not) applicants can rely on Part II of the 1987 USACE Manual that provides information that is sufficient to determine wetland boundaries for compliance with the Procedures.

The USACE definition refers to "saturated soil conditions," whereas the Procedures' definition refers to saturated substrate leading to "anaerobic conditions in the upper substrate" which is a more inclusive term. Both of these descriptions define conditions that would lead to dominance of hydrophytes, if the site is vegetated. The Procedures definition refers to "continuous or recurrent saturation of the upper substrate." Continuous saturation describes hydrological conditions that are perennial or tend to persist for at least twelve months. Recurrent saturation describes hydrological conditions that persist for less than twelve months. Hydrological conditions may be periodic and sustained regularly (i.e., tidewater) or episodic and intermittent, (i.e., vernal pools). In order for the recurrent saturation to support the development of anaerobic conditions, the substrate must become, and remain, saturated for a duration of 14 days during an annual cycle.

Waters of the State

California Code of Regulations, title 23, section 3831(w) states that" "[a]ll Waters of the United States (WoUS) are also 'Waters of the State.'" The regulation reflects the SWRCB intent to include a broad interpretation of Waters of the US into the definition of Waters of the State. Waters of the State includes features that have been determined by the U.S. EPA or the USACE to be WoUS in an approved jurisdictional determination; WoUS identified in an aquatic resource report certified by the USACE upon which a permitting decision was based; and features that are consistent with any current or historic final judicial interpretation of WoUS or any current or historic federal regulation defining WoUS. Because the interpretation of waters of the U.S. in place at the time section 3831(w) was adopted was broader than any post-Rapanos or post-SWANCC regulatory definitions that incorporated more limitations into the scope of federal jurisdiction, it is consistent with the SWRCB's intent to include both historic and current definitions of Waters of the US into the SWRCB's wetland jurisdictional framework.

A wetland will continue to be protected when it has been regulated in the past as a WoUS regardless of any subsequent changes in federal regulations. The inclusion of both current and historic definitions of WoUS ensures regulatory stability in an area that has otherwise been in flux. Like the other categories of the SWRCB's wetland jurisdictional framework, the status as a WoUS may only be used to establish that a wetland qualifies as a Water of the State. It cannot be used to exclude a wetland from qualifying as a Water of the State. Thus, wetlands that are categorically excluded from qualifying as a WoUS may nevertheless qualify as Waters of the State under another jurisdictional category.

Jurisdictional Framework

The jurisdictional framework is intended to exclude small (less than an acre) artificially-created, temporary features, such as tire ruts or other transient depressions caused by human activity from regulation, while still capturing smaller, naturally-occurring features, such as seasonal wetlands and small vernal pools that may be outside of federal jurisdiction. All artificial wetlands that are less than an acre in size and do not satisfy the criteria listed in section II.2, II.3.a, II.3.b, or II.3.c are not Waters of the State. Note that this jurisdictional framework applies only to features meeting the technical definition of a wetland.

If an aquatic feature does not meet the definition of a wetland, it may nonetheless be a different type of aquatic feature that may still be regulated as a non-wetland Water of the State (e.g., lakes, streams, and ocean waters). The Procedures do not include guidance for jurisdictional determinations for other Waters of the State. Non-wetland Waters of the State typically follow USACE regulations, however under the 2020 Rule, ephemeral drainages are excluded. No regulatory guidance has been issued by the SWRCB regarding the delineation of ephemeral drainages. However, until further notice the use of the OHWM will be used to delineate such resources.

Porter-Cologne Act

In the Porter-Cologne, the Legislature declared that the "State must be prepared to exercise its full power and jurisdiction to protect the quality of the waters in the State from degradation..." (California Water Code Section 13000). Porter-Cologne grants the Boards the authority to implement and enforce the water quality laws, regulations, policies and plans to protect the groundwater and surface waters of the State. It is important to note that enforcement of the State's water quality requirements is not solely the purview of the Boards and their staff. Other agencies [e.g., CDFW] have the ability to enforce certain water quality provisions in state law.

The Porter Cologne Act requires "any person discharging waste, or proposing to discharge waste, within any region that could affect the Waters of the State to file a report of discharge (an application for waste discharge requirements (WDRs))" (Water Code § 13260(a)(1)). Discharge of fill material into Waters of the State which does not fall under the jurisdiction of the USACE pursuant to Section 404 of the CWA may require authorization through application for WDRs or through waiver of WDRs.

2.4 MSHCP Riparian/Riverine and Vernal Pool Habitat

The MSHCP serves as an HCP pursuant to Section 10(a)(1)(B) of the FESA, as well as a NCCP under the NCCP Act of 2001. The MSHCP is being used to allow the participating jurisdictions to authorize "Take" of covered plant and wildlife species identified within the Plan Area. As projects are proposed within a Western Riverside 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 the California Environmental Quality Act (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."*

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".*

Although not expressly defined, it is assumed that the Army Corps of Engineer's 1987 Manual for delineating wetlands should be used in determining the presence of wetland indicators in vernal pools. With the exception of wetlands created for the purpose of providing wetlands habitat or resulting from human actions to create open waters or from the alteration of natural stream courses, areas demonstrating characteristics as described above which are artificially created are not included in these definitions.

3 Jurisdictional Delineation Methodology

3.1 Database and Literature Review

Prior to conducting the field survey, MIG reviewed available background information pertaining to wetlands and streams on and in the vicinity of the study area. Available literature and resources reviewed included:

- Regional Climate Data (PRISM Climate Group 2020),
- NOAA Palmer Drought Indices. https://www.ncdc.noaa.gov/temp-and-precip/drought/historical-palmers/ (NOAA 2020),
- United States Department of Agricultural (USDA) Natural Resource Conservation Service (NRCS) web soil survey (NRCS 2020b),
- Aerial photographs (Google Earth Pro 2020),
- UC Santa Barbara Library's collection of aerial photography (UCSB 2019),
- NWI map data for the *Riverside East* 7.5-minute USGS quadrangle that characterize wetland and waters of the United States according to the Classification of Wetlands and Deepwater Habitats of the United States developed by the Unites States Fish and Wildlife Service (USFWS) (Cowardin et al. 1979; NWI 2020), and
- Federal Emergency Management Agency (FEMA) Flood Map Service Center (FEMA 2020).

3.2 Field Surveys

MIG's senior biologist Jonathan Campbell, PhD performed the field investigation on April 21, 2020 to evaluate the extent of jurisdictional features subject to the USACE, the RWQCB and the CDFW, as well as riparian, riverine and vernal pool habitat subject to the MSHCP. The limits of WoUS and Waters of the State, as well as riparian/riverine features were recorded in the field within accessible areas using aerial maps and Google earth

The jurisdictional delineation was conducted in accordance with the Corps of Engineers 1987 Wetlands Delineation Manual (Corps Manual; Environmental Laboratory 1987) and the SWQCB 2019 Procedures. Additionally, the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West (Version 2.0) (Regional Supplement) (USACE 2008a) the Arid West Supplement wetland delineation methodology for wetlands (USACE 2008a) and *A Field Guide to the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b) were followed to document site conditions relative to hydrophytic vegetation, hydric soils, and wetland hydrology.

During the survey, the Project was examined for topographic features, drainages, alterations to hydrology or vegetation, and recent significant disturbance. A determination was then made as to whether normal environmental conditions were present at the time of the field survey. In the field, the techniques used to identify jurisdictional wetland waters of the US/State included observing the vegetation growing near the soil sample points and characterizing the current surface and subsurface hydrologic features present near the sample points through both wetland indicators and direct observation of hydrology. Features meeting wetland vegetation, soil, and hydrology criteria were then mapped in the field. A Trimble GeoXT geographic positioning system (GPS) unit with sub meter accuracy was used to collect geospatial data in the field. These GPS data, aerial photographic interpretation, and notes were then used in the office to identify jurisdictional boundaries on high resolution, geo-rectified aerial photography.

This report was prepared in accordance with guidance provided in Updated Map and Drawing Standards for the South Pacific Division Regulatory Program (USACE 2016a) and Information Requested for Verification of USACE Jurisdiction (USACE 2016b).

3.3 Delineation of Wetland Waters of the US

Where wetland field characteristics were present, Dr. Campbell examined vegetation, soils, and hydrology using the Routine Determination Method outlined in the Corps Manual (Environmental Laboratory 1987), using the Arid West data forms, vegetation sampling methods, and hydric soil and hydrology indicators developed for the Regional Supplement (USACE 2008a).

Hydrophytic Vegetation. Plant species identified on the Project were assigned a wetland status according to the USFWS list of plant species that occur in wetlands (Lichvar et al. 2016) and the USACE California Wetland Plant list (USACE, 2018). This wetland classification system is based on the expected frequency of occurrence in wetlands as shown in Table 1.

Table 1. Classification of Wetland-Associated Plant Species (Lichvar et al. 2016)

Indicator Category	Symbol	Frequency (Percent) of Occurrence in Wetlands[1]
Obligate	OBL	>99 (Almost always is a hydrophyte, rarely in uplands)
Facultative wetland	FACW	67 – 99 (Usually a hydrophyte but occasionally found in uplands)
Facultative	FAC	34 – 66 (Commonly occurs as either a hydrophyte or non-hydrophyte)
Facultative upland	FACU	1 – 33 (Occasionally is a hydrophyte, but usually occurs in uplands)
Upland[2]	UPL	<1% (Rarely is a hydrophyte, almost always in uplands)
Not listed[2]	NI	Considered to be an upland species

The USACE Arid West Supplement requires that a three-step process be conducted to determine if hydrophytic vegetation is present. The procedure first requires the delineator to apply the "50/20 rule" (Indicator 1) described in the manual. To apply the "50/20 rule," dominant species are evaluated within each herb, shrub, and tree stratum of the community. In general, dominants are the most abundant species that individually or collectively account for more than 50 percent of the total coverage of vegetation in the stratum, plus any other species that, by itself, accounts for at least 20 percent of the total. If greater than 50 percent of the dominant species can be classified by an OBL, FACW, or FAC wetland indicator status, ignoring + and - qualifiers, hydrophytic vegetation is present.

If the community passes Indicator 1 then the community is hydrophytic. If the community fails Indicator 1 and neither hydric soils nor wetland hydrology is present, then the hydrophytic vegetation criterion is not met, unless the site is a problematic wetland situation due to natural processes or recent disturbances. However, if the plant community fails Indicator 1 but hydric soils and wetland hydrology are both present, the delineator must apply Indicator 2.

[1] Based on information contained in the Corps Manual.
[2] Plant species that are not listed in the *Arid West 2016 Regional Wetland Plant List* (Lichvar et al. 2016) are considered UPL species

Indicator 2 is known as the Prevalence Index. The prevalence index is a weighted average of the wetland indicator status for all plant species within the sampling plot. Each indicator status is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5). Indicator 2 requires the delineator to estimate the percent cover of each species in every stratum of the community and sum the cover estimates for any species that is present in more than one stratum. All species are then organized into groups according to their wetland indicator status and the Prevalence Index is calculated using the following formula:

$$PI = \frac{A_{OBL} + 2A_{FACW} + 3A_{FAC} + 4A_{FACU} + 5A_{UPL}}{A_{OBL} + A_{FACW} + A_{FAC} + A_{FACU} + A_{UPL}}$$

The Prevalence Index will yield a number between 1 and 5. If the Prevalence Index is equal to or less than 3, hydrophytic vegetation is present. However, if the community fails Indicator 2, the delineator must proceed to Indicator 3.

Indicator 3 is known as Morphological Adaptations. Some hydrophytes in the Western Mountain Region develop easily recognized physical characteristics (or morphological adaptations) when they occur in wetland areas. Some of these adaptations may include, but are not necessarily limited to, adventitious roots and shallow root systems developed on or near the soil surface. If more than 50 percent of the individuals of a FACU species exhibit morphological adaptations for life in wetlands, that species is considered to be a hydrophyte and its wetland indicator status should be reassigned to FAC. If such observations are made, the delineator must recalculate Indicator 1 and 2 using a FAC indicator status for this species. The vegetation is hydrophytic if either test is satisfied.

Hydric Soils. The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as *a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the in the upper part [top 12 inches of soil]* (NRCS 2010). Hydric soils are listed by the U.S. Department of Agriculture (USDA) on the National Hydric Soils List (NRCS 2020a). Nearly all hydric soils exhibit characteristic morphologies that result from repeated periods of saturation or inundation for more than a few days, including redoximorphic features such as orange oxidized mottles or light-colored (high value, low chroma) reduced matrix or mottle colors.

The Arid West Supplement (USACE 2008b) contains a list of 23 hydric soil indicators that are known to occur in the Arid West region. Soils samples were collected and described according to the methodology provided in the NRCS. Soil chroma and values were determined by utilizing a standard Munsell soil color chart (Kollmorgen Instruments Corporation 2009). Hydric soils were determined to be present if any of the soil samples met the criteria defining wetland soils, as described in the Arid West Supplement (USACE 2008b).

Wetland Hydrology. Wetland hydrology exists in areas that are periodically inundated or have saturated soils at some time during the growing season, and for a sufficient duration to support hydrophytic vegetation (Environmental Laboratory 1987). This condition can either be observed through direct observation of primary indicators (such as ponding, saturation, sediment deposits, algal matting), or through indirect or "secondary" indicators (such as drainage pattern, saturation visible on an aerial photograph, raised ant mounds).

3.4 Delineation of Non-Wetland Waters of the US

Non-wetland waters ("Other waters") were also identified in the field and mapped. This could include lakes, slough channels, seasonal ponds, tributary waters, non-wetland linear drainages, and salt ponds. Non-wetland waters meet the one or more of the wetland criteria, but not all three. In non-tidal or muted tidal

waters USACE jurisdiction extends to the ordinary high water mark (OHWM) which is defined in 33 CFR Part 328.3 as "the line on the shore established by the fluctuations of water and indicated by physical characteristics, such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation or the presence of litter and debris."

In tidal waters, USACE jurisdiction extends to the landward extent of vegetation associated with salt or brackish water or the high tide line (HTL) (see 33 CFR, Part 328.4). The HTL is defined in 33 CFR, Part 328.3 as "the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The HTL may be determined, in the absence of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gauges, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other tides that occur with periodic frequency, but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm."

3.5 Delineation of Wetland and Non-Wetland Waters of the State under RWQCB

Evaluation of jurisdiction under the RWQCB was completed, and traditionally follows guidance from Section 401 of the CWA. It generally has the same jurisdictional areas as the USACE. In addition, the wetland delineation procedures were followed per the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" (April 2019).

3.6 Delineation of CDFW Streambed & Riparian Habitat

CDFW jurisdiction was identified, including any unvegetated streambed, aquatic and riparian areas. Evaluation of potentially jurisdictional areas followed the guidance of relevant CDFW materials and standard practices by CDFW personnel. CDFW jurisdiction was delineated by measuring the outer width and length boundaries of potentially jurisdictional areas, consisting of the greater of either the top of bank measurement or the extent of associated riparian or wetland vegetation.

Ephemeral and intermittent streams, rivers, creeks, dry washes, sloughs, blue line streams on USGS maps, and watercourses with subsurface flows fall under CDFW jurisdiction. Canals, aqueducts, irrigation ditches, and other means of water conveyance may also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife. Jurisdiction does not include tidal areas such as tidal sloughs unless there is freshwater input. This includes watercourses having surface or subsurface flow that supports or has supported riparian vegetation.

3.7 Delineation of MSHCP Riparian/Riverine and Vernal Pools

Habitats were assessed to determine if MSHCP riparian/riverine resources and vernal pools, pursuant to section 6.1.2 of the MSHCP are present onsite. MSHCP riparian/riverine resources are defined as, "*those lands that 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. Vernal pools are 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"* (MSHCP 2004).

In addition, stock ponds, ephemeral pools, and other areas of potential fairy shrimp habitat are identified and mapped, where present.

4 Environmental Setting

This chapter describes the topography, land use, hydrology, vegetation characteristics, and soils associated with the Project.

4.1 Topography

Elevation within the Project ranges from 1,562 to 1,574 feet NAVD88, and gently slopes from the north to the south (Google Earth 2020). The site is mostly flat.

4.2 Soils

The NRCS has identified one soil series within the Project (Figure 4), and is described below (NRCS 2020b). The National List and California List of Hydric Soils was reviewed to determine if the soil type within the Project is hydric. The mapped soil series is not classified as a hydric soil on the National List or California List of Hydric soils (NRCS 2020a).

Monserate sandy loam, 0 to 5 percent slopes. The Monserate series is a member of the fine-loamy, mixed, thermic family of Typic Durixeralfs. This soil type has an impermeable layer (duripan) approximately 28 inches below the surface, which can form a perched water table when water is present, since infiltration through this soil layer is very slow. This may be a strong influence on the emergent cattail ponds that are present onsite, and allow for willow and other hydrophytic vegetation to persist in the swales.

The soils formed in alluvium derived principally from granitic rocks. Monserate soils have brown and yellowish red, slightly acid, sandy loam A horizons, reddish brown, neutral, sandy clay loam B2t horizons underlain by a silica-cemented duripan. Monserate soils are found in the interior valleys in the western part of southern California. Monserate soils are moderately well to well drained with slow to rapid runoff. Permeability is moderately slow below 10 to 20 inches and very slow in the duripan.

4.3 Precipitation

In Moreno Valley, the climate is hot-summer Mediterranean, with most rain falling in the winter and spring. Mild cool temperatures are common in the winter and hot to very hot temperatures are common in the summer. Climate conditions include a 30-year average (1986-2015) of approximately 8.7 inches of annual precipitation with an average temperature range from 53ºF to 81ºF (PRISM Climate Group 2020).

The jurisdictional delineation was conducted during normal conditions that were categorized as Mid-Range on the Palmer Drought Severity Index (NOAA 2020). The jurisdictional delineation field investigation took place during the wet season (April 2020). Relative to the 30-year climate normal, precipitation was normal for the 2019-20 wet season prior to the delineation. Total precipitation recorded in the area from October 2019 through February 2020 was 5.4 inches, which is approximately 87% of the 30-year average (PRISM Climate Group 2020). These normal conditions were taken into account when assessing the jurisdictional features present.

4.4 Hydrologic Unit

The Project is located in the San Jacinto sub-watershed (USGS Hydrologic Unit 18070202), which is part of the larger Santa Ana Watershed (USGS Hydrologic Unit 180702).

4.5 Hydrology

There are two small emergent marshes that connect with, and flow into, two ephemeral drainage swales within the Project limits (Figure 2). The primary sources of hydrology that support these features are runoff from storm flows, as well as nuisance flows (irrigation overspray, etc) from surrounding residential and commercial areas. The underlying duripan found within Monserate soils keeps water present in the marsh, and retains moisture sufficient for willows to grow, since the duripan can create a perched water table.

The drainage features are the remnants of natural braided channels that were present prior to urbanization. Evidence of these channels are visible in aerial photography in 1977 (UCSB 2020). The present day drainage swales convey runoff through overland flow into culverts that terminate at a detention basin, approximately 0.75 mile east of the Project, located at Brodiaea Avenue and Gilbert Street.

The drainage swales within the project are not confluent with the Sunnymead or Perris Valley Storm Drain Channels based on stormwater facility maps published by the Riverside County Flood Control and Water Conservation District.

The Sunnymead Storm Drain Channel is the nearest named hydrologic feature and is located offsite, and approximately 0.3 mile west of the Project. The Sunnymead Channel is confluent with the Perris Valley Storm Drain Channel which is located approximately 2.4 miles southeast of the Project. The Perris Valley Storm Drain Channel is confluent to the San Jacinto River, which flows into Lake Elsinore. Lake Elsinore generally acts as a sink, although high water flows are occasionally diverted through the Elsinore Spillway Channel to Temescal Creek. Temescal Creek flows to the Santa Ana River (nearest Traditional Navigable Water [TNW]) and finally to the Pacific Ocean.

4.6 Vegetation Communities

The Project supports four main vegetation communities, of which two are aquatic/riparian in nature (Figure 5). Vegetation communities were mapped using CDFW's Vegetation Classification and Mapping Program's (VegCAMP) currently accepted list of vegetation alliances and associations (CDFW 2020). Table 2 provides a summary of the main vegetation communities onsite. One mule fat and one palo verde individuals were separately mapped and constitute 0.011 acre, which is not included in the table or discussion below. Appendix A list of plant species recorded onsite.

Riparian or Wetland Habitat

Black Willow Riparian Woodland (0.39 acre). This riparian community is dominated by black willow (*Salix gooddingii*) [FACW] and occurs primarily within the onsite western drainage swale (Drainage A). A small patch of black willow is also found on the eastern swale. One mule fat (*Baccharis salicifolia*) [FACW] individual was also mapped within this vegetation community. Understory plants include ripgut brome (*Bromus diandrus*) [UPL], wild raddish (*Rhapanus sativus*) [FAC], chickweed (*Stellaria media*) [FACU], bedstraw (*Galium aparine*) [FACU], small-flowered fiddleneck (*Amsinckia menziesii*) [UPL], and hairy vetch (*Vicia villosa*) [UPL].

Typha Alliance (Disturbed Wetland - Cattail Marsh) (0.02 acre). Cattail marsh occurs at the upstream-most end of both onsite drainages, and form as a result of urban runoff in combination with the hardpan layer below the surface. The dominant specie is southern cattail (*Typha domingensis*) [OBL].

Wet Meadow (0.81 acre). Wet meadow vegetation community includes the seasonally inundated drainage pattern which bisects the non-native grassland. Dominant plant species observed within this vegetation community include hairy vetch (*Vicia villosa*), black mustard *(Brassica nigra*), field bindweed *(Convolvulus arvensis*), kochia (*Bassia scoparia*), prickly lettuce (*Lactuca serriola*), jointed charlock (*Raphanus sativus*),

Italian rye (*Lolium multiflorum*), horseweed (*Erigeron canadensis*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), tumbling pigweed (*Amaranthus albus*), common wild oat (*Avena fatua*), prickly sow thistle (*Sonchus asper*), jimsonweed (*Datura wrightii*), telegraph weed (*Heterotheca grandiflora*), cheeseweed (*Malva parviflora*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), mayweed (*Anthemis cotula*), prostrate knotweed (*Polygonum aviculare*), Spanish lotus (*Acmispon americanus*), and western witchgrass (*Panicum capillare*).

Upland Habitat

Non-native Grassland (16.39 acre). Non-native grassland is the dominant vegetation community throughout the property and is a result of annual discing operations. The dominant species is foxtail barley (*Hordeum murinum*) [FACU].

Developed Land (0.05 acre). Developed areas include buildings, impervious surfaces, and areas that are regularly disturbed, or are devoid of substantial vegetation cover. The concrete drainage at a culvert inlet at the terminus of Drainage A is considered developed land.

Table 2 - Vegetation Communities

Vegetation Community	Within Project Limits (acres)
Riparian or Wetland	
Black Willow Riparian Woodland	0.39
Typha Alliance (Disturbed wetland - cattail marsh)	0.02
Wet Meadow	0.81
Upland	
Non-Native Grassland	16.39
Developed (onsite only)	0.05
TOTAL	17.66

4.7 U.S. Fish and Wildlife Service National Wetland Inventory

As part of the evaluation for the presence of jurisdictional resources, USFWS National Wetland Inventory (NWI) map data were reviewed. NWI maps are based on interpretation of aerial photography, limited verification of mapped units, and/or classification of wetland types using the classification system developed by Cowardin et al. (1979). These wetland data are available for general reference purposes and do not necessarily correspond to jurisdictional waters/wetlands as defined in the USACE Arid West Supplement. According to the NWI map no wetlands are mapped within the Project, although the two onsite cattail marshes would be considered emergent wetland (PEM1C).

Nearby offsite wetland features include two intermittent riverine features (R4SBA): one approximately 0.5 mile east, and the other one approximately 0.3 mile west of the Project. The NWI also maps a freshwater emergent wetland (PEM1C) approximately 0.3 mile west of the Project Site.

4.8 Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) produces maps depicting flood zones that are generally associated with rivers, oceans and other water bodies. Like the NWI maps, the FEMA flood zone maps are based predominantly on topography and regional modeling.

Based upon a review of the FEMA flood zone maps, no portion of the Project occurs within the 100-year flood zone. The area is mapped as Zone X – Area of Minimal Flood Hazard (FEMA 2020).

5 Jurisdictional Delineation Results and Discussion

This chapter describes the delineated features, existing conditions and expected jurisdictional status within the Project limits. The information and results included herein document the investigation, best professional judgment, and conclusions of MIG. It is correct and complete to the best of our knowledge. However, all jurisdictional determinations should be considered preliminary until reviewed and approved by the regulatory agencies.

The Project contain two ephemeral drainages, willow woodland, and two emergent cattail marshes that are drainage subject to the jurisdiction of the RWQCB, the CDFW, and the MSHCP. A total of eight sample points (SP1 to SP8) were examined to identify jurisdictional features. See Figures 6 through 8 for a map of each jurisdiction. Table 3 provides a summary of acreage. The Arid Land JD Forms are found in Appendix B. Site photos locations and photographs are depicted are depicted in Appendix C.

A total of 1.22 acres of potentially jurisdictional waters & riparian/riverine habitat regulated by the RWQCB, the CDFW and the MSHCP were mapped onsite (see Table 3 below). The onsite aquatic and drainage swale features are not subject to the jurisdiction of the USACE under the 2020 Rule, since they do not meet any of the definitions of Category (a)(1-4) waters.

Table 3. Summary of Jurisdictional Waters and Habitats within the Project

Jurisdictional Waters	Acres[1]
RWQCB Jurisdiction Total	0.38 acre
Section 401 Waters of the State	
Wetland Waters of the State	
Cattail marshes	0.02 acre
Non-Wetland Waters of the State	
Drainages A & B (1,149 linear feet)	0.35 acre
Developed land (concrete drainage inlet, impacted)	0.01 acre
CDFW Jurisdiction Total	1.22 acre
Streambed	0.81 acre
Riparian/Aquatic	0.41 acre
MSHCP Riparian/Riverine Total	1.22 acre
Riverine	0.81 acre
Riparian/Aquatic	0.41 acre

[1]Note: Values are approximate due to rounding.

Cattail Marshes

Two cattail marshes, totaling 0.02 acre, each situated on the north end of the two drainage swales met the definition of a Wetland Waters of the State, under the SWQCB 2019 Procedures and are considered Special Aquatic Sites. These two marshes are regulated by the RWQCB, CDFW and MSHCP. They are not jurisdictional under the USACE.

Black Willow Woodland

Black willow woodland is found just downstream of the cattail marsh along the western Drainage A and forms a broad woodland habitat. A small patch is also present on the upstream end of Drainage B. This area constitutes 0.39 acre of riparian habitat and is regulated by the CDFW and under the MSHCP to the outer dripline of the trees.

It did not meet the 3-parameter definition of a Wetland, and therefore it would be considered a non-wetland Water of the State subject to the RWQCB jurisdiction. Hydric soil characteristics were lacking. Examination of historic aerial photographs (Google Earth 1994-present) indicates an OHWM of approximately 20 feet wide in Drainage A and 7 feet wide in Drainage B under the canopy, which the RWQCB would take jurisdiction over. The acreage is included in Drainage A and B below.

Drainage A

Directly downstream of the Black Willow Woodland, woody vegetation disappears and is dominated by an array of grasses and forbs. The dominant plant species range from FAC to UPL and do not meet the criteria of hydrophytic vegetation and hydric soil characteristics are absent. These areas remain green for much longer duration than the surrounding area, indicating the presence of soil moisture, resulting from the urban hydrologic input. Examination of historic aerial photographs confirmed a defined bed and bank under non-disced conditions, indicating that wetland hydrology is present. This drainage would be considered ephemeral in nature and extends for 218 linear feet beyond the willow woodland until it terminates in a concrete drainage inlet (already impacted jurisdictional feature) and exits the site. The total drainage length is 546 feet. The width of jurisdiction was determined by the presence of hydrology which averages 20 feet wide, for a total of 0.25 acre of jurisdiction. This drainage is regulated by the RWQCB, CDFW and under the MSHCP as non-wetland Waters of the State and Riverine habitat (MSHCP).

Drainage B

Drainage B Is located directly downstream and adjacent to the eastern cattail marsh. Like Drainage A, woody vegetation as absent and grasses and forbs are dominant. The Project limits are regularly disced, so this occurs under a highly disturbed conditions. The dominant plant species are mostly FACU, but range from a few FACW to UPL species. This drainage does not meet the criteria of hydrophytic vegetation and hydric soil characteristics are absent. Like Drainage A, these areas remain green for much longer duration than the surrounding area, indicating the presence of soil moisture, resulting from the urban hydrologic input. Examination of historic aerial photographs confirmed a defined bed and bank under non-disced conditions. Wetland hydrology is present. This drainage would be considered ephemeral in nature and extends for 603 linear feet until it terminates off-site in a concrete inlet. The width of jurisdiction was determined by the presence of hydrology which averages 7 feet wide, for a total of 0.10 acre of jurisdiction. This drainage is regulated by the RWQCB, CDFW and under the MSHCP as non-wetland Waters of the State and Riverine habitat (MSHCP).

5.1 Sample Point Summary

A total of eight (8) Sample Points (SP) were collected during the jurisdictional delineation. Arid West Wetland Determination Data Forms and SP locations are found in Appendix B.

- SP1 was located just outside the cattail marsh of Drainage A. Dominant species were a mix of grasses and forbs which were FACU to UPL. It did not meet the criteria for hydrophytic vegetation or soils. Soils are regularly disced. Based upon historic aerial photographs this location is outside the OHWM. This Sample Point is not subject to the jurisdiction to any of the authorities that

regulate wetlands and waters.

- SP2 is situated on the edge of the cattail marsh. Dominant species was southern cattail (*Typha domingensis*) [OBL]. The pond was inundated at the time of the survey. Due to the present of the OBL vegetation with the ponded water, hydric soils were assumed. This Sample Point meets the RWQCB definition of a wetland. It is an aquatic feature also regulated by the CDFW and MSHCP.

- SP3 is located just downstream of the cattail pond of SP1 and SP2 on the western-most drainage (Drainage A). Overstory is black willow (FACW), with an understory of various invasive grasses and forbs (UPL and FACU plants). Soils did not exhibit hydric characteristic. Hydrology is from upstream sources with the duripan most likely acting as a perched water table. This SP does not meet the RWQCB definition of a wetland, but it would be considered a Waters of the State under the Porter Cologne Act, and Riparian Habitat regulated by the CDFW and the MSHCP.

- SP4 is situated just outside the dripline of the Black Willow Woodland. It is dominated by forbs and grasses that occur in non-wetland areas, including annual fescue (*Vulpia myuros*) [FACU], wild radish [FAC], sweet clover (*Melilotus officinalis*) [FACU], chickweed [FACU], hairy vetch [UPL] and bobtail barley (*Hordeum intercedens*) [FAC]. No hydric soils were noted. Normal circumstances do not exist due to annual discing. Examination of historic aerial photographs indicate this sample point is outside any OHWM. This Sample Point is not subject to the jurisdiction to any of the authorities that regulate wetlands and waters.

- SP5 is downstream of SP1-4 in the same drainage, in the center of the swale where annual grasses and forbs dominate and willows are absent. Dominant plants include annual fescue [FACU], wild radish [FAC], sweet clover [FACU], chickweed [FACU], and Pacific popcorn flower (*Plagiobothrys tenellus*) [FACU]. There was no evidence of hydric soils. Normal circumstances do not exist due to annual discing. Examination of historic aerial photographs indicate a drainage with an OHWM of ~20 feet wide. This Sample Point meets the RWQCB definition of non-wetland waters of the State, is considered streambed by the CDFW and riverine habitat under the MSHCP.

- SP6 lies at the edge of the eastern cattail marsh upstream of Drainage B. The dominant plant species was southern cattail [OBL], with curly dock (*Rumex crispus*) [FAC] and perennial ryegrass (*Lolium perenne*) [FAC] also present, but comprise a minor component. The pond was inundated. Due to the dominance of the OBL vegetation with the ponded water, hydric soils were assumed. This Sample Point meets the RWQCB definition of a wetland, and would also be regulated by the CDFW and under the MSHCP.

- SP7 is along the eastern Drainage B with one mule fat [FACW] and black willow [FACW] present, along with a mix of FACW to FACU annual grasses and forbs. It met the Prevalence Index for hydrophytic vegetation, but did not meet the criteria for hydric soils. Examination of historic aerial photographs indicate a drainage with an OHWM of ~7 feet wide. This Sample Point meets the RWQCB definition of non-wetland waters of the State, is considered streambed by the CDFW and riverine habitat under the MSHCP.

- SP8 is further downstream of SP7 in Drainage B. Dominant plants that are common in upland habitats, and were dominated by FACU species such as annual fescue, sweet clover and storksbill (*Erodium cicutarium*) [FAC]. It did not meet the criteria for hydrophytic vegetation or soils. Examination of historic aerial photographs indicate a drainage with an OHWM of ~7 feet wide. This

Sample Point meets the RWQCB definition of non-wetland waters of the State, is considered streambed by the CDFW and riverine habitat under the MSHCP.

5.2 Waters of the US Under the USACE

The two onsite cattail marshes, the willow woodland, and two drainages swales do not meet the definition of Waters of the US under the 2020 Rule, and thus the USACE will likely not exert jurisdiction, as of the date of this report. It should be noted however, that at least one state (Colorado) has an injunction, thus regulations in Colorado revert back to the pre-2020 Rule. Should a California injunction occur prior to permit application submittal, the USACE might exert jurisdiction over these features.

5.3 Waters of the State Under the RWQCB

Wetland Waters of the State

Both cattail marshes meet the definition of a Wetland under the SWQCB 2019 Procedures. All three wetland parameters are met, and thus these would be considered Wetland Waters of the State, and falls under the category of Special Aquatic Sites (*§ 230.41 Wetlands* in the 2019 Procedures). A total of 0.02 acre of RWQCB jurisdictional wetlands were identified onsite (Figure 6).

Non-Wetland Waters of the State

The OHWM under the black willow riparian woodland, Drainage A and B, and the already impacted concrete stormdrain inlet are considered non-wetland Waters of the State. Because they are not jurisdictional under the CWA, the RWQCB may exert jurisdiction under the California Porter Cologne Act and a Waste Discharge Requirement (WDR) or waiver of WDR would be required, should any waters of the State be impacted.

The RWQCB would take jurisdiction just the OHWM below the canopy in the black willow woodland. This acreage has been included as part of the overall acreage of the two drainage swales. Annual discing of the soil along Drainages A and B, has disturbed any OHWM features, thus historic aerial photographs were examined (Google Earth 1994-present). Evidence of an OHWM was observed and estimated widths extrapolated. Drainage A is estimated at 20 feet wide and is 546 feet long, for a total of 0.25 acre. Drainage B is estimated at 7 feet wide and extends for 603 linear feet, for a total of 0.10 acre. Total length of both drainages sums to 1,149 acres. Drainages A and B are non-wetland Waters of the US due to the presence of hydrology. They would take jurisdiction over 0.35 acre.

The concrete drainage inlet conveying water offsite is a non-wetland Water of the State. However, it is already considered “impacted” and therefore would not be subject to compensatory mitigation requirements over the 0.01 acre.

5.4 CDFW Jurisdictional Areas

All ecological systems associated with drainages (i.e., riparian vegetation) and drainage and pond features with bed and bank topography are regulated by the CDFW under Sections 1600-1616 of the California Fish and Game Code. This includes the 0.02 acre of cattail marshes, 0.39 acre of black willow woodland, and 0.81 acre of wetland meadow along Drainages A and B outside the black willow woodland, (Figure 7). A total of 1.22 acres of CDFW jurisdictional resources were identified onsite.

The cattail marsh and black willow woodland would be considered riparian/aquatic and generally requires higher mitigation ratios (e.g., 2:1) if impacted than the non-native grassland dominated wet meadow (1:1 mitigation ratio).

The concrete drainage inlet where water is conveyed offsite is a unvegetated stream channel by the CDFW since it conveys water. However, it is already considered "impacted" and therefore would not be subject to compensatory mitigation requirements over the 0.01 acre.

5.5 MSHCP Riparian/Riverine Resources

The cattail marshes and black willow woodlands are considered Riparian resources under the MSHCP. Drainages A and B are considered Riverine resources under the MSHCP. Thus, a total of 0.41 acre of riparian habitat and 0.81 acre of riverine habitat is present onsite for a total of 1.22 acres (Figure 8).

The concrete drainage inlet would not be regulated under the MSHCP. No vernal pool habitat occurs onsite.

6 Impacts to Jurisdictional Resources & Habitat Mitigation

6.1 Impacts to Jurisdictional Resources

Impacts to jurisdictional resources listed in this report as a result of the proposed development would trigger the need for regulatory permits. The current design would impact all jurisdictional resources. Impacts to Wetlands under the 2019 Procedures triggers the requirement for an Alternatives Analysis by the RWQCB. The 0.02 acre of cattail marsh would fall under this category.

6.2 Habitat Mitigation

Any permanent impacts to jurisdictional resources require that the resources be mitigated for (aka replaced or preserved). Impacts to 0.81 acre of wet meadow, which are ephemeral in nature and low quality, will be mitigated for by purchasing re-establishment credits at a1:1 ratio from the Riverpark Mitigation Bank. Impacts to 0.41 acre of cattail marsh and black willow woodland will be mitigated for by purchasing rehabilitation credits at a 2:1 ratio at the Riverpark Mitigation Bank.

Habitat mitigation credits can be purchased either at an approved Habitat Mitigation Bank (privately owned) or via an In-Lieu Fee Program (public agency). Approval to purchase the mitigation credits must be granted in advance by the resource agencies. The Riverpark Mitigation Bank may be the preferred bank for purchase by the resource agencies, due to the approved Service Area that includes Riverside County. .

7 Conclusions and Summary

The Project limits support jurisdictional resources subject to the RWQCB, CDFW and under the MSHCP.

- Wetland habitat (Wetland Waters of the State) includes 0.02 acre of cattail marshes.
- Riparian habitat (non-Wetland Waters of the State & MSHCP habitat) includes 0.39 acre of black willow woodland.
- RWQCB streambed (Non-Wetland Waters of the State) includes Drainages A and B, which extend for 1,149 linear feet, totaling 0.35 acre.
- CDFW and MSHCP streambed totals 0.81 acre, includes Drainages A and B outside the willow woodland. This acreage is included with the total RWQCB jurisdiction.
- The onsite 0.01 acre concrete outlet is also considered jurisdictional by the RWQCB and CDFW but is already an impacted feature thus would not be subject to any mitigation requirement. It is not regulated under the MSHCP.

Under the USACE 2020 Rule, none of the features would be regulated under Section 404 of the CWA, since none meet the definition of Category (a)(1-4) regulated waters. Should there be a California injunction over the new rule, this may be subject to change. Obtaining a letter of non-jurisdiction by the USACE is recommended.

Impacts to 0.81 acre of CDFW and MSHCP streambed, which are ephemeral in nature and low quality, will be mitigated for by purchasing re-establishment credits at a 1:1 ratio from the Riverpark Mitigation Bank. Impacts to 0.41 acre of CDFW and MSHCP riparian areas will be mitigated for by purchasing rehabilitation credits at a 2:1 ratio at the Riverpark Mitigation Bank.

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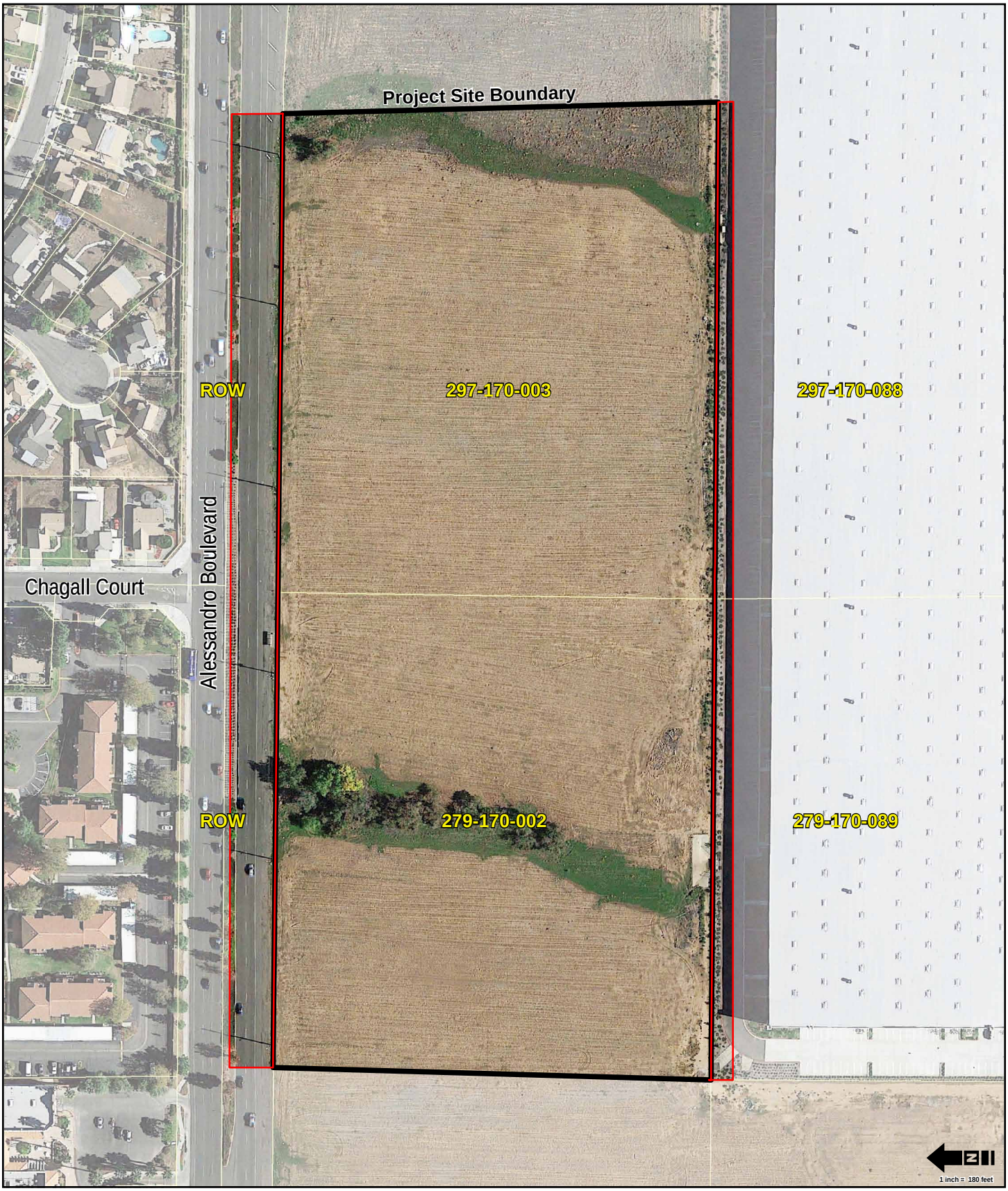
Figure 1 Vicinity Map

Alessandro Project Site, City of Moreno Valley, CA

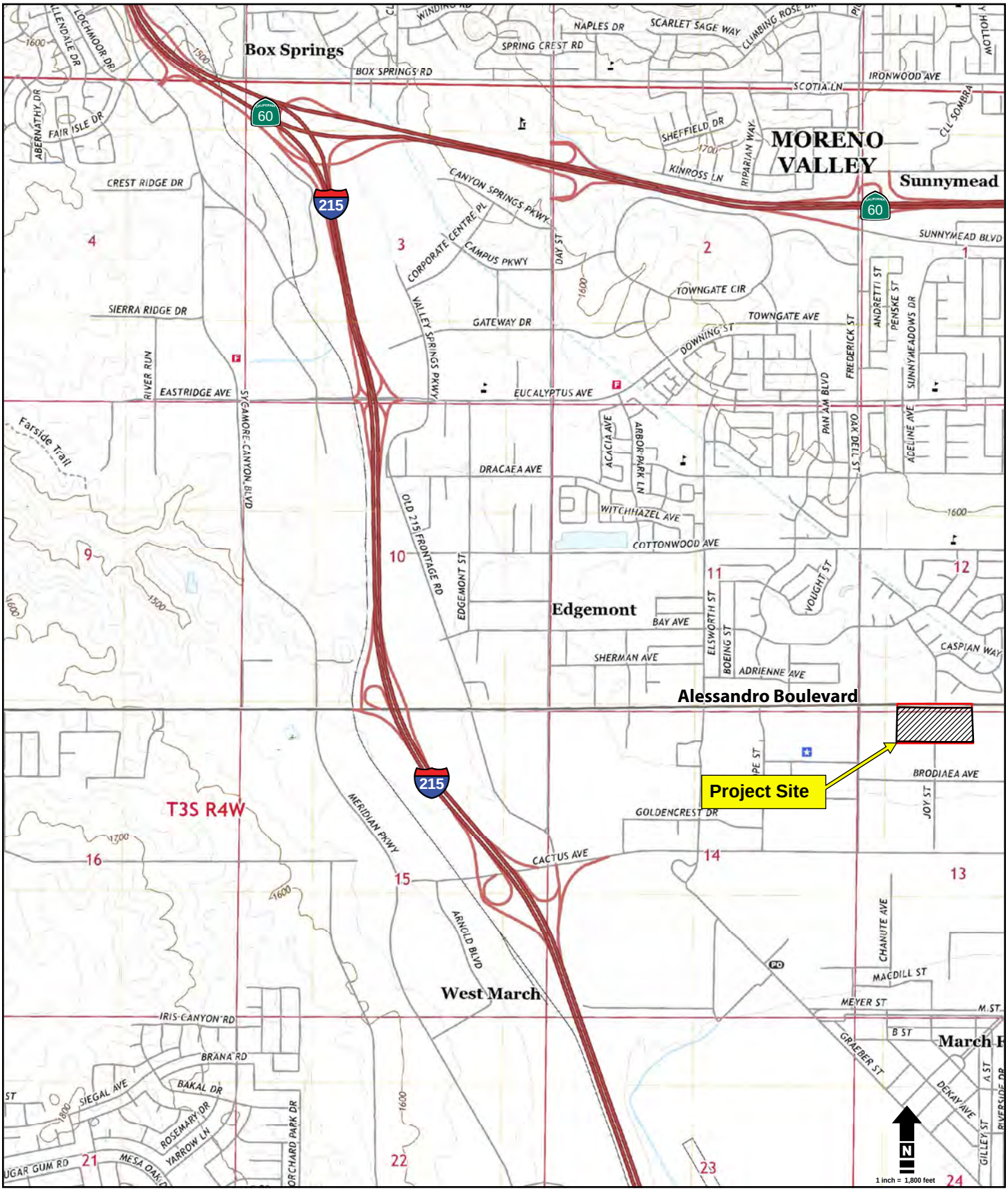


Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 2 Project Site Map

Alessandro Project Site, City of Moreno Valley, CA



Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Source: USGS Riverside East 2018

Figure 3 USGS Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

MmB - Monserate Sandy Loam (NRCS 2020)

Figure 4 Soils Associations Map

Alessandro Project Site, City of Moreno Valley, CA

BW Black Willow Woodland

DG Disturbed (Non-native Grassland)

DV Developed

WM Wet Meadow

OR Ornamental (Mexican palo verde)

DW Disturbed Wetland - Cattail

MF Mule Fat (individual shrub)

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 5 Vegetation Communities Map

Alessandro Project Site, City of Moreno Valley, CA

MIG

Wetland Waters of the State (0.02 acre)

Non-Wetland Waters of the State (0.35 acre, 1,149 LF)

Concrete Stormdrain, already impacted (0.01 acre, 32 LF)

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 6 RWQCB Jurisdiction

Alessandro Project Site, City of Moreno Valley, CA

MIG

CDFW Disturbed Wetland (0.02 acre)

CDFW Riparian (0.39 acre)

CDFW Wet Meadow (0.81)

Concrete Stormdrain, already impacted (0.01 acre, 32 LF)

Project Site Boundary (17.66 acres)

Offsite Assessment Area (2.65 acres)

Figure 7 CDFW Jurisdiction

Alessandro Project Site, City of Moreno Valley, CA

MIG

Figure 8 MSHCP Section 6.1.2 Jurisdiction

Alessandro Project Site, City of Moreno Valley, CA

MIG

Appendix A: Plants Observed Onsite

Disturbed/Non-Native Grassland

The majority of the Project Site is characterized as disturbed/non-native grassland and experiences annual dicking activities. Dominant plant species observed within this vegetation community include hairy vetch (*Vicia villosa*), black mustard *(Brassica nigra*), field bindweed *(Convolvulus arvensis*), kochia (*Bassia scoparia*), prickly lettuce (*Lactuca serriola*), jointed charlock (*Raphanus sativus*), Italian rye (*Lolium multiflorum*), horseweed (*Erigeron canadensis*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), tumbling pigweed (*Amaranthus albus*), common wild oat (*Avena fatua*), prickly sow thistle (*Sonchus asper*), jimsonweed (*Datura wrightii*), telegraph weed (*Heterotheca grandiflora*), cheeseweed (*Malva parviflora*), ripgut grass (*Bromus diandrus*), foxtail chess (*Bromus madritensis*), mayweed (*Anthemis cotula*), prostrate knotweed (*Polygonum aviculare*), Spanish lotus (*Acmispon americanus*), and western witchgrass (*Panicum capillare*).

Black Willow Woodland

The northern region of Drainage A is dominated by black willow woodland. Common species documented within this vegetation community include Gooding's willow (*Salix gooddingii*), velvet ash (*Fraxinus velutina*), and an understory of non-native grasses and ruderal species as described above.

Disturbed Wetland – Cattail

Two small patches of disturbed wetland-cattail habitat are located in the northern region of both Drainage A and B, immediately adjacent to Alessandro Boulevard. Dominant plant species observed within this vegetation community include curly dock (Rumex crispus), common cattail (*Typha latifolia*), tall nutsedge (*Cyperus eragrostis*), annual beard grass (*Polypogon monspeliensis*), Mexican fan palm (*Washingtonia robusta*), dallis grass (*Paspalum dilatatum*), barnyard grass (*Echinochloa crus-galli*), and tarragon (*Artemisia dracunculus*).

Ornamental

A single ornamental tree, Mexican palo verde (*Parkinsonia aculeata*) is located adjacent to the black willow woodland.

Mule Fat

A single mule fat (*Baccharis salicifolia*) shrub is located near the northeast corner of the Project Site.

Appendix B: USACE Wetland Determination Forms

Sample Point Locations

Appendix C: Site Photographs

Photo 1: View of Black Willow Woodland along Drainage A.

Photo 2: View of Concrete inlet at terminus of Drainage A.

Photo 3: View of disced field where Drainage B is situated. Taken from SE corner.

Photo 4: View of Drainage B and cattail marsh near Alessandro Blvd.