Determination of Biologically Equivalent or Superior Preservation Report

Harvest Landing Retail Center & Business Park Project

Permittee Name

City of Perris
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Consultant Name

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Contents

APPENDIX

1 EXECUTIVE SUMMARY

This report contains the results of the Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis to demonstrate compliance with the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) for impacts to riparian/riverine resources and burrowing owl (*Athene cuincularia*) associated with the proposed Harvest Landing Retail Center and Business Park Project. The project involves the proposed construction and operation of a commercial and business park development which would be developed in two phases in the City of Perris, Riverside County, California.

Two drainage features (Drainage 1 and Drainage 2) were observed onsite. Drainage 1 enters the site at the northeast corner of Orange Avenue and the Interstate 215 Frontage Road from a 48-inch box culvert which originates from the west under Interstate 215 and beyond. Flows from Drainage 1 are conveyed east along the northern shoulder of Orange Avenue through a concrete channel for approximately 165 feet before the channel yields to an earthen basin. Flows are consolidated through a 36-inch culvert and conveyed further east under Indian Avenue before exiting the project site through an 18-inch culvert at the northwest corner of Barrett Avenue and Orange Avenue. From here, flows are directed further east beyond the project site. Drainage 2 enters the site from the lower western boundary of the project site, through a 60-inch box culvert which originates from underneath the Interstate 215 Frontage Road and beyond Interstate 215 to the west. The drainage runs from west to east within the project site, extending from the Interstate 215 Frontage Road at the western boundary, and terminating within the project site before reaching Indian Avenue.

Approximately 0.25 acre of riparian/riverine habitat was mapped within the project boundaries. The 0.25 acre of mapped MSHCP Riparian/Riverine habitat, consists of 0.02 acre of disturbed riparian scrub (riparian), and 0.23 acre of riverine habitat. Project activities are expected to permanently impact approximately 0.25 (200 linear feet) acre of mapped riverine habitat within Drainage 1 and 2.

The applicant will mitigate impacts to 0.25 acre of riparian/riverine habitat through the creation of 0.5 acre of riparian/riverine habitat onsite at a 2:1 ratio. A conservation easement will be placed over the created herbaceous riparian/riverine habitat onsite. A Habitat Mitigation Monitoring and Reporting Program will also need to be prepared, reviewed, and approved by the wildlife agencies prior to project implementation.

However, when the project is ready to be kicked off, and if credits become available at the Riverpark Mitigation Bank, the applicant proposes to mitigate impacts to riverine habitat off-site through the purchase of re-establishment and/or rehabilitation mitigation credits through the Riverpark Mitigation Bank and/or other approved bank. Permanent impacts to 0.25 acre of riparian/riverine habitat will be mitigated at a 2:1 ratio consisting of re-establishment and/or rehabilitation mitigation credits. The applicant will be responsible for the purchase of mitigation credits to compensate for impacts to riparian/riverine habitat. The purchase of credits will remove the need for on-site creation.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region either by creating (establishment) riparian/riverine habitat onsite, or by re-

establishing habitat of equal or superior functions and values within the same watershed through the purchase of off-site mitigation credits.

2 INTRODUCTION

2.1 Project Area

The project site is generally located north and east of Interstate 215, west of State Route 79, and south of State Route 60 in the City of Perris, Riverside County, California. The project site is depicted on the Perris quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within Sections 18 and 19 of Township 4 South, Range 3 West. Specifically, the project site is bounded to the west by Interstate 215 East Frontage Road and to the east by North Perris Boulevard and is located north of East Nuevo Road and south of Placentia Avenue. Refer to Exhibits 1-3 in Appendix A.

2.2 Project Description

The project involves the construction and operation of a commercial and business park specific plan over 358.28 acres which would be developed in two phases. The first phase of the project consists of construction of seven (7) industrial buildings, a commercial shopping center, a big box retail building, and a Water Quality Management Plan (WQMP) drainage and detention area. The total area of development for Phase I encompasses approximately 187.43 acres. In addition, the project would include the construction of approximately 35.09 acres of roadways and a 13.08-acre WQMP basin. Phase II will consist of future business park uses north of Orange Avenue. Phase II area totals 122.68 acres. Refer to Appendix B, *Site Plan*.

PARCEL	LAND AREA
Business Park - Phase I - Building 1	102.34
Business Park - Phase I - Building 2	24.16
Business Park - Phase I - Building 3	7.15
Business Park - Phase I - Building 4	3.6
Business Park - Phase I - Building 5	3.46
Business Park - Phase II - Building 6	40.65
Business Park - Phase II - Building 7	54.15
Business Park - Phase II - Building 8	17.22
MBU Overlay - Phase II	10.66
TOTAL Business Park	**263.39**
Total Commercial *	**46.72**
Roadways	**35.09**
WQMP	**13.08**
TOTAL SP AREA	**358.28**

2.3 Existing Conditions

The project site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances associated with historic agricultural activities, surrounding development, and routine weed abatement/disking activities. Historic aerials show these activities have been ongoing since at least 1959. Prior to conducting the field investigation, aerial photography was reviewed to document existing site conditions and document the changes to the project site and surrounding area. Below is a summary of the aerial review.

1959: The project site and surrounding areas support active agricultural fields with associated structures near the intersection of Indian Avenue and Orange Avenue. Construction is present to the north at what will become the existing location of Val Verde Elementary School. Interstate 215, Placentia Avenue and North Perris Boulevard are present to the west, north, and east, respectively.

1959 – 1966: Residential developments are present along Indian Avenue.

1966 – 1978: Agricultural operations have ceased in the western limits of the project site.

1978 – 1997: Large anchor retail centers are present off-site to the northeast and southeast.

1997 – 2002: A trailer stockyard is present in the northern portion of the project site.

2002 – 2005: Agricultural operations have ceased in the southern limits of the project site.

2005 – 2009: Agricultural operations have ceased in all but the eastern limits of the project site.

2009 – 2010: All agricultural operations supported by the project site have ceased.

2010 – 2020: No changes have occurred. The project site is subjected to routine weed abatement regimes.

2020 – present: A water detention basin is present off-site to the north, beyond Val Verde Elementary School. Additional commercial development is present to the southeast.

The disturbances outlined above have eliminated the natural plant communities that historically occurred on the project site and surrounding area. As a result, no native plant communities occur on-site, nor will any native plant communities be impacted from implementation of the proposed project.

Vegetation

No native plant communities occur within the boundary of the project site. The project site supports one (1) plant community: non-native grassland. In addition, the site supports two (2) land cover types that would be classified as disturbed and developed. Refer to Exhibit 4, *Vegetation*. The vegetation community and land cover type are described in further detail below.

- **Non-Native Grassland:** The majority of the project site supports a non-native grassland that occurs in varying densities throughout the site, except the southwest and southeast corners and portions of the site perimeter. This plant community is dominated by non-native grasses such as oats (*Avena spp.*) and bromes (*Bromus spp*.) and supports primarily weedy/early successional species. Common plant species observed in the non-native grassland plant community include red-stemmed filaree (*Erodium cicutarum*), common mustard (*Brassica rapa*), Mediterranean mustard (*Hirschfeldia incana*), stinknet (*Oncosiphon pilulifer*), wild radish (*Raphanus sativa*), fiddleneck (*Amsinckia sp*.), annual lupine (*Lupinus bicolor*), and Mexican palo verde (*Parkinsonia aculeata*). Non-native grasses occur in the highest densities in the southern portion of the site, where they are nearly exclusive along a swale.

- **Disturbed**: The majority of the project site supports disturbed land that previously supported agricultural land uses. Vegetative cover ranges from dense/complete to barren based on frequency and nature of routine anthropogenic disturbance such as vehicle access and weed abatement regimes. Common plant species observed on-site include stinknet (*Oncosiphon piluliferum*), Russian thistle (*Salsola tragus*), common sunflower (*Helianthus annuus*), tumbleweed (*Amaranthus albus*), telegraph weed (*Heterotheca grandiflora*), horseweed (*Erigeron canadensis*), tocalote (*Centaurea melitensis*), Spanish clover (*Acmispon americanus*), prickly lettuce (*Lactuca serriola*), mustard (*Hirschfeldia incana*), ripgut brome (*Bromus diandrus*), Peruvian pepper tree (*Schinus molle*), tree of heaven (*Ailanthus altissima*), knotweed (*Polygonum aviculare*), jimsonweed (*Datura wrightii*), and slim oat (*Avena barbata*). In addition, a swathe of mulefat (*Baccharis salicifolia*) was observed in a roadside ditch along Orange Avenue, a swathe of desiccated cattails (*Typha sp*.) was observed near a water detention basin near the southwest intersection of North Perris Boulevard and Orange Avenue, and pockets of non-native ornamental trees such as Mexican palo verde (*Parkinsonia aculeata*) and gum tree (*Eucalyptus sp*.) are present near existing and former residential developments.

- **Developed:** Developed areas primarily include paved site-adjacent roadways, and existing residential land uses. Developed areas include paved, impervious surfaces.

Aquatic Resources

Drainage 1

Drainage 1 extends from the western boundary of the project site, at the northeast corner of the intersection of Orange Avenue and the Interstate 215 Frontage Road to the northwest corner of the intersection of Orange Avenue and Barrett Avenue, parallelling Orange Avenue. The roadside ditch extends from west to east through the middle of the site, terminating before reaching the northwest corner of the intersection of Barrett Avenue and Orange Avenue. This feature receives flows from paved box culvert leading from the Interstate 215 Frontage Road to the west. Heading east, the paved banks of the roadside ditch give way into an entirely earthen roadside ditch which runs parallel to the northern shoulder of Orange Avenue. Flows within the roadside ditch are eventually conveyed through a 36-inch paved culvert leading under Indian Avenue within the project site, and continue further west within the project site, eventually exiting the site through an 18-inch culvert which leads beneath Barrett Avenue on the eastern boundary and beyond further

east. The roadside ditch then flows into the underground storm drain system that likely conveys flows into the Perris Valley Storm Channel southeast of the site.

No surface water was present at the time of the investigation. In-channel vegetation within site boundaries consisted primarily of non-native plant species such as golden crownbeard (*Verbesina encelioides*), Jimson weed (*Dartura stramonium*), Russian thistle, Mediterranean mustard, horseweed (*Ergeron canadensis*), tree of heaven (*Ailanthus altissima*), and oleander (*Nerium* sp.); as well as common species California buckwheat (*Erigonium fasciculatum*) and common sunflower (*Helianthus annus*).

Drainage 2

Drainage 2 enters the site from the lower western boundary of the project site, through a 60-inch box culvert which originates from underneath the Interstate 215 Frontage Road and beyond Interstate 215 to the west. The drainage runs from west to east within the project site, extending from the Interstate 215 Frontage Road at the western boundary, and terminating within the project site before reaching Indian Avenue. Drainage 1 is concrete lined and paved at its entrance to the project site and is reinforced by a stepped spillway before transitioning into an entirely earthen channel. Drainage 2 infiltrates as its flows are conveyed east, eventually infiltrating entirely within the boundaries of the project site.

No surface water was present within Drainage 2 at the time of the investigation. Evidence of an ordinary high water mark was observed via scour, changes in substrate, shelving, and lack of vegetation. The ordinary high water mark ranged from approximately 1 to 6 feet in width throughout the length of the drainage within site boundaries.

In-channel vegetation within site boundaries consisted of common plant species such as slender oat (*Avena barbata*), horseweed, California buckwheat, common sunflower, and Mediterranean mustard.

3 RIPARIAN/RIVERINE MITIGATION (SECTION 6.1.2)

3.1 Methods

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

Based on the results of a Delineation of State and Federal Jurisdictional Waters Report (ELMT, 2024) prepared under a separate cover, two (2) unnamed drainage features were observed within the project site. These features will not be considered riparian/riverine habitat under Section 6.1.2 of the MSHCP. Since the onsite water features were artificially created/manmade, did not replace an existing blueline stream or other water feature, and are not dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens it does not meet the definition of riparian/riverine habitat under Section 6.1.2 of the MSHCP. However, since the regulatory agencies will likely assert jurisdiction over the onsite features, it is expected that the Western Riverside County Regional Conservation Authority (RCA) will also assert jurisdiction over the feature under Section 6.1.2 of the MSHCP.

Vernal Pools

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

specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

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

The MSHCP lists two general classes of soils known to be associated with special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur on the project site. Exeter sandy loam (0 to 2 percent slopes), and Madera fine sandy loam (0 to 2 percent slopes) are mapped as historically underlying the project site. In addition, agricultural land uses spanning much of the past century have thoroughly mixed and compacted on-site soils, such that conditions suitable for the formation of vernal pools are no longer present.

A review of recent and historic aerial photographs (1966-2023) of the project site during wet and dry seasons did not provide visual evidence of an astatic or vernal pool conditions within the project site. The site supported agricultural land uses for several decades and has been heavily degraded by recent installation of flood control infrastructure and staging and storage activities associated with nearby construction activities, which have resulted in heavy compaction of on-site soils. While surface water was observed in the southeast portion of the site, this was due to a series of storm events that concluded the day prior to the field investigation, and ponding was only observed where recent disturbance had compacted on-site soils. From this review of historic aerial photographs and observations during the field investigations, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat occurring within the proposed project site. Therefore, the project is consistent with Section 6.1.2 of the MSHCP.

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

3.2 Results/Impacts

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

The proposed project will result in permanent impacts to approximately 0.25 acre (2,978 linear feet) of riparian/riverine habitat within Drainage 1 and Drainage 2.

Table 1: Impacts to Riparian/Riverine Habitat

Jurisdictional Feature	Riparian/Riverine Habitat
	On-Site Jurisdiction/Impacts Acreage (Linear Feet)
Drainage 1	0.17 (2,330)
Drainage 2	0.08 (648)
TOTAL	**0.25 (2,978)**

3.3 Mitigation and Equivalency

3.3.1 Direct Effects

Project activities are expected to permanently impact approximately 0.25 acre of mapped riparian/riverine habitat. The applicant proposes to mitigate impacts to riparian/riverine habitat through the following:

- If off-site mitigation credits are not available from Riverpark Mitigation Bank, the applicant will mitigate impacts to 0.25 acre of riparian/riverine habitat through on-site applicant sponsored mitigation through the creation of 0.5 acre of riparian/riverine habitat onsite at a 2:1 ratio. A conservation easement will be placed over the created herbaceous riparian/riverine resource to ensure this area is protected in perpetuity.

  A Habitat Mitigation Monitoring and Reporting Program will also need to be prepared, reviewed, and approved by the wildlife agencies prior to project implementation.

- When the project is ready to be kicked off, and if credits become available at the Riverpark Mitigation Bank, the applicant proposes to mitigate impacts to riverine habitat off-site through the purchase of re-establishment and/or rehabilitation mitigation credits through the Riverpark Mitigation Bank and/or other approved bank. Permanent impacts to 0.25 acre of riparian/riverine habitat will be mitigated at a 2:1 ratio consisting of re-establishment and/or rehabilitation mitigation credits. The applicant will be responsible for the purchase of mitigation credits to compensate for

impacts to riparian/riverine habitat. The purchase of credits will remove the need for on-site creation.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region either by creating (establishment) riparian/riverine habitat onsite, or by re-establishing habitat of equal or superior functions and values within the same watershed through the purchase of off-site mitigation credits.

3.3.2 Indirect Effects

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

Fugitive Dust

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

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

Runoff - Toxics

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

are in place. BMPs shall be monitored and repaired if necessary to ensure maximum erosion, sediment, and pollution control.

- Permittee shall prohibit the use of erosion control materials potentially harmful to fish and wildlife species, such as mono-filament netting (erosion control matting) or similar material, within and adjacent to CDFW jurisdictional areas.
- All fiber roles [1], straw waddles, and/or hay bales utilized within and adjacent to the project site shall be free of non-native plant materials.
- Permittee shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws and it shall be the responsibility of Permittee to ensure compliance.
- Permittee shall not allow water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities to enter a lake, streambed, or flowing stream or be placed in locations that may be subjected to high storm flows.
- Spoil sites shall not be located within a lake, streambed, or flowing stream or locations that may be subjected to high storm flows, where spoil shall be washed back into a lake, streambed, or flowing stream where it will impact streambed habitat and aquatic or riparian vegetation.
- Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to fish and wildlife resources resulting from project related activities shall be prevented from contaminating the soil and/or entering the waters of the State. These materials, placed within or where they may enter a lake, streambed, or flowing stream by Permittee or any party working under contract or with the permission of Permittee, shall be removed immediately.
- No equipment maintenance shall be done within or near any lake, streambed, or flowing stream where petroleum products or other pollutants from the equipment may enter these areas under any flow.
- No broken concrete, cement, debris, soil, silt, sand, bark, slash, sawdust, rubbish, or washings thereof, oil or petroleum products, or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into waters of the State. When operations are completed, any excess materials or debris shall be removed from the work area. No rubbish shall be deposited within 150 feet of the edge of any lake, streambed, or flowing stream.

Accidental Encroachments During Construction

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

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

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

4 ADDITIONAL SURVEY NEEDS (SECTION 6.3.2)

4.1 Burrowing Owl

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

4.1.1 Methods

Under the MSHCP, burrowing owl is considered an adequately conserved covered species that may still require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The project site occurs within the MSHCP burrowing owl survey area and a habitat assessment was conducted for the species to ensure compliance with MSHCP guidelines for the species. In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. The following section describes the methodology followed during the burrowing owl habitat assessment conducted for this project.

- Step I – Habitat Assessment: Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present on-site. The habitat assessment was conducted on August 18, 2023. Upon arrival at the project site, and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats within and adjacent to the property, including perch locations, to establish owl presence.

  All suitable areas of the project site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat on-site. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

According to the MSHCP guidelines, if suitable habitat is present, the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the project site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. In addition to surveying the entire project site all bordering natural habitats located immediately adjacent to the project site were assessed. Seven (7) burrowing owls were observed during the habitat assessment. Further results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the project site. Accordingly, if suitable habitat is documented on-site or within adjacent habitats, both Step II, focused surveys and the 30-day preconstruction surveys are required in order to comply with the MSHCP guidelines.

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

    - Part A – Focused Burrow Survey: A systematic survey for burrows, including burrowing owl sign, was conducted concurrently with the August 18, 2023, habitat assessment by walking across all suitable habitats within 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, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for topography and in general ground surface visibility. Areas providing potential habitat for burrowing owls were surveyed for suitable burrows, consisting of natural and non-natural substrates in areas with low, open vegetation. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.

    - Part B – Focused Burrow Survey: Focused burrowing owl surveys were conducted during the recognized timeframe (the breeding season is typically March through August) in the morning one hour before sunrise to two hours after sunrise.

      Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed were recorded and mapped, with a hand-held GPS unit, if observed. Methods to detect presence of burrowing owls included direct observation, aural detection, and signs of presence. Binoculars were used to observe distant birds and their activity around potential nesting habitat. During the focused surveys, the survey area was assessed on foot by

qualified biologists Travis J. McGill, Jacob H. Lloyd Davies, Rachael A. Lyons, and Megan E. Peukert who are knowledgeable in the habitats and behavior of burrowing owls.

4.1.2 Results/Impacts

Four focused burrowing owl surveys were conducted on August 21, 23, 26, and 30, 2023. All surveys were completed between 0600 and 1100. The surveys were conducted to document the presence/absence of burrowing owl on the project site. Refer to Table 1, *Burrowing Owl Survey Data*, for a summary of the survey dates and times, personnel, weather conditions, and general findings.

Table 2: Burrowing Owl Survey Data

Survey No.	Survey Date	Surveyor	Time	Temperature (˚F)	Cloud Cover	Wind Speed (mph)	Burrowing Owl Detected On-Site
1	8/21/23	Jacob H. Lloyd Davids and Rachael A. Lyons	0600-1000	72-80	0%	1-5	Yes
2	8/23/23	Jacob H. Lloyd Davies and Megan E. Peukert	0800-1100	75-86	0%	1-5	Yes
3	8/26/23	Rachael A. Lyons and Megan E. Peukert	0600-1000	74-82	0%	1-5	No
4	8/30/23	Jacob H. Lloyd Davids and Rachael A. Lyons	0700-1000	72-78	0%	1-5	No

A total of seven (7) burrowing owls, including four (4) adults and three (3) juveniles, were observed during the 2023 focused surveys approximately 450 feet south of the intersection of Orange Avenue and Barrett Avenue in the northern of two water detention basins.

4.1.3 Mitigation and Equivalency

4.1.3.1 Direct Effects

The project proponent shall retain a qualified biologist to conduct a pre-construction survey for resident burrowing owls within 30 days prior to commencement of grading and construction activities within the project site. The survey shall include the project site and all suitable burrowing owl habitat within a 500-foot buffer. The results of the survey shall be submitted to the City of Perris Planning Division prior to obtaining a grading permit. In addition, if burrowing owls are observed during the required nesting bird survey, to be conducted within three days prior to ground disturbance or vegetation clearance, the observation shall be reported to the Wildlife Agencies. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity shall be conducted in accordance with the current Burrowing Owl Survey Instructions for the Western Riverside MSHCP.

If burrowing owl are detected, the CDFW shall be sent written notification by the City, within three days of detection of burrowing owls. If active nests are identified during the pre-construction survey, the nests

shall be avoided and the qualified biologist and project proponent shall coordinate with the City of Perris Planning Division, the US Fish and Wildlife Service, and the CDFW to develop a Burrowing Owl Plan to be approved by the CDFW and the US Fish and Wildlife Service prior to commencing project activities. The Burrowing Owl Plan shall be prepared in accordance with guidelines in the CDFW Staff Report on Burrowing Owl (March 2012) and MSHCP. The Burrowing Owl Plan shall describe proposed avoidance, minimization, relocation, and monitoring as applicable. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls and/or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls may also be required in the Burrowing Owl Plan. The project proponent shall implement the Burrowing Owl Plan following CDFW and US Fish and Wildlife Service review and concurrence. A final letter report shall be prepared by the qualified biologist documenting the results of the Burrowing Owl Plan. The letter shall be submitted to the CDFW prior to the start of project activities. When a qualified biologist determines that burrowing owls are no longer occupying the project site per the criteria in the Burrowing Owl Plan, project activities may begin.

If burrowing owls occupy the project site after project activities have started, then construction activities shall be halted immediately. The project proponent shall notify the City and the City shall notify the CDFW and the US Fish and Wildlife Service within 48 hours of detection. A Burrowing Owl Plan, as detailed above, shall be implemented.

4.1.3.2 Indirect Effects

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

5 REFERENCES

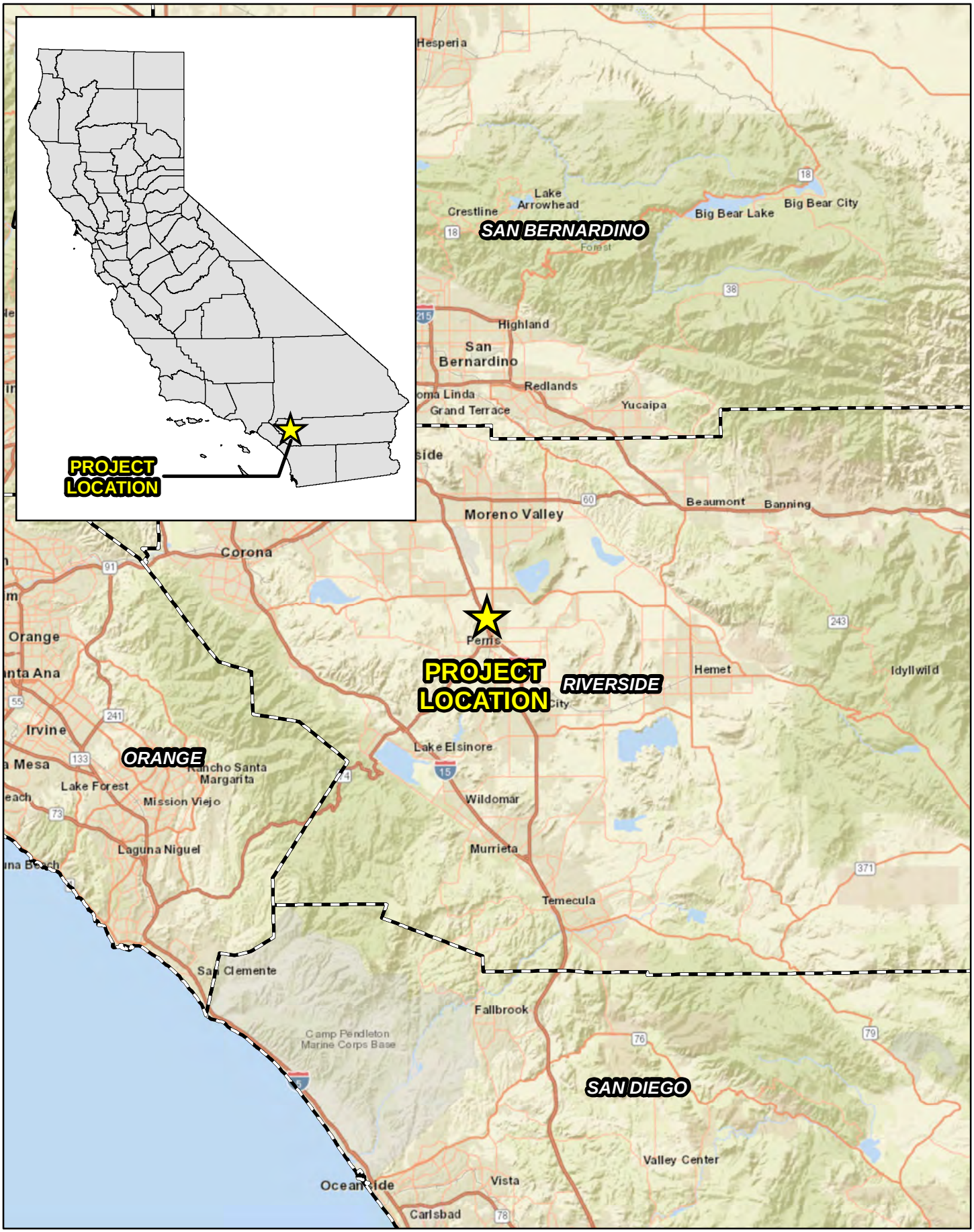
Google, Inc. 2024. Google Earth Pro version 7.3.6.9796. Build date 2/22/2024.

ELMT Consulting Inc. 2024. Habitat Assessment and MSHCP Consistency Analysis – Harvest Landing Business Park.

ELMT Consulting Inc. 2024. Delineation of State and Federal Jurisdictional Waters – Harvest Landing Business Park.

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

Appendix A Project Exhibits



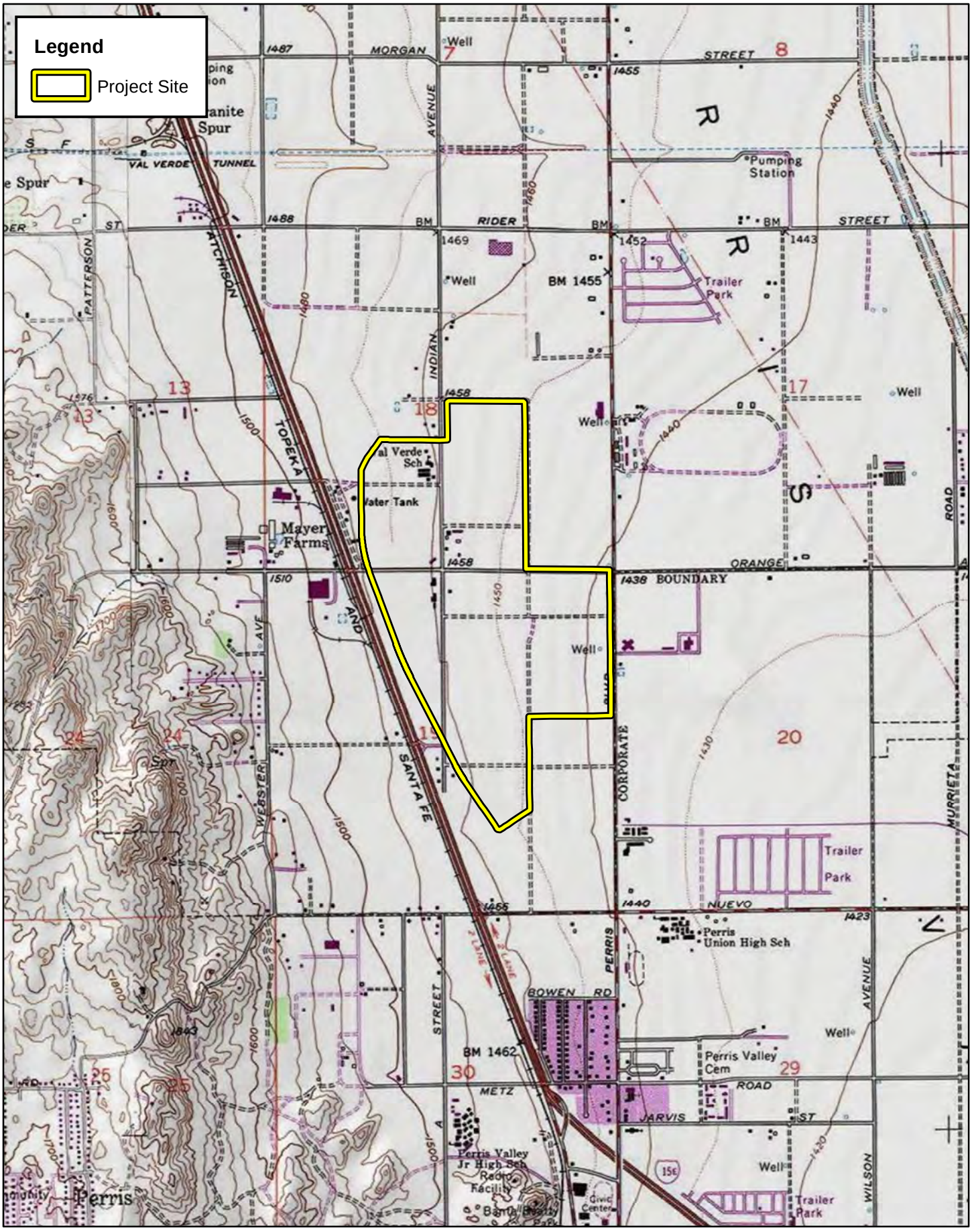
ELMT CONSULTING

Source: World Street Map, Riverside County

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Regional Vicinity

Exhibit 1



HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Site Vicinity

ELMT CONSULTING

0 625 1,250 2,500 Feet

Source: USA Topographic Map, Riverside County

Exhibit 2

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

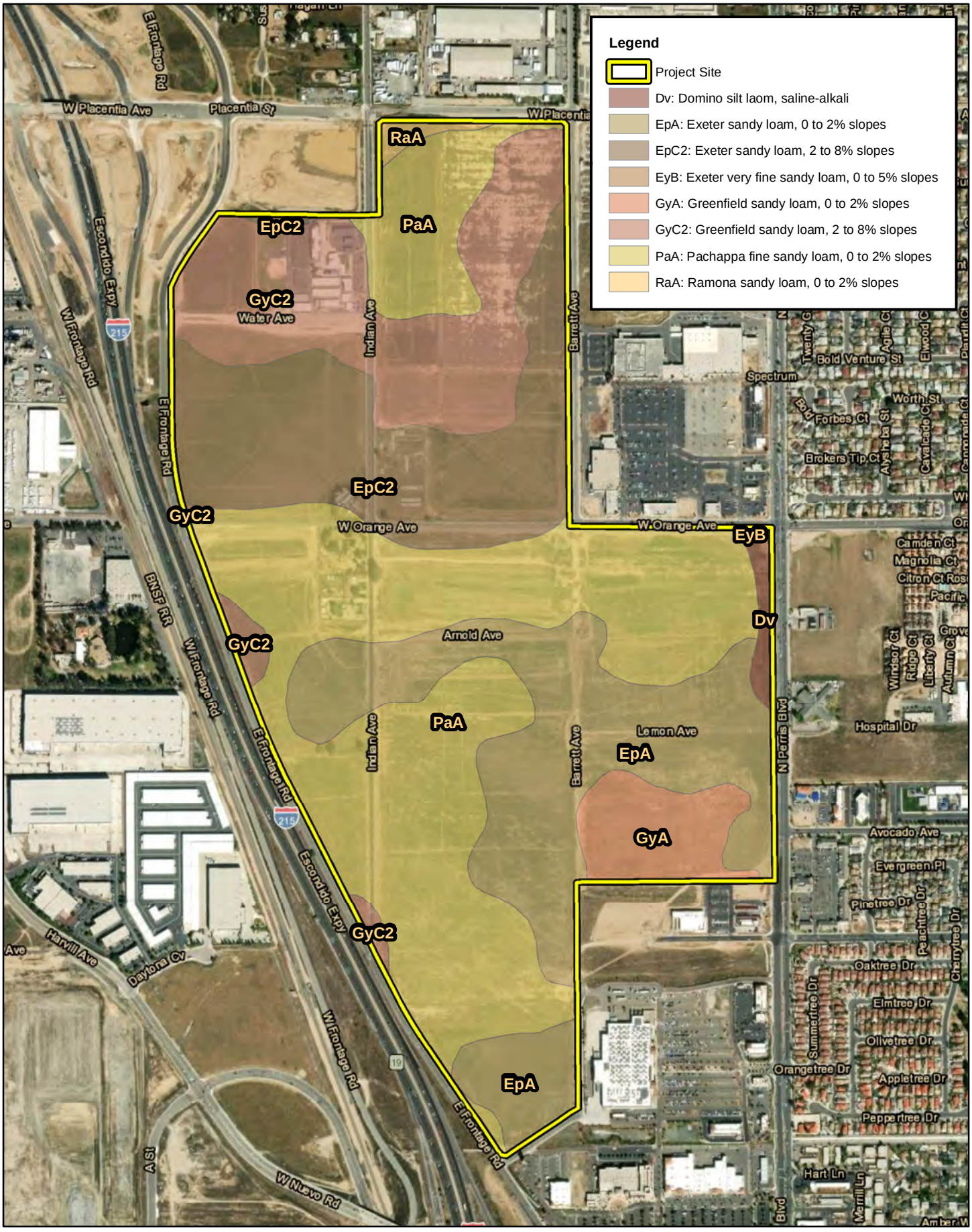
Project Site

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 3



HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Soils

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

Exhibit 4

ELMT CONSULTING

0 250 500 1,000 Feet

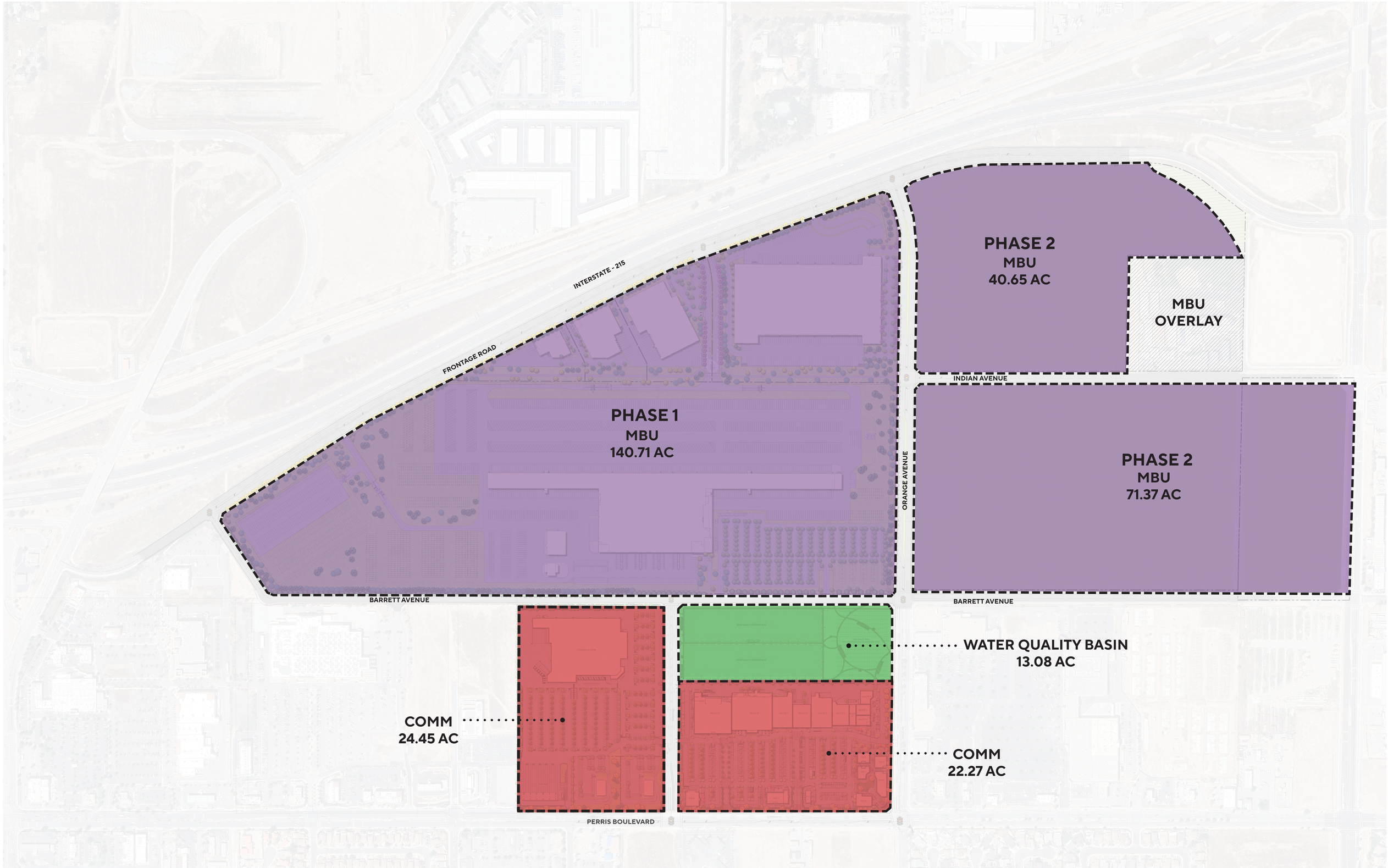
Source: ESRI Aerial Imagery, Riverside County

HARVEST LANDING BUSINESS PARK

Jurisdictional Areas

Exhibit 5

Appendix B Site Plan



HARVEST LANDING RETAIL CENTER & BUSINESS PARK

PERRIS, CA

0 100' 200' 300' 400' 500' 600'

LAND USE PLAN

Architecture. Design. Relationships.

A1

Scale 1" = 200'
Job No. 2020-392
Date 2024-04-18

FUTURE PM 38810

APN 305-090-056
VACANT

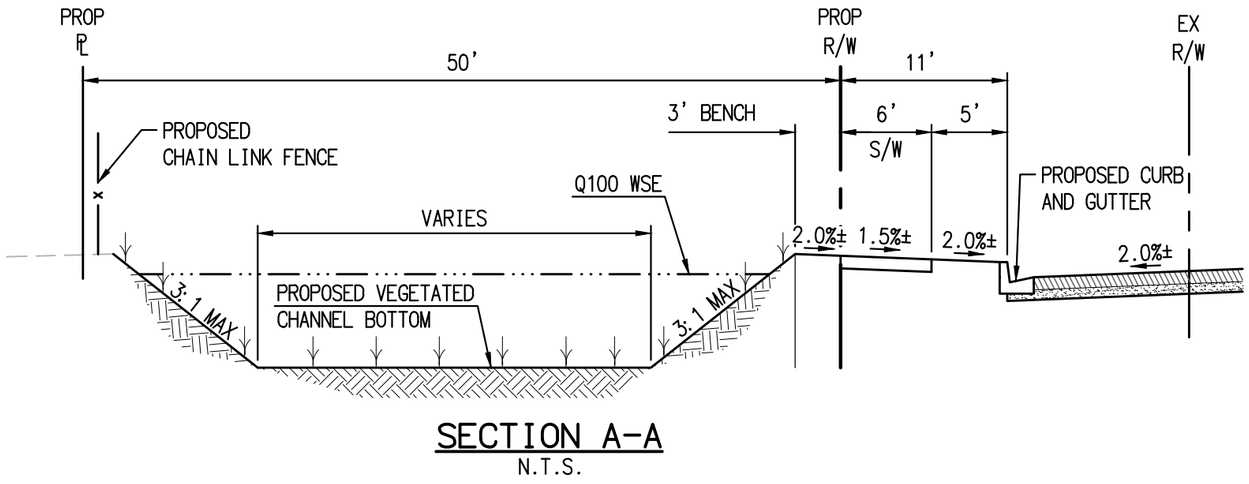
APN 305-090-019
VACANT

APN 305-100-028
SFR

APN 305-100-028
AGRICULTURAL W/SFR

FUTURE PM 38811

PROP R/W
EX R/W
EX ST C/L
CONSTRUCTION ST C/L
EX CALTRANS R/W
EX HEADWALL
EX 4'X3' RCB
PROP SHARED USE TRAIL ESMT
PROP STORM DRAIN HEADWALL
PROP ℄
77.29'
220.77'
204.25'
0.7 ACRES
50'
A 1147.40'
A
CONCEPTUAL DRIVEWAY LOCATION
PROP STORM DRAIN CULVERT
50'
676.17'
EX ℄
1.0 ACRES
0.3 ACRES
50'
PROP STORM DRAIN HEADWALL
33.52'
25.62'
PROP R/W
EX R/W
EX ST C/L
EX R/W
PROP R/W
ORANGE AVE
INTERSTATE - 215
FRONTAGE RD
INDIAN ST
INDIAN ST (TO BE VACATED)



SECTION A-A
N.T.S.

SCALE 1"=100'

100 50 0 100 200
SCALE: 1"=100'

FMCIVIL ENGINEERS INC.
41870 KALMIA STREET, SUITE 120
| MURRIETA | CA 92562
951.973.0201 - FMCIVIL.COM

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

DBESP MITIGATION DRAINAGE EXHIBIT

H:\PDATA\20-001 HARVEST LANDING\DWGS\EXHIBITS\20-001-DBESP MITIGATION DRAINAGE EXHIBIT.DWG JASON STOUFFER 1/22/2025 9:28 AM

Appendix C Habitat Assessment and Western Riverside County MSHCP Consistency Analysis

HARVEST LANDING RETAIL CENTER & BUSINESS PARK PROJECT

CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

PERRIS USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE
SECTIONS 18 AND 19, TOWNSHIP 4 SOUTH, RANGE 3 WEST

Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis

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Prepared For:

EPD SOLUTIONS
333 Michelson Drive, Suite 500
Irvine, California 92612
Contact: Meaghan Truman

Prepared By:

ELMT Consulting, Inc.
2201 N. Grand Avenue #10098
Santa Ana, California 92711
Contact: *Travis J. McGill*

January 2025

HARVEST LANDING RETAIL CENTER & BUSINESS PARK PROJECT

CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis

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The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Travis J. McGill
Director/Biologist

Thomas J. McGill, Ph.D.
Managing Director

January 2025

Table of Contents

EXHIBITS

APPENDIX

Section 1 Introduction

This report contains the findings of ELMT Consulting's (ELMT) Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) consistency analysis for the proposed Harvest Landing Retail Center & Business Park project in the City of Perris, Riverside County, California. The report was prepared to document baseline conditions and assess the potential for special-status [1] plant and wildlife species to occur within the proposed project site that could pose a constraint to implementation of the proposed project. Special attention was given to the suitability of the on-site habitat to support special-status species identified by the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB) and other electronic databases as potentially occurring in the general vicinity of the project site. Additionally, this report also addresses resources protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (FGC), federal Clean Water Act (CWA) regulated by the United States Army Corps of Engineers (Corps) and Regional Water Quality Control Board (Regional Board) respectively, and Section 1602 of the FGC administered by CDFW.

The City of Perris is a signatory to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). Since the City of Perris will be the lead agency for the proposed project, the project will need to be consistent with the rules and regulations set forth in the MSHCP. The Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map was queried to determine if the project site is subject to any potential MSHCP survey requirements. Further, the project site was reviewed against the MSHCP to determine if the site is located within any MSHCP areas including Criteria Cells (core habitat and wildlife movement corridors) or areas proposed for conservation. Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined that the project site is located within the Mead Valley Area Plan of the MSHCP but is not located within any Criteria Cells or MSHCP Conservation Areas. In addition, the project site is located within the designated survey area for burrowing owl (*Athene cunicularia*) and portions of the site are located within the designated survey area for Narrow Endemic Plant Species San Diego ambrosia (*Ambrosia pumila*), spreading navarretia (*Navarretia fossallis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*), and Criteria Area Species San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), Parish's crownscale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), round-leaved filaree (*California macrophylla*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), little mousetail (*Myosurus minimus* ssp. *apus*), and mud nama (*Nama stenocarpa*).

1.1 PROJECT LOCATION

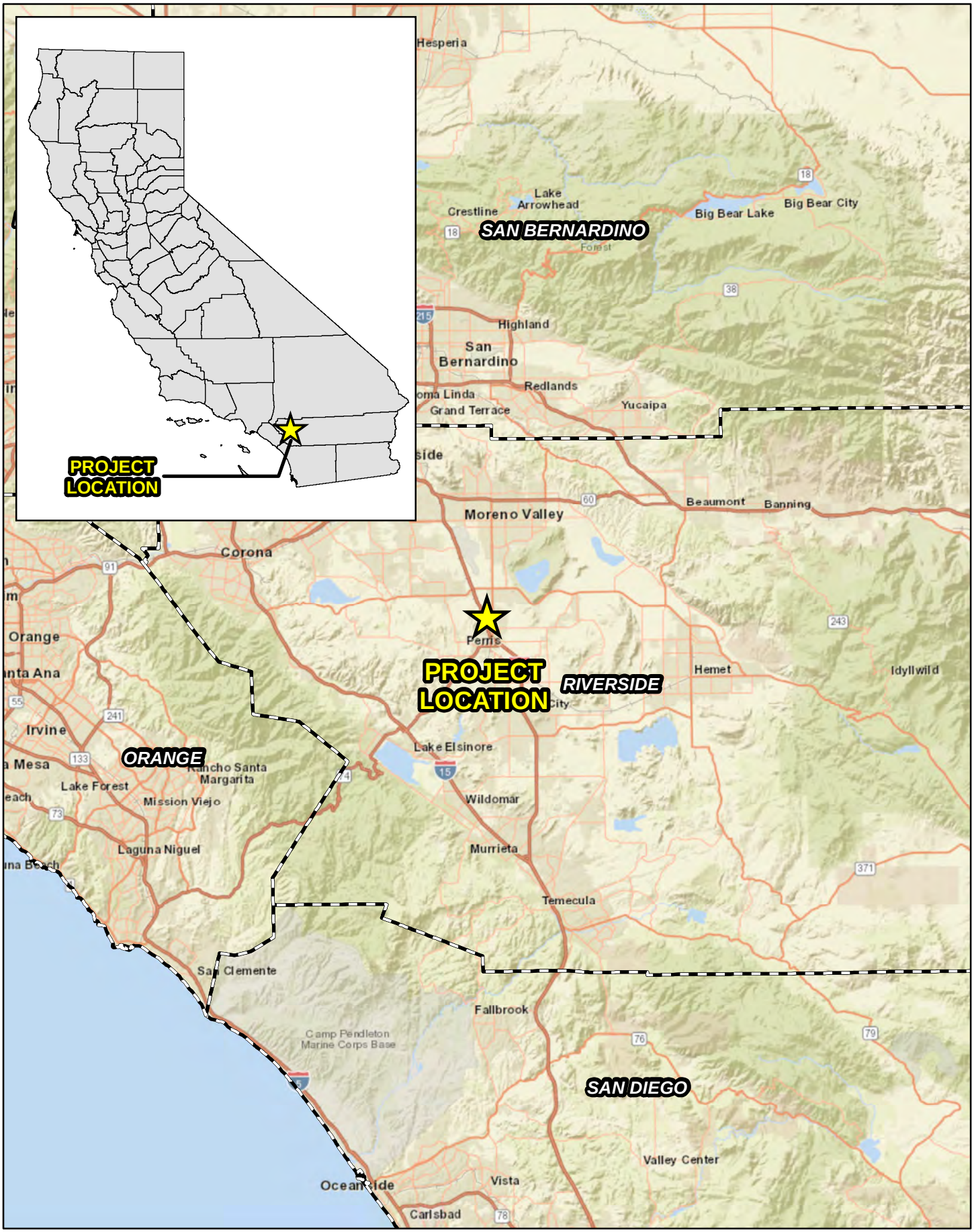
The project site is generally located north and east of Interstate 215, west of State Route 79, and south of State Route 60 in the City of Perris, Riverside County, California (Exhibit 1, *Regional Vicinity*). The project site is depicted on the Perris quadrangle of the United States Geological Survey's (USGS) 7.5-minute

[1] As used in this report, "special-status" refers to plant and wildlife species that are federally, State, and MSHCP listed, proposed, or candidates; plant species that have been designated with a California Native Plant Society Rare Plant Rank; wildlife species that are designated by the CDFW as fully protected, species of special concern, or watch list species; and specially protected natural vegetation communities as designated by the CDFW.

topographic map within Sections 18 and 19 of Township 4 South, Range 3 West (Exhibit 2, *Site Vicinity*). Specifically, the project site is bounded to the west by Interstate 215 East Frontage Road and to the east by North Perris Boulevard and is located north of East Nuevo Road and south of Placentia Avenue (Exhibit 3, *Project Site*).

1.1 PROJECT DESCRIPTION

The project involves the proposed construction and operation of a commercial and business park specific plan over 358.28 acres which will be developed in two phases. The first phase of the project consists of construction of seven (7) industrial buildings, a commercial shopping center, a big box retail building, and a Water Quality Management Plan (WQMP) drainage and detention area. The total area of development for Phase I encompasses approximately 187.43 acres. In addition, the project would include the construction of approximately 35.09 acres of roadways and a 13.08-acre WQMP basin. Phase II will consist of future business park uses north of Orange Avenue. Phase II area totals 122.68 acres. Refer to Attachment A, *Site Plan*.



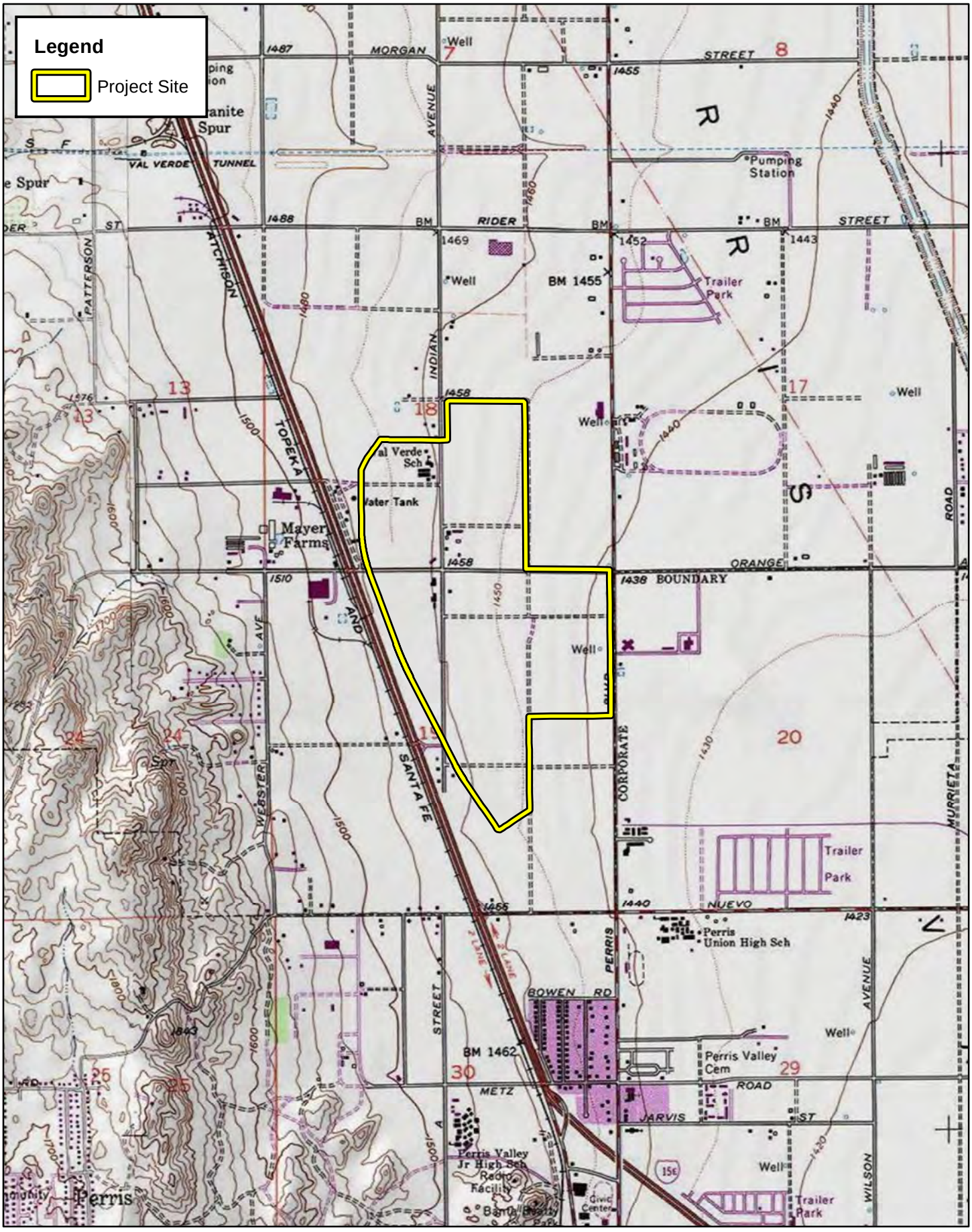
ELMT CONSULTING

Source: World Street Map, Riverside County

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Regional Vicinity

Exhibit 1



HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Site Vicinity

ELMT CONSULTING

0 625 1,250 2,500 Feet

Source: USA Topographic Map, Riverside County

Exhibit 2

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Project Site

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 3

Section 2 Methodology

A literature review and records search were conducted to determine which special-status biological resources have the potential to occur within or within the general vicinity of the project site. In addition to the literature review, a general habitat assessment or field investigation was conducted. The field investigation was conducted to document existing conditions within the project site to assess the potential for special-status biological resources to occur.

2.1 LITERATURE REVIEW

Prior to conducting the field investigation, species and habitat information was gathered from the reports related to the specific project and relevant databases for the *Steele Peak and Perris* USGS quadrangles to determine which species and/or habitats would be expected to occur on-site. These sources include:

- California Native Plant Society Electronic Inventory (CNPSEI) database;
- California Natural Diversity Database (CNDDB) *Rarefind 5*;
- CNDDB Biogeographic Information and Observation System (BIOS);
- Environmental Protection Agency (EPA) Water Program "My Waters" data layers
- Google Earth Pro historic aerial imagery (1985-2023);
- Stephen's Kangaroo Rat Habitat Conservation Plan
- United States Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS), Soil Survey [2];
- United States Fish and Wildlife Service (USFWS) Critical Habitat designations for Threatened and Endangered Species;
- USFWS National Wetlands Inventory (NWI);
- Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map;
- 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area; and
- CDFW's listing of Crotch's bumble bee.

The literature review provided a baseline from which to inventory the biological resources potentially occurring on the project site. The CNDDB database was used, in conjunction with ArcGIS software, to locate the nearest recorded occurrences of special-status species and determine the distance from the project site.

2.2 FIELD INVESTIGATION

Following the literature review, biologists Jacob H. Lloyd Davies and Megan E. Peukert inventoried and evaluated the condition of the habitat within the project site on August 18, 2023. Plant communities

[2] A soil series is defined as a group of soils with similar profiles developed from similar parent materials under comparable climatic and vegetation conditions. These profiles include major horizons with similar thickness, arrangement, and other important characteristics, which may promote favorable conditions for certain biological resources.

identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities.

All plant and wildlife species observed, as well as dominant plant species within each plant community, were recorded. Plant species observed during the field survey were identified by visual characteristics and morphology in the field. Unusual and less familiar plant species were photographed during the field survey and identified in the laboratory using taxonomical guides. Wildlife detections were made through observation of scat, trails, tracks, burrows, nests, and/or visual and aural observation. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, condition of on-site plant communities, and presence of potential jurisdictional drainage and/or wetland features were noted.

Special attention was given to special-status habitats and/or undeveloped areas, which have higher potential to support special-status plant and wildlife species. Areas providing suitable habitat for burrowing owl were closely surveyed for signs of presence during the field survey. Methods to detect the presence of burrowing owls included direct observation, aural detection, and signs of presence including pellets, whitewash, feathers, or prey remains.

No limitations significantly affected the results and conclusions given herein. The survey was conducted during the appropriate season to observe the target species, in good weather conditions, by qualified biologists who followed all pertinent protocols.

2.3 SOILS SERIES ASSESSMENT

On-site and adjoining soils were researched prior to the field survey using the USDA NRCS Soil Survey for Western Riverside Area, California. In addition, a review of the local geological conditions and historical aerial photographs was conducted to assess the ecological changes that the project site has undergone.

2.4 PLANT COMMUNITIES

Plant communities were mapped using 7.5-minute USGS topographic base maps and aerial photography. The plant communities were delineated on an aerial photograph, classified in accordance with those described in the MSHCP, and then digitized into GIS Arcview. The Arcview application was used to compute the area of each plant community in acres.

2.5 PLANTS

Common plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unusual and less-familiar plants were photographed in the field and identified in the laboratory using taxonomic guides. Taxonomic nomenclature used in this study follows the 2012 Jepson Manual (Hickman 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only).

2.6 WILDLIFE

Wildlife species detected by sight, calls, tracks, scat, or other sign were recorded during the survey in a field notebook. Field guides were used to assist with identification of wildlife species during the survey included The Sibley Field Guide to the Birds of Western North America (Sibley 2003), A Field Guide to Western Reptiles and Amphibians (Stebbins 2003), and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are well-standardized, scientific names are provided immediately following common names in this report (first reference only).

2.7 JURISDICTIONAL DRAINAGES AND WETLANDS

Aerial photography was reviewed prior to conducting the field investigation in order to locate and inspect any potential natural drainage features, ponded areas, or water bodies that may fall under the jurisdiction of the Corps, Regional Water Quality Control Board (Regional Board), or CDFW. In general, surface drainage features indicated as blue-line streams on USGS maps that are observed or expected to exhibit evidence of flow are considered potential riparian/riverine habitat and are also subject to state and federal regulatory jurisdiction. In addition, ELMT reviewed jurisdictional waters information through examining historical aerial photographs to gain an understanding of the impact of land-use on natural drainage patterns in the area. The USFWS National Wetland Inventory (NWI) and Environmental Protection Agency (EPA) Water Program “My Waters” data layers were also reviewed to determine whether any hydrologic features and wetland areas have been documented the project site or local vicinity.

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

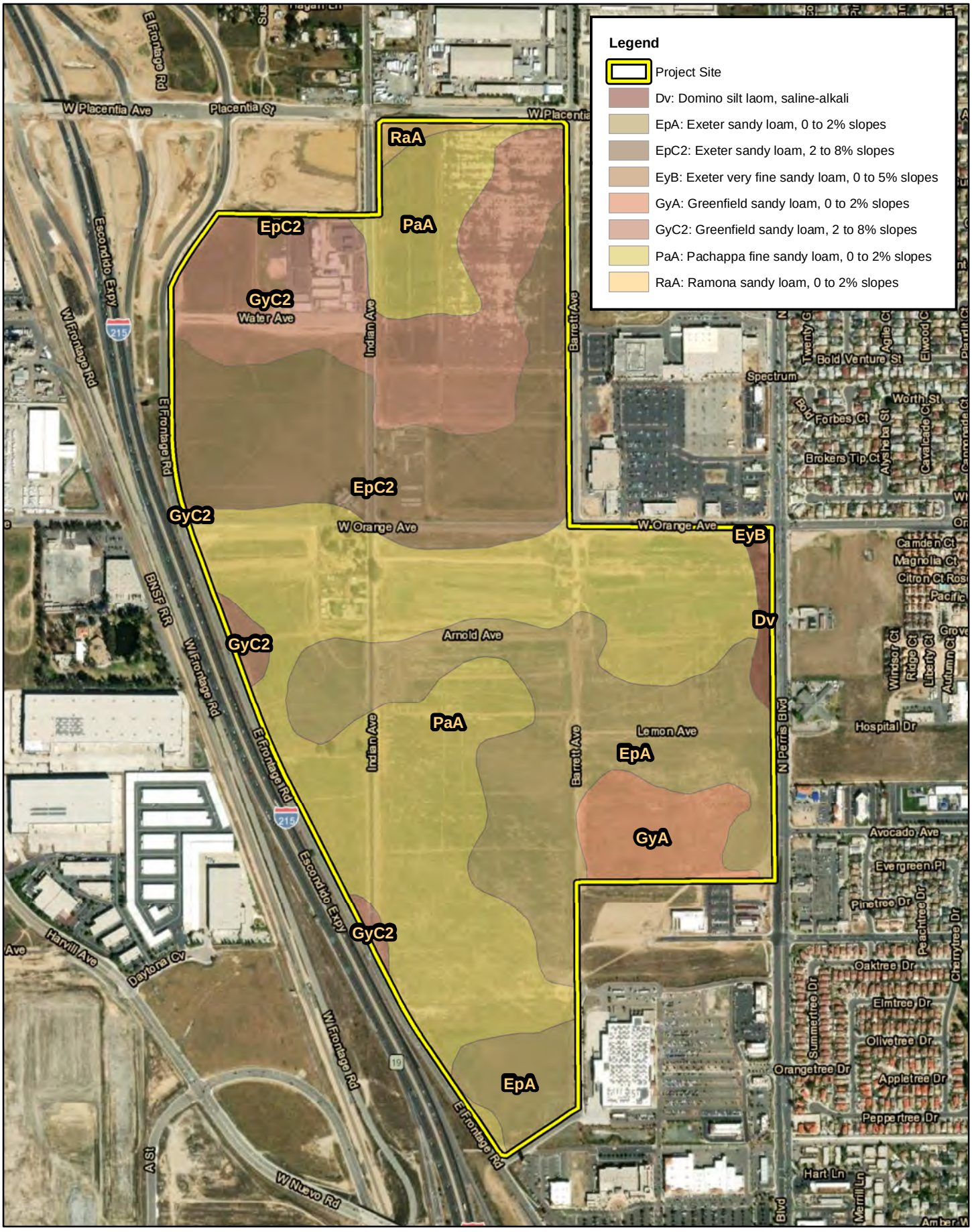
The City of Perris features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in Southern California, winters are colder with chilly to cold morning temperatures with frost common. Climatological data obtained for the City of Perris indicates the annual precipitation averages 11.11 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and April, with hardly any occurring between the months of May and September. The wettest months are January and February, with monthly average totals precipitation of 2.24 and 3.29 inches, respectively, and the driest months are June and July, both with monthly average total precipitation of 0.04 inch. The average maximum and minimum temperatures are 86 and 46 degrees Fahrenheit (°F), respectively, with July and August (monthly average high 100°F) being the hottest months and December and January (monthly average lows 34 and 35°F) being the coldest. The temperature during the site visit was in the high-80s°F with clear skies and calm winds.

3.2 TOPOGRAPHY AND SOILS

On-site topography of the project site is relatively flat, sloping marginally from southwest to northeast at an approximate elevation of 1,435 to 1,480 feet above mean sea level. Limited topographic relief is present in the form of water detention basins, flood control channels, and spoils piles. Based on the NRCS USDA Web Soil Survey, the project site is underlain entirely by Domino silt loam (saline-alkali), Exeter sandy loam (deep, 0 to 2 percent slopes), Exeter sandy loam (deep, 2 to 8 percent slopes, eroded), Ramona sandy loam (0 to 2 percent slopes), Exeter very fine sandy loam (deep, 0 to 5 percent slopes), Greenfield sandy loam (0 to 2 percent slopes), Greenfield sandy loam (2 to 8 percent slopes, eroded), and Pachappa fine sandy loam (0 to 2 percent slopes). Refer to Exhibit 4, *Soils*. Soils on-site have been mechanically disturbed and heavily compacted from historic land uses (i.e., agricultural activities, grading activities, and weed abatement).

3.3 SURROUNDING LAND USES

The project site occurs in an area formerly dominated by agricultural land uses that has been becoming urbanized in recent decades. Present land uses in the vicinity include tract neighborhoods, anchor retail centers, and assorted commercial, industrial, and institutional developments, with scattered undeveloped parcels supporting former agricultural land. The site is bounded to the north by existing development; to the northeast, east, and south by commercial and industrial developments with tract neighborhoods beyond; and to the west by Interstate 215.



HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Soils

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

Exhibit 4

Section 4 Discussion

4.1 SITE CONDITIONS

The project site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances associated with historic agricultural activities, surrounding development, and routine weed abatement/disking activities. Val Verde Elementary School is located near the northwest corner of the site. Historic aerials show these activities have been ongoing since at least 1959. Prior to conducting the field investigation, aerial photography was reviewed to document existing site conditions and document the changes to the project site and surrounding area. Below is a summary of the aerial review.

1959: The project site and surrounding areas support active agricultural fields with associated structures near the intersection of Indian Avenue and Orange Avenue. Construction is present in the north portion of the site at what will become the existing location of Val Verde Elementary School. Interstate 215, Placentia Avenue and North Perris Boulevard are present to the west, north, and east, respectively.

1959 – 1966: Residential developments are present along Indian Avenue.

1966 – 1978: Agricultural operations have ceased in the western limits of the project site.

1978 – 1997: Large anchor retail centers are present off-site to the northeast and southeast.

1997 – 2002: A trailer stockyard is present in the northern portion of the project site.

2002 – 2005: Agricultural operations have ceased in the southern limits of the project site.

2005 – 2009: Agricultural operations have ceased in all but the eastern limits of the project site.

2009 – 2010: All agricultural operations supported by the project site have ceased.

2010 – 2020: No changes have occurred. The project site is subjected to routine weed abatement regimes.

2020 – present: A water detention basin is present off-site to the north, beyond Val Verde Elementary School. Additional commercial development is present to the southeast.

The disturbances outlined above have eliminated the natural plant communities that historically occurred on the project site and surrounding area. As a result, no native plant communities occur on-site, nor will any native plant communities be impacted from implementation of the proposed project. Refer to Appendix B, *Site Photographs*, for representative site photographs of the project site.

4.2 VEGETATION

No native plant communities occur within the boundary of the project site. The project site supports one (1) plant community: non-native grassland. In addition, the site supports two (2) land cover types that would

be classified as disturbed and developed. Refer to Exhibit 5, *Vegetation*. The vegetation community and land cover type are described in further detail below.

4.2.1 Non-Native Grassland

The majority of the project site supports a non-native grassland that occurs in varying densities throughout the site, except the southwest and southeast corners and portions of the site perimeter. This plant community is dominated by non-native grasses such as oats (*Avena* spp.) and bromes (*Bromus* spp.) and supports primarily weedy/early successional species. Common plant species observed in the non-native grassland plant community include red-stemmed filaree (*Erodium cicutarum*), common mustard (*Brassica rapa*), Mediterranean mustard (*Hirschfeldia incana*), stinknet (*Oncosiphon pilulifer*), wild radish (*Raphanus sativa*), fiddleneck (*Amsinckia* sp.), annual lupine (*Lupinus bicolor*), and Mexican palo verde (*Parkinsonia aculeata*). Non-native grasses occur in the highest densities in the southern portion of the site, where they are nearly exclusive along a swale.

4.2.2 Disturbed

The majority of the project site supports disturbed land that previously supported agricultural land uses. Vegetative cover ranges from dense/complete to barren based on frequency and nature of routine anthropogenic disturbance such as vehicle access and weed abatement regimes. Common plant species observed on-site include stinknet (*Oncosiphon piluliferum*), Russian thistle (*Salsola tragus*), common sunflower (*Helianthus annuus*), tumbleweed (*Amaranthus albus*), telegraph weed (*Heterotheca grandiflora*), horseweed (*Erigeron canadensis*), tocalote (*Centaurea melitensis*), Spanish clover (*Acmispon americanus*), prickly lettuce (*Lactuca serriola*), mustard (*Hirschfeldia incana*), ripgut brome (*Bromus diandrus*), Peruvian pepper tree (*Schinus molle*), tree of heaven (*Ailanthus altissima*), knotweed (*Polygonum aviculare*), jimsonweed (*Datura wrightii*), and slim oat (*Avena barbata*). In addition, a swathe of mulefat (*Baccharis salicifolia*) was observed in a roadside ditch along Orange Avenue, a swathe of desiccated cattails (*Typha* sp.) was observed near a water detention basin near the southwest intersection of North Perris Boulevard and Orange Avenue, and pockets of non-native ornamental trees such as Mexican palo verde (*Parkinsonia aculeata*) and gum tree (*Eucalyptus* sp.) are present near existing and former residential developments.

4.2.3 Developed

Developed areas primarily include paved site-adjacent roadways, and existing residential land uses. Developed areas include paved, impervious surfaces.

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites for wildlife species, and shelter from adverse weather or predation. This section provides a discussion of wildlife species that were observed during the field survey or that are expected to occur within the project site. The discussion is to be used as a general reference and is limited by the season, time of day, and weather condition during which the field survey was conducted. Wildlife detections were based on calls, songs, scat, tracks, burrows, and direct observation.

4.3.1 Fish

The MSHCP does not identify any covered or special-status fish species as potentially occurring within the project site. No fish or hydrogeomorphic features (e.g., perennial creeks, ponds, lakes, reservoirs) that would provide suitable habitat for fish were observed within the project site. Therefore, no fish are expected to occur and are presumed absent from the project site.

4.3.2 Amphibians

The MSHCP does not identify any covered or special-status amphibian species as potentially occurring within the project site. No amphibians were observed within the project site or local vicinity. While highly disturbed, the roadside ditches that parallel Orange Avenue and artificially irrigated areas near on-site residential developments provide limited habitat for local amphibians adapted to degraded conditions and routine anthropogenic disturbance. Common amphibian species that could be expected to occur in these areas include Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*) and garden slender salamander (*Batrachoseps major major*). No special-status amphibian species are expected to occur.

4.3.3 Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring within the project site. The project site provides limited habitat for a few reptile species adapted to a high degree of human disturbance associated with the on-site weed abatement activities. The only reptilian species observed during the field investigation was Great Basin fence lizard (*Sceloporus occidentalis longipes*). Other common reptilian species that could be expected to occur include western side-blotched lizard (*Uta stansburiana elegans*), southern alligator lizard (*Elgaria multicarinata webbii*), and San Diego gophersnake (*Pituophis catenifer annectens*).

4.3.4 Birds

In accordance with the MSHCP, the project site is located within the designated survey area for burrowing owl. The project site provides suitable foraging nesting habitat for bird species adapted to a high degree of human disturbance. Avian species detected during the field survey include burrowing owl (*Athene cunicularia*), rock pigeon (*Columba livia*), common raven (*Corvus corax*), white-tailed kite (*Elanus leucurus*), prairie falcon (*Falco mexicanus*), house finch (*Haemorhous mexicanus*), song sparrow (*Melospiza melodia*), house sparrow (*Passer domesticus*), say's phoebe (*Sayornis saya*), european collared dove (*Streptopelia decaocto*), western meadowlark (*Sturnella neglecta*), cassin's kingbird (*Tyrannus vociferans*), and mourning dove (*Zenaida macroura*).

4.3.5 Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring within the project site. The project site provides limited foraging and denning habitat for mammalian species adapted to degraded conditions and routine anthropogenic disturbance. Mammalian species observed/detected during the field investigation include coyote (*Canis latrans*), California ground squirrel (*Otospermophilus beecheyi*), and desert cottontail (*Syvilagus audubonii*). Other common mammalian

species that could be expected to occur include common raccoon (*Procyon lotor*), opossum (*Didelphis virginiana*), gray fox (*Urocyon cineroargenteus*), striped skunk (*Mephitis mephitis*), and deer mouse species (*Peromyscus* sp.).

4.4 NESTING BIRDS

No active nests were directly observed on-site during the field survey, which was conducted in the final weeks of the breeding season. Although heavily disturbed, the project site has the potential to provide nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to a high degree of disturbance. Additionally, the barren areas have the potential to support birds that nest on the open ground such as killdeer (*Charadrius vociferans*).

Nesting birds are protected pursuant to the federal MBTA and California Fish and Game Code (Sections 3503, 3503.5, 3511, and 3513 prohibit the take, possession, or destruction of birds, their nests or eggs). The nesting bird season generally occurs between February 1st and August 31st but may be extended due to weather and drought conditions If construction occurs during the nesting season, a pre-construction clearance survey for nesting birds should be conducted prior to the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

4.5 WILDLIFE CORRIDORS AND LINKAGES

Habitat linkages provide links between larger undeveloped habitat areas that are separated by development. Wildlife corridors are similar to linkages but provide specific opportunities for animals to disperse or migrate between areas. A corridor can be defined as a linear landscape feature of sufficient width to allow animal movement between two comparatively undisturbed habitat fragments. Adequate cover is essential for a corridor to function as a wildlife movement area. It is possible for a habitat corridor to be adequate for one species yet inadequate for others. Wildlife corridors are significant features for dispersal, seasonal migration, breeding, and foraging. Additionally, open space can provide a buffer against both human disturbance and natural fluctuations in resources.

The project site has not been identified as occurring in a wildlife corridor or linkage. The nearest linkage to the project site, as identified by the MSHCP, occurs approximately 0.65 mile to the west of the project site in association with the Motte/Rimrock Reserve. The proposed project will be confined to existing areas that have been heavily disturbed and are isolated from regional wildlife corridors and linkages as there are no riparian corridors, creeks, or useful patches of steppingstone habitat (natural areas) within or connecting the site to any recognized wildlife corridor or linkage. As such, implementation of the proposed project is not expected to impact wildlife movement opportunities and no impacts to wildlife corridors or linkages are expected to occur.

4.6 STATE AND FEDERAL JURISDICTIONAL AREAS

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates discharge of dredge and/or fill materials into “waters of the United States” pursuant to Section 404 of the Federal CWA and Section 10 of the Rivers and Harbors Act. Of the State agencies, the Regional Board regulates discharges into surface waters pursuant to Section

401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates alterations to streambed and associated plant communities pursuant to Section 1602 of the California Fish and Game Code.

Two ephemeral drainage features (Drainage 1 and Drainage 2) were observed onsite. Drainage 1 enters the site at the northeast corner of Orange Avenue and the Interstate 215 Frontage Road from a 48-inch box culvert which originates from the west under Interstate 215 and beyond. Flows from Drainage 1 are conveyed east along the northern shoulder of Orange Avenue through a concrete channel for approximately 165 feet before the channel yields to an earthen basin. Flows are consolidated through a 36-inch culvert and conveyed further east under Indian Avenue before exiting the project site through an 18-inch culvert at the northwest corner of Barrett Avenue and Orange Avenue. From here, flows are directed further east beyond the project site. Drainage 2 enters the site from the lower western boundary of the project site, through a 60-inch box culvert which originates from underneath the Interstate 215 Frontage Road and beyond Interstate 215 to the west. The drainage runs from west to east within the project site, extending from the Interstate 215 Frontage Road at the western boundary, and terminating within the project site before reaching Indian Avenue

The onsite ephemeral drainage features are not relatively permanent, standing, or continuously flowing bodies of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage features will likely qualify as waters of the State and fall under the regulatory authority of the Regional Board and CDFW. A delineation of state and federal jurisdictional waters report was prepared under separate cover.

Approximately 0.23 acre (2,978 linear feet) of non-wetland waters of the State and approximately 0.25 acre (2,978 linear feet) of CDFW jurisdictional streambed occur onsite.

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

A records search was conducted for reported locations of special-status plant and wildlife species as well as natural communities of special concern in the *Steele Peak* and *Perris* USGS 7.5-minute quadrangles. Two quadrangles were used due to the proximity of the site to quadrangle boundaries and regional topography. Special-status plant and wildlife species were evaluated for their potential to occur within the project site based on habitat requirements, availability, and quality of suitable habitat, and known distributions. Twenty-four (24) special status plant species, eighty (80) special-status wildlife species, and three (3) special-status plant communities have been recorded in the *Steele Peak* and *Perris* USGS 7.5-minute quadrangles. Species determined to have the potential to occur within the general vicinity are provided in Appendix C, *Potentially Occurring Special-Status Biological Resources*.

4.7.1 Special-Status Plants

According to the CNDDB and CNPS, twenty-four (24) special-status plant species have been recorded in the *Steele Peak* and *Perris* quadrangles (refer to Appendix C). No special-status plant species were observed on the project site during the field investigation. The project site and surrounding area have been subject to decades of anthropogenic disturbances which have removed native plant communities that historically occurred. Based on habitat requirements for specific species and the availability and quality of on-site

habitats, it was determined that the site has a low potential to support smooth tarplant (*Centromadia pungens ssp. laevis*) and paniculate tarplant (*Deinandra paniculata*). It was further determined that the site does not have potential to support any of the other special-status plant species known to occur in the vicinity of the site and all are presumed to be absent.

Smooth tarplant and paniculate tartplant are neither federally nor state listed as threatened or endangered. They are designated as CNPS Rare Plant Rank species. They are not listed as a covered species under the MSHCP. While the historic land uses supported by the project site have removed the natural plant communities that once occurred in the area, smooth tarplant and paniculate tarplant are known for tolerating disturbed conditions and is commonly seen colonizing similar areas in western Riverside County. Further, local records indicate that this species is known to occur in the vicinity of the site. Therefore, smooth tarplant and paniculate tarplant were determined to have a low potential to occur within the project site, even though they were not observed onsite. The project site is isolated from known occupied areas and aforementioned observations are scant and widespread. As such, if any smooth tarplant or paniculate tarplant are present on-site, they are not expected to contribute to the long-term conservation of the value for the species. No further surveys related to this species are recommended.

4.7.2 Special-Status Wildlife

According to the CNDDB, eighty (80) special-status wildlife species have been reported in the *Steele Peak* and *Perris* quadrangles (refer to Appendix C). Three (3) special-status wildlife species were observed during the field investigation: burrowing owl, white-tailed kite, prairie falcon. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined that the project site has a high potential to support Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), Costa's hummingbird (*Calypte costae*), northern harrier (*Circus hudsonius*), and California horned lark (*Eremophila alpestris actia*); and a low potential to support great egret (*Ardea alba*), great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*); loggerhead shrike (*Lanius ludovivianus*). It was further determined that the project site does not have the potential to support any of the other special-status wildlife species known to occur in the vicinity of the site and all are presumed to be absent.

None of the other aforementioned species are federally or state listed as endangered or threatened. In addition, burrowing owl, white-tailed kite, prairie falcon, Cooper's hawk, sharp-shinned hawk, northern harrier, California horned lark, great blue heron, and loggerhead shrike are covered species under the MSHCP. Of the species, only burrowing owl, Costa's hummingbird, and California horned lark have a higher potential to nest onsite; burrowing owl were observed nesting onsite.

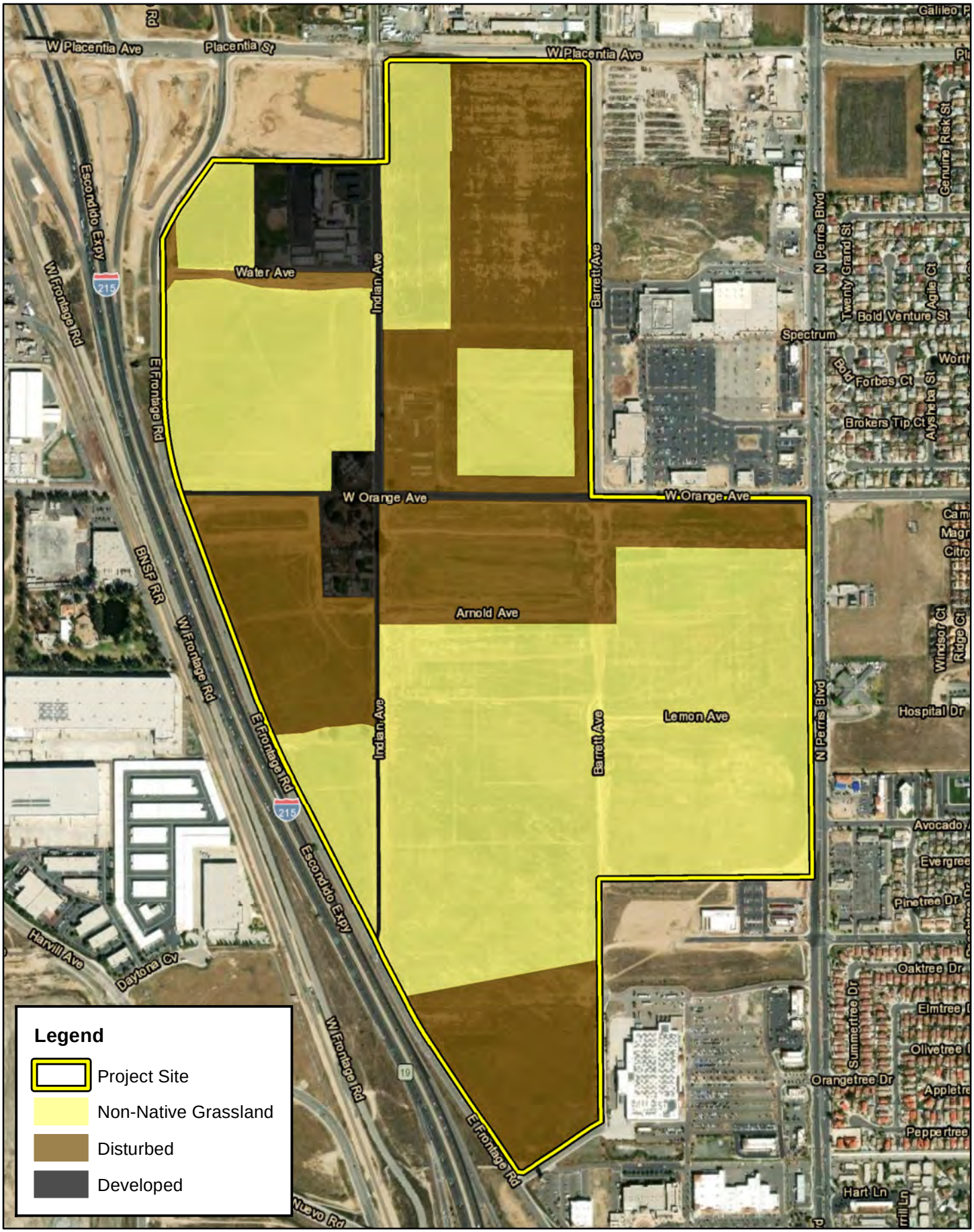
4.7.3 Special-Status Plant Communities

The CNDDB lists three (3) special-status habitats as being identified within the *Steele Peak* and *Perris* quadrangles: Southern Coast Live Oak Riparian Forest, Southern Cottonwood Willow Riparian Forest, and Southern Sycamore Alder Riparian Woodland, which do not occur within the project site. No CDFW special-status plant communities occur within the boundaries of the project site.

4.8 CRITICAL HABITAT

Under the federal Endangered Species Act, "Critical Habitat" is designated at the time of listing of a species or within one year of listing. Critical Habitat refers to specific areas within the geographical range of a species at the time it is listed that include the physical or biological features that are essential to the survival and eventual recovery of that species. Maintenance of these physical and biological features requires special management considerations or protection, regardless of whether individuals or the species are present or not. All federal agencies are required to consult with the USFWS regarding activities they authorize, fund, or permit which may affect a federally listed species or its designated Critical Habitat. The purpose of the consultation is to ensure that projects will not jeopardize the continued existence of the listed species or adversely modify or destroy its designated Critical Habitat. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing is on federal lands, uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highways Administration or a CWA Permit from the Corps). If there is a federal nexus, then the federal agency that is responsible for providing the funding or permit would consult with the USFWS.

The project site is not located with federally designated Critical Habitat. The nearest designated Critical Habitat is located approximately 2.46 miles to the southeast for spreading navarretia (*Navarretia fossallis*) and thread-leaved brodiaea (*Brodiaea filifolia*) (Exhibit 6, *Critical Habitat*). No impacts to federally designated Critical Habitat will occur from project implementation.



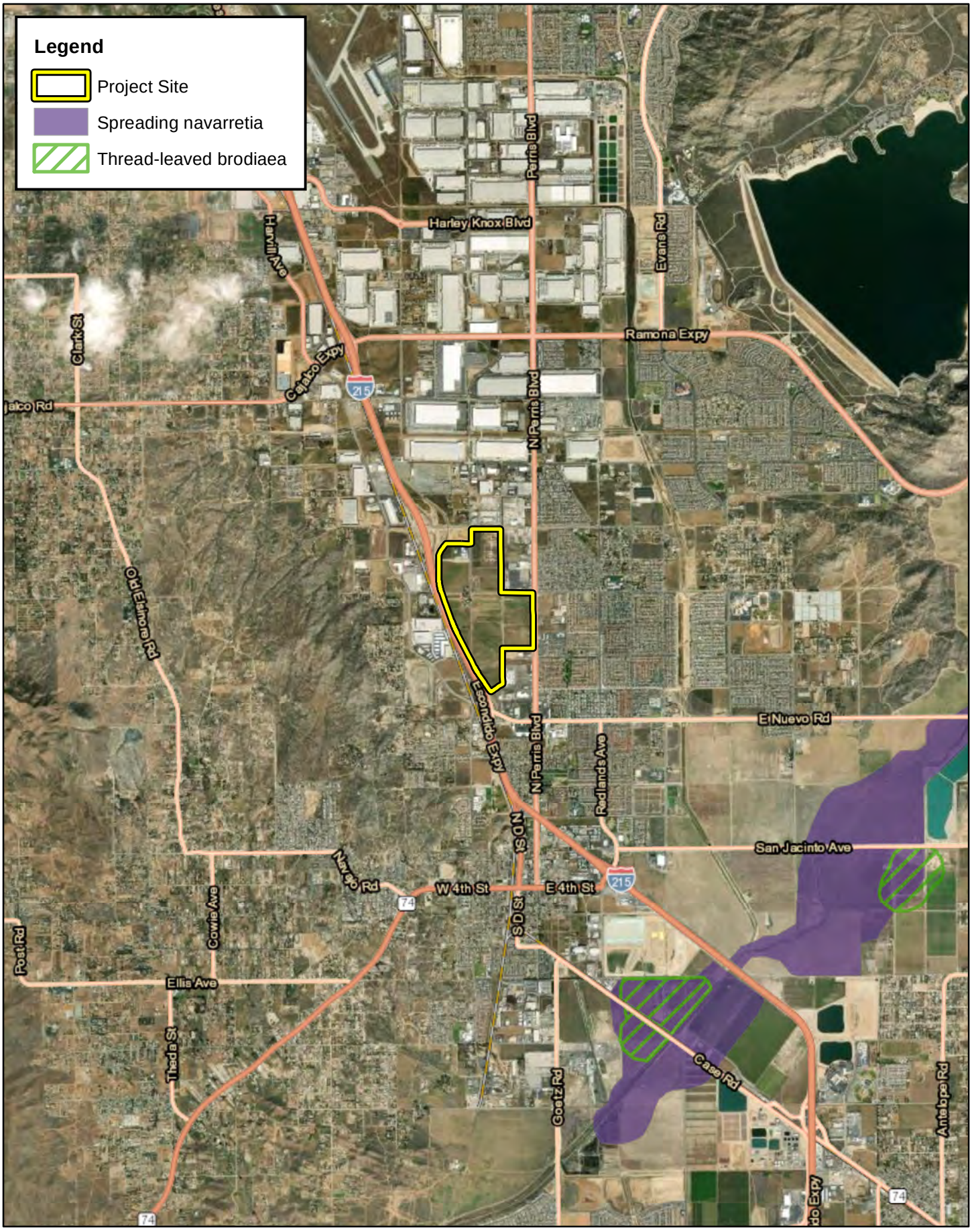
0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Vegetation

Exhibit 5



ELMT CONSULTING

0 2,500 5,000 10,000 Feet

Source: ESRI Aerial Imagery, USFWS Critical Habitat, Riverside County

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Critical Habitat

Exhibit 6

Section 5 MSHCP Consistency Analysis

The project site is located in the Mead Valley Area Plan of the MSHCP but is not located within any Criteria Cells or designated conservation areas (Exhibit 7, *MSHCP Conservation Areas*). Additionally, the project site is located within the MSHCP designated survey areas for burrowing owl and Narrow Endemic Plant Species San Diego ambrosia (*Ambrosia pumila*), spreading navarretia (*Navarretia fossallis*), California Orcutt grass (*Orcuttia californica*), and Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*), and Criteria Area Species San Jacinto Valley crownscale (*Atriplex coronata* var. *notatior*), Parish's crownscale (*Atriplex parishii*), Davidson's saltscale (*Atriplex serenana* var. *davidsonii*), thread-leaved brodiaea (*Brodiaea filifolia*), round-leaved filaree (*California macrophylla*), smooth tarplant (*Centromadia pungens* ssp. *laevis*), Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*), little mousetail (*Myosurus minimus* ssp. *apus*), and mud nama (*Nama stenocarpa*).

The City of Perris is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity under Section 7.1, *Covered Activities Outside Criteria Area and PQP Lands*, of the MSHCP, public and private development that are outside of Criteria Areas and Public/Quasi-Public (PQP) [3] Lands are permitted under the MSHCP, subject to consistency with MSHCP policies that apply to area outside of Criteria Areas. As such, to achieve coverage, the project must be consistent with the following policies of the MSHCP:

- The policies for the protection of species associated with Riparian/Riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP;
- The policies for the protection of Narrow Endemic Plant Species as set forth in Section 6.1.3;
- The Urban/Wildlands Interface Guidelines as set forth in Section 6.1.4; and
- The requirements for conducting additional surveys as set forth in Section 6.3.2

5.1 RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

5.1.1 Riparian/Riverine Areas

As defined under Section 6.1.2 of the MSHCP, *Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools*, riparian/riverine areas are areas dominated by trees, shrubs, persistent emergent plants, or emergent mosses and lichens which occur close to or are dependent upon nearby freshwater, or areas with freshwater flowing during all or a portion of the year. Conservation of these areas is intended to protect habitat that is essential to a number of listed or special-status water-dependent fish, amphibian, avian, and plant species. Any alteration or loss of riparian/riverine habitat from development of a project will require the preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis to ensure the replacement of any lost functions and values of habitats in regard to the listed species. This assessment is independent from considerations given to waters of the United States and

[3] PQP Lands are a subset of MSHCP Conservation Area lands totaling approximately 347,000 acres of lands known to be in public/private ownership and expected to be managed for open space value and/or in a manner that contributes to the Conservation of Covered Species (including lands contained in existing reserves). The acreage of PQP Lands has been accounted for in the MSHCP tracking process for assembling the Conservation Area.

waters of the State under the CWA, the California Porter-Cologne Water Quality Control Act, and CDFW jurisdictional streambed under the California Fish and Game Code.

Approximately 0.25 acre of riparian/riverine habitat was mapped within the project boundaries. The 0.25 acre of mapped MSHCP Riparian/Riverine habitat, consists of 0.02 acre of disturbed riparian scrub (riparian), and 0.23 acre of riverine habitat.

Project activities are expected to permanently impact approximately 0.25 acre of mapped riparian/riverine habitat. The applicant proposes to mitigate impacts to riparian/riverine habitat through the following:

- The applicant proposes to mitigate the impacts to 0.25 acre of riverine habitat off-site through the purchase of re-establishment and/or establishment mitigation credits through the Riverpark Mitigation Bank. Permanent impacts to 0.25 acre of riparian/riverine habitat will be mitigated at a 1:1 ratio consisting of re-establishment and/or establishment mitigation credits. The applicant will be responsible for the purchase of mitigation credits to compensate for impacts to riverine habitat.

- If off-site mitigation credits are not available from Riverpark Mitigation Bank, the applicant will mitigate impacts to 0.25 acre of riparian/riverine habitat through on-site applicant sponsored mitigation through the creation of 0.5 acre of riparian/riverine habitat onsite. A conservation easement will be placed over the created riparian/riverine resource to ensure this area is protected in perpetuity.

  A Habitat Mitigation Monitoring and Reporting Program will be prepared and will also be reviewed and approved by the County of Riverside Environmental Programs Division, Western Riverside County Regional Conservation Authority, and regulatory agencies.

5.1.2 Vernal Pools

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

One of the factors for determining the suitability of the habitat for fairy shrimp would be demonstrable evidence of seasonal ponding in an area of topographic depression that is not subject to flowing waters. These astatic pools are typically characterized as vernal pools. More specifically, vernal pools are seasonal wetlands that occur in depression areas without a continual source of water. They have wetland indicators of all 3 parameters (soils, vegetation, and hydrology) during the wetter portion of the growing season but normally lack wetland indicators of hydrology and/or vegetation during the drier portion of the growing season. Obligate hydrophytes and facultative wetlands plant species are normally dominant during the wetter portion of the growing season. The determination that an area exhibits vernal pool characteristics

and the definition of the watershed supporting vernal pool hydrology is made on a case-by-case basis. Such determinations should consider the length of time the area exhibits upland and wetland characteristics and the manner in which the area fits into the overall ecological system as a wetland. The seasonal hydrology of vernal pools provides for a unique environment, which supports plants and invertebrates specifically adapted to a regime of winter inundation, followed by an extended period when the pool soils are dry.

The MSHCP lists two general classes of soils known to be associated with special-status plant species: clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with special-status species within the MSHCP plan area include Bosanko, Auld, Altamont, and Porterville series soils, whereas Traver-Domino Willows association includes saline-alkali soils largely located along floodplain areas of the San Jacinto River and Salt Creek. Without the appropriate soils to create the impermeable restrictive layer, none of the special-status species associated with vernal pools can occur within the project site. Domino silt loam (saline-alkali) is mapped as occurring in a narrow swathe in the eastern limits of the site along North Perris Boulevard. However, agricultural land uses spanning much of the past century have thoroughly mixed and compacted on-site soils, such that conditions suitable for the formation of vernal pools are no longer present.

A review of recent and historic aerial photographs (1966-2023) of the project site during wet and dry seasons did not provide visual evidence of an astatic or vernal pool conditions within the project site. The site supported agricultural land uses for several decades and has been heavily degraded by recent installation of flood control infrastructure and staging and storage activities associated with nearby construction activities, which have resulted in heavy compaction of on-site soils. While surface water was observed in the southeast portion of the site, this was due to a series of storm events that concluded the day prior to the field investigation, and ponding was only observed where recent disturbance had compacted on-site soils. From this review of historic aerial photographs and observations during the field investigations, it can be concluded that there is no indication of vernal pools or suitable fairy shrimp habitat occurring within the proposed project site.

Below is a summary of the fairy shrimp known to occur in Western Riverside County and their potential to occur on-site.

Riverside fairy shrimp (*Streptocephalus woottoni*)

Riverside fairy shrimp are restricted to deep seasonal vernal pools, vernal pool like ephemeral ponds, and stock ponds and other human modified depressions The prefer warm-water pools that have low to moderate dissolved solids, are less predictable, and remained filled for extended periods of time. Basins that support Riverside fairy shrimp are typically dry a portion of the year, but usually are filled by late fall, winter or spring rains, and may persist through May. Known habitat occurs within annual grasslands, which may be interspersed through chaparral or coastal sage scrub vegetation. In Riverside County, Riverside fairy shrimp have been found in pools formed over the following soils: Murrieta stony clay loams, Las Posas series, Wyman clay loam, and Willows soils.

No soils that are known to support Riverside fairy shrimp occur within the project site. Further, no indicators of astatic water conditions were observed during the field investigation, and no ponding was observed on

historic aerials during the wet season due to existing activities on-site. Therefore, the site was determined not to provide suitable habitat for Riverside fairy shrimp.

Santa Rosa Plateau fairy shrimp (*Linderiella santarosae*)

Santa Rosa Plateau fairy shrimp are restricted to seasonal southern basalt flow vernal pools with cool clear to milky waters that are moderately predictable and remain filled for extended periods of time and are known only from vernal pool on the Santa Rosa Plateau. Since the project site is not located within the known area where Santa Rosa Plateau fairy shrimp have been documented, and no indicators of historic water ponding or astatic water conditions were observed on site, Santa Rosa Plateau fairy shrimp are not expected to occur on-site. Therefore, the site was determined not to provide suitable habitat for Santa Rosa Plateau fairy shrimp.

Vernal pool fairy shrimp (*Branchinecta lynchi*)

Vernal pool fairy shrimp are restricted to seasonal vernal pools (vernal pools and alkali vernal pools) and prefer cool-water pools that have low to moderate dissolved solids, are unpredictable, and often short lived. The vernal pool fairy shrimp is known from four locations in Western Riverside County MSHCP Plan Area: Skunk Hollow, the Santa Rosa Plateau, Salt Creek, and the vicinity of the Pechanga Indian Reservation. Since the project site is not located within or adjacent to the four known populations, and no indicators of historic water ponding or astatic water conditions were observed on site, the site was determined not to provide suitable habitat for vernal pool fairy shrimp.

5.2 NARROW ENDEMIC PLANT SPECIES

Section 6.1.3 of the MSHCP, *Protection of Narrow Endemic Plant Species*, states that the MSHCP database does not provide sufficient detail to determine the extent of the presence/distribution of Narrow Endemic Plant Species within the MSHCP Plan Area. Additional surveys may be needed to gather information to determine the presence/absence of these species to ensure that appropriate conservation of these species occurs. Based on the RCA MSHCP Information Map query and review of the MSHCP, it was determined that the project site is located within the designated survey area for Narrow Endemic Plant Species San Diego ambrosia, spreading navarretia, California Orcutt grass, and Wright's trichocoronis as depicted in Figure 6-1 within Section 6.1.3 of the MSHCP. Based on the results of the literature review, the project site has not supported natural plant communities since at least 1959. Based on the results of the field investigation, the project site does not provide suitable habitat for these MSHCP listed Narrow Endemic Plant Species.

San Diego Ambrosia (*Ambrosia pumila*)

San Diego ambrosia is federally listed as endangered and is a CNPS Rare Plant Rank 1B.1 species. It occurs in open habitats in coarse substrates near drainages, and in upland areas on clay slopes or on the dry margins of vernal pools. This species occurs in a variety of associations that are dominated by sparse grasslands or marginal wetland habitats such as river terraces, pools, and alkali playas. In Riverside County, San Diego ambrosia is associated with open, gently sloped grasslands and is generally associated with alkaline soils. Three populations of San Diego ambrosia have been mapped in Riverside County. The project site is not located within any of the known occurrences of San Diego ambrosia. In addition, historical agricultural

activities and routine anthropogenic disturbances spanning much of the past century have contaminated and heavily mixed and compacted the soils within the site, such that they no longer have the potential to provide suitable habitat for San Diego ambrosia. As a result, the project site was determined not to have potential to support San Diego ambrosia and no further surveys are recommended.

Spreading Navarretia (*Navarretia fossallis*)

Spreading navarretia is federally listed as threatened and is a CNPS 1B.1 species. It is associated with vernal pools and depressions and basins in areas that once supported vernal pools. In western Riverside County, spreading navarretia has been found within vernal floodplains dominated by annual alkali grassland or alkali playa. The vernal pool habitat found in the Hemet area is based primarily on silty clay soils in the Willows and Travers series. Spreading navarretia is an annual herb that blooms from April to June. The project site is not located within any of the known occurrences of spreading navarretia. In addition, historical agricultural activities and routine anthropogenic disturbances spanning much of the past century have contaminated and heavily mixed and compacted the soils within the project site, such that they no longer have the potential to provide suitable habitat for spreading navarretia. As a result, the project site was determined not to have potential to support spreading navarretia and no further surveys are recommended.

California Orcutt Grass (*Orcuttia californica*)

California Orcutt grass is both federally and State listed as endangered and is a CNPS Rare Plant Rank 1B.1 species. It is associated with vernal pools. In Riverside County, this species is found in southern basaltic claypan vernal pools and alkaline vernal pools. It is an annual herb that blooms from April to August. In Riverside County it is known to occur in Upper Salt Creek, Skunk Hollow, and the Santa Rosa Plateau. The project site is not located within any of the known occurrences of California Orcutt grass. In addition, historical agricultural activities and routine anthropogenic disturbances spanning much of the past century have contaminated and heavily mixed and compacted the soils within the project site, such that they no longer have the potential to provide suitable habitat for California Orcutt grass. As a result, the project site was determined not to have potential to support California Orcutt grass and no further surveys are recommended.

Wright's trichocoronis (*Trichocoronis wrightii var. wrightii*)

Wright's trichocoronis is a CNPS Rare Plant Rank 2.1 species. It is an annual herb that blooms from May to September and occurs in marshes, riparian forest, meadows, seeps, and vernal pools. In western Riverside County, Wright's trichocoronis is found in the alkali vernal plains and associated with alkali playa, alkali annual grassland, and alkali vernal pool habitats. This species occupies the more mesic portions of these habitats. Wright's trichocoronis is known from four locations along the San Jacinto River in the vicinity of the Ramona and Expressway and San Jacinto Wildlife Area. The project site is not located within any of the known occurrences of Wright's trichocoronis. In addition, historical agricultural activities and routine anthropogenic disturbances spanning much of the past century have contaminated and heavily mixed and compacted the soils within the project site, such that they no longer have the potential to provide suitable habitat for Wright's trichocoronis. As a result, the project site was determined not to have potential to support Wright's trichocoronis and no further surveys are recommended.

5.3 URBAN/WILDLANDS INTERFACE GUIDELINES

Section 6.1.4 of the MSHCP, *Guidelines Pertaining to Urban/Wildlands Interface*, is intended to address indirect effects associated with development in proximity to MSHCP Conservation Areas. The Urban/Wildlife Interface Guidelines are intended to ensure that indirect project-related impacts to the MSHCP Conservation Area, including drainage, toxics, lighting, noise, invasive plant species, barriers, and grading/land development, are avoided or minimized. The project site is not located within or in close proximity of any Criteria Cells or designated conservation areas. Therefore, the proposed project will not need to comply with the Urban/Wildlands Interface Guidelines.

5.4 ADDITIONAL MSHCP CONSIDERATIONS

In accordance with Section 6.3.2 of the MSHCP, *Additional Survey Needs and Procedures*, additional surveys may be needed for certain species in order to achieve coverage for these species. The query of the RCA MSHCP Information Map and review of the MSHCP determined that the project site is located within the designated survey area for burrowing owl and portions of the site are located within the designated survey area for Criteria Area Species San Jacinto Valley crownscale, Parish's brittlescale, Davidson's saltscale, Thread-leaved brodiaea, Round-leaved filaree, Smooth tarplant, Coulter's goldfields, Little mousetail, and Mud nama, as depicted in Figure 6-4 within Section 6.3.2 of the MSHCP. No other special-status wildlife species surveys were identified.

Burrowing Owl

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

Under the MSHCP, burrowing owl is considered an adequately conserved covered species that may still require focused surveys in certain areas as designated in Figure 6-4 of the MSHCP. The project site occurs within the MSHCP burrowing owl survey area and a habitat assessment was conducted for the species to ensure compliance with MSHCP guidelines for the species. In accordance with the MSHCP Burrowing Owl Survey Instructions (2006), survey protocol consists of two steps, Step I – Habitat Assessment and Step II – Locating Burrows and Burrowing Owls. The following section describes the methodology followed during the burrowing owl habitat assessment conducted for this project.

- Step I – Habitat Assessment: Step 1 of the MSHCP habitat assessment for burrowing owl consists of a walking survey to determine if suitable habitat is present on-site. The habitat assessment was conducted on August 18, 2023. Upon arrival at the project site, and prior to initiating the assessment survey, binoculars were used to scan all suitable habitats on and adjacent to the property, including perch locations, to establish owl presence.

  All suitable areas of the project site were surveyed on foot by walking slowly and methodically while recording/mapping areas that may represent suitable owl habitat on-site. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, but they often utilize man-made structures, such as earthen berms, cement culverts, cement, asphalt, rock, wood debris piles, openings beneath cement or asphalt pavement. Burrowing owls are often found within, under, or in close proximity to man-made structures.

  According to the MSHCP guidelines, if suitable habitat is present, the biologist should also walk the perimeter of the property, which consists of a 150-meter (approximately 500 feet) buffer zone around the project site boundary. If permission to access the buffer area cannot be obtained, the biologist shall not trespass, but visually inspect adjacent habitats with binoculars. In addition to surveying the entire project site all bordering natural habitats located immediately adjacent to the project site were assessed. Seven (7) burrowing owls were observed during the habitat assessment. Further results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the project site. Accordingly, if suitable habitat is documented on-site or within adjacent habitats, both Step II, focused surveys and the 30-day preconstruction surveys are required in order to comply with the MSHCP guidelines.

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

  - Part A – Focused Burrow Survey: A systematic survey for burrows, including burrowing owl sign, was conducted concurrently with the August 18, 2023, habitat assessment by walking across all suitable habitats within 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, and owing to the terrain, often much smaller. Transect routes were also adjusted to account for topography and in general ground surface visibility. Areas providing potential habitat for burrowing owls were surveyed for suitable burrows, consisting of natural and non-natural substrates in areas with low, open vegetation. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.

- Part B – Focused Burrow Survey: Focused burrowing owl surveys were conducted during the recognized timeframe (the breeding season is typically March through August) in the morning one hour before sunrise to two hours after sunrise.

  Suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence. All burrows encountered were examined for shape, scat, pellets, white-wash, feathers, tracks, and prey remains. The location of all suitable burrowing owl habitat, potential owl burrows, burrowing owl sign, and any owls observed were recorded and mapped, with a hand-held GPS unit, if observed. Methods to detect presence of burrowing owls included direct observation, aural detection, and signs of presence. Binoculars were used to observe distant birds and their activity around potential nesting habitat. During the focused surveys, the survey area was assessed on foot by qualified biologists Travis J. McGill, Jacob H. Lloyd Davies, Rachael A. Lyons, and Megan E. Peukert who are knowledgeable in the habitats and behavior of burrowing owls.

  Four focused burrowing owl surveys were conducted on August 21, 23, 26, and 30, 2023. All surveys were completed between 0600 and 1100. The surveys were conducted to document the presence/absence of burrowing owl within the project site. Refer to Table 1, *Burrowing Owl Survey Data*, for a summary of the survey dates and times, personnel, weather conditions, and general findings.

Table 1: Burrowing Owl Survey Data

Survey No.	Survey Date	Surveyor	Time	Temperature (˚F)	Cloud Cover	Wind Speed (mph)	Burrowing Owl Detected On-Site
1	8/21/23	Jacob H. Lloyd Davids and Rachael A. Lyons	0600-1000	72-80	0%	1-5	Yes
2	8/23/23	Jacob H. Lloyd Davies and Megan E. Peukert	0800-1100	75-86	0%	1-5	Yes
3	8/26/23	Rachael A. Lyons and Megan E. Peukert	0600-1000	74-82	0%	1-5	No
4	8/30/23	Jacob H. Lloyd Davids and Rachael A. Lyons	0700-1000	72-78	0%	1-5	No

A total of seven (7) burrowing owls, including four (4) adults and three (3) juveniles, were observed during the 2023 focused surveys approximately 450 feet south of the intersection of Orange Avenue and Barrett Avenue in the northern of two water detention basins.

Criteria Area Species

No criteria area species were observed on the project site. However, the site supported agricultural operations for much of the past century and continued to be impacted by surrounding development and weed abatement activities, eliminating natural plant communities.

San Jacinto Valley Crownscale (*Atriplex coronata var. notatior*)

San Jacinto Valley crownscale is federally endangered and designated as a CNPS 1B.1 species. It is an annual herb that blooms from April to August and is restricted to highly alkaline, silty-clay soils in association with Traver-Domino-Willows soil associations. San Jacinto Valley crownscale primarily occurs in floodplains dominated by alkali scrub, alkali playas, vernal pools, and alkali grasslands. This species is endemic to Riverside County and is restricted to the San Jacinto, Perris, Menifee and Elsinore Valleys. The project site is not located within any of the known occurrences of San Jacinto Valley crownscale. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities on the site do not provide suitable habitat for this species. As a result, the project site was determined to not have potential to provide suitable habitat for San Jacinto Valley crownscale and this species is presumed absent.

Parish's Brittlescale (*Atriplex parishii*)

Parish's brittlescale is designated as a CNPS 1B.1 species. It is an annual herb that blooms from June to October and is found in alkaline habitats. In western Riverside County it is found primarily along the San Jacinto River and at Salt Creek within the Domino-Willows-Traver Soils series in association with the alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains. Salt Creek west of Hemet and the Winchester Valley support the only known populations of this plant. The project site is not located within any of the known occurrences of Parish's brittlescale. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for Parish's brittlescale and this species is presumed absent.

Davidson's Saltscale (*Atriplex serenana var. davidsonii*)

Davidson's saltscale is designated as a CNPS 1B.2 species. It is an annual herb that blooms from April to October and occurs in coastal bluff scrub and coastal scrub in alkaline soils. In Riverside County, Davidson's saltscale is found in the Domino-Willows-Traver Soils series in association with the alkali vernal pools, alkali annual grassland, alkali playa, and alkali scrub components of alkali vernal plains. Currently known key populations of Davidson's saltscale include Salt Creek west of Hemet, the middle segment of San Jacinto River, and the San Jacinto Wildlife Area. The project site is not located within any of the known occurrences of Davidson's saltscale. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities on the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for Davidson's saltscale and this species is presumed absent.

Thread-leaved Brodiaea (*Brodiaea filifolia*)

Thread-leaved brodiaea is federally listed as threatened, is State listed as a candidate for endangered status, and is a CNPS Rare Plant Rank 1B.1 species. It is a perennial bulbiferous herb that blooms from March to June and it typically occurs on gentle hillsides, valleys, and floodplains in semi-alkaline mudflats, vernal pools, mesic southern needlegrass grassland, mixed native-nonnative grassland and alkali grassland plant communities in association with clay, loamy sand, or alkaline silty-clay soils. Localities occupied by this species are frequently intermixed with, or near, vernal pool complexes, such as at the Santa Rosa Plateau and in the Upper Salt Creek drainage southwest of Hemet in Riverside County. The project site is not located within any of the known occurrences of thread-leaved brodiaea. In addition, the heavily mixed and

compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for thread-leaved brodiaea and this species is presumed absent.

Round-leaved Filaree (*California macrophylla*)

Round-leaved filaree typically occurs in cismontane woodland, valley grassland, and chaparral within the Riverside lowlands and Santa Ana Mountains bioregions. It is thought to prefer clay soils. Round-leaved filaree is an annual herb with a blooming period from March to May. The project site is not located within any of the known occurrences of round-leaved filaree. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for round-leaved filaree and this species is presumed absent.

Smooth Tarplant (*Centromadia pungens ssp. laevis*)

Smooth tarplant is designated as a CNPS 1B.1 species. It is an annual herb that blooms from April to September. Smooth tarplant is an annual member of the sunflower family (Asteraceae) that often occurs in vernal pools, alkali playas and scrub, alkali grasslands, riparian areas, and disturbed sites in alkaline soils. However, smooth tarplant is also tolerant of disturbance, and is often found in agricultural lands or other disturbed mesic alkaline habitats. The majority of the populations in western Riverside County are associated with alkali vernal plains. Smooth tarplant is found at scattered low elevation locations throughout much of western Riverside County. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. In addition, the site is entirely surrounded by likewise disturbed land or development, further precluding this species from the site. As a result, the project site was determined to have a low potential to provide suitable habitat for smooth tarplant and this species is presumed absent due to historic anthropogenic activities.

Coulter's Goldfield (*Lasthenia glabrata ssp. coulteri*)

Coulter's goldfields are designated as a CNPS 1B.1 species. It is an annual herb that blooms from February to June and has been found to occur in marshes and swamps, playas, and vernal pools. In Riverside County, Coulter's goldfields occur primarily in highly alkaline, silty-clay soils in association with the Traver-Domino-Willows soil association. Coulter's goldfields occur primarily in the alkali vernal plains community. These are floodplains dominated by alkali scrub, alkali playas, vernal pools, and alkali grasslands. The project site is not located within any of the known occurrences of Coulter's goldfield. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for Coulter's goldfield and this species is presumed absent.

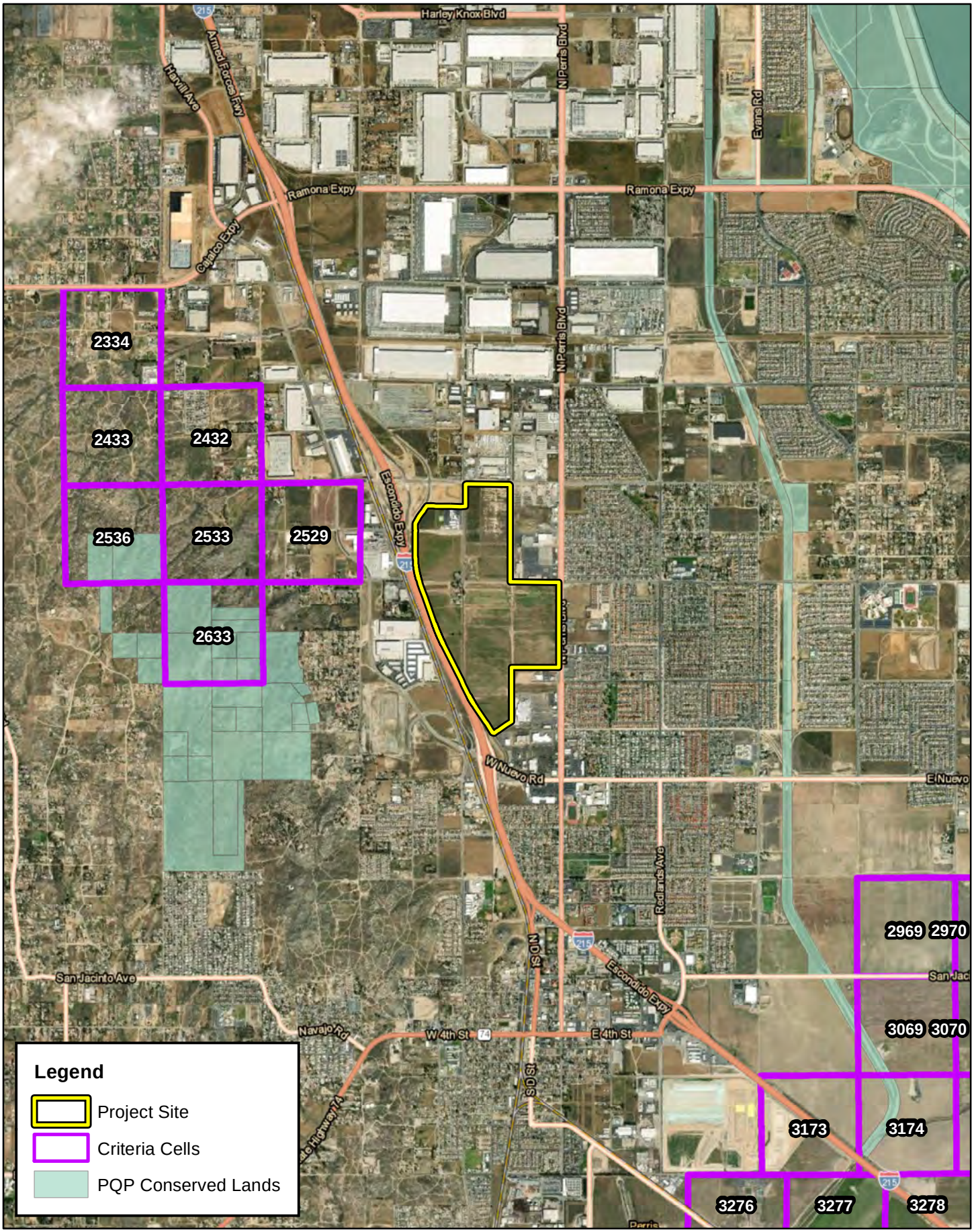
Little Mousetail (*Myosurus minimus*)

Little mousetail is a CNPS 3.1. This plant species is an annual herb that blooms from March to June and occurs in association with vernal pools and within the alkali vernal pools and alkali annual grassland components of alkali vernal plains. Little mousetail is found in areas that have semi-regular inundation. Little mousetail is known from at least nine locations in western Riverside County. The largest population complex of this plant known is found within an alkali vernal pool complex at Salt Creek west of Hemet.

Two populations are on the Santa Rosa Plateau within the Santa Rosa Plateau Preserve. The project site is not located within any of the known occurrences of little mousetail. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for little mousetail and this species is presumed absent.

Mud Nama (*Nama stenocarpa*)

Mud nama is an annual herb that blooms from January to July and is listed as a CNPS 2B.2 species. Mud nama is typically found within muddy embankments of marshes and swamps, and within lake margins and riverbanks between 16 and 1,640 feet above mean sea level. Within Riverside County, this species is known from along the San Jacinto River near Gilman Springs Road and from the El Casco quadrangle. The project site is not located within any of the known occurrences of mud nama. In addition, the heavily mixed and compacted soils and lack of natural vegetation communities within the site do not provide suitable habitat for this species. As a result, the project site was determined not to have potential to provide suitable habitat for mud nama and this species is presumed absent.



ELMT CONSULTING

0 1,250 2,500 5,000 Feet

Source: ESRI Aerial Imagery, Riverside County

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

MSHCP Criteria Area

Exhibit 7

Section 6 Stephen's Kangaroo Rat Habitat Conservation Plan

Separate from the consistency review against the policies of the MSHCP, Riverside County established a boundary in 1996 for protecting the Stephens' kangaroo rat (*Dipodomys stephensi*), a federally endangered and state threatened species. The Stephens' kangaroo rat is protected under the Stephens' Kangaroo Rat Habitat Conservation Plan (County Ordinance No. 663.10; SKR HCP). As described in the MSHCP Implementation Agreement, a Section 10(a) Permit, and California Fish and Game Code Section 2081 Management Authorization were issued to the Riverside County Habitat Conservation Agency (RCHCA) for the Long-Term SKR HCP and was approved by the USFWS and CDFW in August 1990 (RCHCA 1996). Relevant terms of the SKR HCP have been incorporated into the MSHCP and its Implementation Agreement. The SKR HCP will continue to be implemented as a separate habitat conservation plan; however, to provide the greatest conservation for the largest number of Covered Species, the Core Reserves established by the SKR HCP are managed as part of the MSHCP Conservation Area consistent with the SKR HCP. Actions shall not be taken as part of the implementation of the SKR HCP that will significantly affect other Covered Species. Take of Stephens' kangaroo rat outside of the boundaries but within the MSHCP area is authorized under the MSHCP and the associated permits.

The project site is located within the Mitigation Fee Area of the SKR HCP but is not located within or adjacent to any of the Core Reserve Areas. Since the project site is not located within or adjacent to any of the Core Reserve Areas, no focused SKR surveys or on-site mitigation would be required. On-site mitigation is only recommended in County Ordinance 663.10 when a site is located within or adjacent to a Core Reserve Area. As a result, the project applicant will only be required to pay the SKR HCP Mitigation Fee prior to development of the project site.

Section 7 Conclusion and Recommendations

The discussion below provides a summary of survey results; avoidance and minimization efforts; direct, indirect, and cumulative project impacts; and compensatory mitigation measures for each biological resource area required to be analyzed according to the California Environmental Quality Act (CEQA), based on Appendix G (Environmental Checklist Form) of the CEQA Guidelines:

***CEQA Threshold**: Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?*

Special-Status Plant Species

No special-status plant species were observed during the field investigation. Based on habitat requirements for the identified special-status species, known species distributions, and the quality and availability of habitats present, it was determined that the project site has a low potential to support smooth tarplant and paniculate tarplant. The proposed project will be confined to existing heavily disturbed and developed areas that were subject to agricultural land uses and continue to be impacted by routine weed abatement regimes and other disturbances associated with on-site and surrounding development. Further, the site is isolated from known occupied areas and if any smooth tarplant and paniculate tarplant supported were found onsite, their present would not have a meaningful contribution to the conservation of the species. No additional surveys are recommended.

Special-Status Wildlife Species

Recommendations for avoidance and minimization:

1. Prior to grading or construction activities, including vegetation removal, occurring during the nesting bird season (generally February 1st and August 31st but may be extended due to weather and drought conditions), a pre-construction clearance survey for nesting birds should be conducted within three (3) days of the start of any vegetation removal or ground disturbing activities to ensure that no nesting birds will be disturbed during construction. The project Applicant shall ensure that impacts to nesting bird species at the project site are avoided through the implementation of preconstruction surveys, ongoing monitoring, and if necessary, establishment of minimization measures. The project Applicant shall adhere to the following:

    a. Applicant shall retain a qualified biologist (Designated Biologist) experienced in: identifying local and migratory bird species of special concern; conducting bird surveys using appropriate survey methodology; nesting surveying techniques, recognizing breeding and nesting behaviors, locating nests and breeding territories, and identifying nesting stages and nest success; determining/establishing appropriate avoidance and minimization measures; and monitoring the efficacy of implemented avoidance and minimization measures.

b. Surveys shall be conducted by the Designated Biologist at the appropriate time of day/night, during appropriate weather conditions, no more than 3 days prior to the initiation of project activities. Surveys shall encompass all suitable areas including trees, shrubs, bare ground, burrows, cavities, and structures. Survey duration shall take into consideration the size of the project site; density, and complexity of the habitat; number of survey participants; survey techniques employed; and shall be sufficient to ensure the data collected is complete and accurate. If a nest is suspected, but not confirmed, the Designated Biologist shall establish a disturbance-free buffer until additional surveys can be completed, or until the location can be inferred based on observations. If a nest is observed, but thought to be inactive, the Designated Biologist shall monitor the nest for one hour (four hours for raptors during the non-breeding season) prior to approaching the nest to determine status. The Designated Biologist shall use their best professional judgement regarding the monitoring period and whether approaching the nest is appropriate.

   If an active avian nest is confirmed, the Designated Biologist shall immediately establish a conservative avoidance buffer surrounding the nest based on their best professional judgement and experience. The Designated Biologist shall monitor the nest at the onset of project activities, and at the onset of any changes in such project activities (e.g., increase in number or type of equipment, change in equipment usage, etc.) to determine the efficacy of the buffer. If the Designated Biologist determines that such project activities may be causing an adverse reaction, the Designated Biologist shall adjust the buffer accordingly or implement alternative avoidance and minimization measures, such as redirecting or rescheduling construction or erecting sound barriers. All work within these buffers will be halted until the nesting effort is finished (i.e., the juveniles are surviving independent from the nest). The on-site qualified biologist will review and verify compliance with these nesting avoidance buffers and will verify the nesting effort has finished. Work can resume within these avoidance areas when no other active nests are found. Upon completion of the survey and nesting bird monitoring, a report shall be prepared and submitted to the City of Perris for mitigation monitoring compliance record keeping.

2. The project proponent shall retain a qualified biologist to conduct a pre-construction survey for resident burrowing owls within 30 days prior to commencement of grading and construction activities within the project site. The survey shall include the project site and all suitable burrowing owl habitat within a 500-foot buffer. The results of the survey shall be submitted to the City of Perris Planning Division prior to obtaining a grading permit. In addition, if burrowing owls are observed during the required nesting bird survey, to be conducted within three days prior to ground disturbance or vegetation clearance, the observation shall be reported to the Wildlife Agencies. If ground disturbing activities in these areas are delayed or suspended for more than 30 days after the pre-construction survey, the area shall be resurveyed for owls. The pre-construction survey and any relocation activity shall be conducted in accordance with the current Burrowing Owl Survey Instructions for the Western Riverside MSHCP.

If burrowing owl are detected, the CDFW shall be sent written notification by the City, within three days of detection of burrowing owls. If active nests are identified during the pre-construction survey, the nests shall be avoided and the qualified biologist and project proponent shall coordinate with the City of Perris Planning Division, the US Fish and Wildlife Service, and the CDFW to develop a Burrowing Owl Plan to be approved by the CDFW and the US Fish and Wildlife Service prior to commencing project activities. The Burrowing Owl Plan shall be prepared in accordance with guidelines in the CDFW Staff Report on Burrowing Owl (March 2012) and MSHCP. The Burrowing Owl Plan shall describe proposed avoidance, minimization, relocation, and monitoring as applicable. The Burrowing Owl Plan shall include the number and location of occupied burrow sites and details on proposed buffers if avoiding the burrowing owls and/or information on the adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation and funding of artificial burrows (numbers, location, and type of burrows) and management activities for relocated owls may also be required in the Burrowing Owl Plan. The project proponent shall implement the Burrowing Owl Plan following CDFW and US Fish and Wildlife Service review and concurrence. A final letter report shall be prepared by the qualified biologist documenting the results of the Burrowing Owl Plan. The letter shall be submitted to the CDFW prior to the start of project activities. When a qualified biologist determines that burrowing owls are no longer occupying the project site per the criteria in the Burrowing Owl Plan, project activities may begin.

If burrowing owls occupy the project site after project activities have started, then construction activities shall be halted immediately. The project proponent shall notify the City and the City shall notify the CDFW and the US Fish and Wildlife Service within 48 hours of detection. A Burrowing Owl Plan, as detailed above, shall be implemented.

CEQA Threshold: *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?*

Riparian Habitat and Special-Status Natural Communities

Two (0) unnamed ephemeral drainage feature was observed within the project site during the field survey (Drainage 1 and 2). The onsite ephemeral drainage features ares not a relatively permanent, standing, or continuously flowing body of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage features will likely qualify as waters of the State and fall under the regulatory authority of the Regional Board and CDFW.

Impacts to the on-site jurisdictional area will require a Corps Approved Jurisdictional Determination or Waiver, Regional Board CWA Section Report of Waste Discharge, and a CDFW Section 1602 Lake and Streambed Alteration Agreement prior to project implementation.

Additionally, no sensitive habitats were identified within the project site. Thus, no sensitive natural communities will be impacted from project implementation.

CEQA Threshold: *Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

Federally Protected Wetlands

No inundated areas, wetland features, or wetland plant species that would be considered wetlands as defined by Section 404 of the Clean Water Act occur within the proposed project footprint. As a result, implementation of the proposed project would not result in any impacts or have substantial adverse effects on federally protected wetlands.

CEQA Threshold: *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

Wildlife Corridors

The project site has not been identified as occurring in a wildlife corridor or linkage. The nearest linkage, as identified by the MSHCP, occurs approximately 0.65 mile to the west of the project site in association with the Motte/Rimrock Reserve. The proposed project will be confined to existing areas that have been heavily disturbed and are isolated from regional wildlife corridors. Therefore, the project site does not function as a major wildlife movement corridor or linkage. As such, implementation of the proposed project is not expected to have a significant impact to wildlife movement opportunities or prevent local wildlife movement through the area. Due to the lack of any identified impacts to wildlife movement, migratory corridors or linkages or native wildlife nurseries, no mitigation is required. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

Additionally, the project site does not provide any native wildlife nursery site (e.g., bat maternity site).

CEQA Threshold: *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

Local Policies or Ordinances

As outlined by the City of Perris Urban Forestry Establishment and Care Ordinance (Municipal Code Section 19.71.050) trees on private property may be protected and regulated under the provisions of the municipal code. To ensure that the proposed project is compliant with the City's municipal code, site plans shall identify the location of all existing trees with a diameter at breast-height (DBH) of six inches or larger and indicate whether these trees will be preserved or removed. For trees which are justified to be preserved, a tree protection plan will need to be prepared which identifies the location of these trees and sets forth protection instructions based on the recommendations of a qualified arborist.

CEQA Threshold: *Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state Habitat Conservation Plan?*

Local, Regional, and State Plans

The project site is located within the Western Riverside County MSHCP. Specifically, the project site is located in the within the Mead Valley Area Plan of the MSHCP but is not located within any designated Criteria Cells or conservation areas. Based on the analysis provided in this report and with completion of recommendations provided above and payment of the MSHCP Local Development Mitigation Fee, development of the project site will be fully consistent with the MSHCP. Additionally, the project site is also located within the fee area for the SKR HCP. With payment of the Stephen's kangaroo rat mitigation fee, development of the project will be consistent with the SKR HCP.

Section 8 References

California Burrowing Owl Consortium, 1993. *Burrowing Owl Survey Protocol and Mitigation Guidelines.* Accessed on the internet at: www.dfg.ca.gov/wildlife/nongame/docs/boconsortium.pdf

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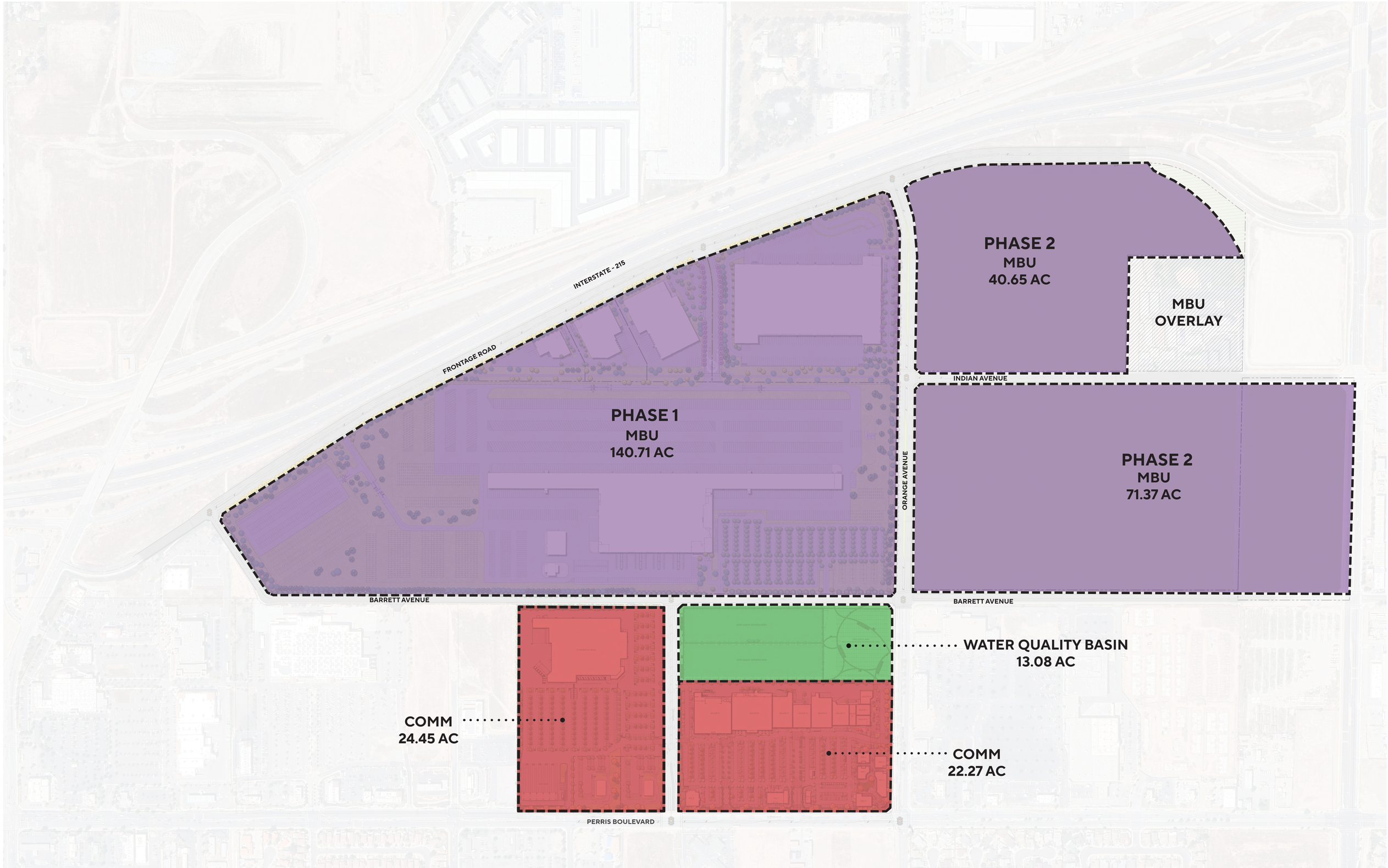
Appendix A Site Plan



HARVEST LANDING RETAIL CENTER & BUSINESS PARK

PERRIS, CA

0 100' 200' 300' 400' 500' 600'

LAND USE PLAN

Architecture. Design. Relationships.

A1

Scale 1" = 200'
Job No. 2020-392
Date 2024-04-18

Appendix B Site Photographs

Photograph 1: From the northeast corner of the project site, looking south along the eastern boundary.

Photograph 2: From the northeast corner of the project site, looking east along the northern boundary.

Photograph 3: From the northwest corner of the project site, looking south along the western boundary.

Photograph 4: From the northwest corner of the project site, looking east along the northern boundary.

Photograph 5: From the middle of the western boundary, looking east through project site along the intersection of Indian Avenue and Frontage Road.

Photograph 6: From the southern limits of the project site, looking northwest along the western boundary and the Interstate 215 Frontage Road.

Photograph 7: From the middle of the eastern boundary, looking west through the project site.

Photograph 8: From inside Drainage 1, looking northeast along the western boundary of the project site.

Photograph 9: From inside Drainage 2 looking east at its entry to the project site at the intersection of Orange Avenue and Frontage Road along the western boundary.

Photograph 10: From the middle of the project site, looking southwest at the area supporting burrows and seven burrowing owls (six owls shown).

Appendix C Potentially Occurring Special-Status Biological Resources

Table C-1: Potentially Occurring Special-Status Biological Resources

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
WILDLIFE SPECIES					
Accipiter cooperii Cooper's hawk	Fed: None CA: WL	Generally found in forested areas up to 3,000 feet in elevation, especially near edges and rivers. Prefers hardwood stands and mature forests but can be found in urban and suburban areas where there are tall trees for nesting. Common in open areas during nesting season.	Yes	No	**High** Suitable foraging and nesting habitat are present within and surrounding the project site. This species is adapted to urban environments and occurs commonly.
Accipiter striatus sharp-shinned hawk	Fed: None CA: WL	Found in pine, fir and aspen forests. They can be found hunting in forest interior and edges from sea level to near alpine areas. Can also be found in rural, suburban and agricultural areas, where they often hunt at bird feeders. Typically found in southern California in the winter months.	Yes	No	**High** Suitable foraging habitat is present within and surrounding the project site. This species does not nest in this region. This species is adapted to urban environments and occurs commonly.
Agelaius tricolor tricolored blackbird	Fed: None CA: **THR**/SSC	Range is limited to the coastal areas of the Pacific coast of North America, from Northern California to upper Baja California. Can be found in a wide variety of habitat including annual grasslands, wet and dry vernal pools and other seasonal wetlands, agricultural fields, cattle feedlots, and dairies. Occasionally forage in riparian scrub habitats along marsh borders. Basic habitat requirements for breeding include open accessible water, protected nesting substrate (freshwater marsh dominated by cattails, willows, and bulrushes), and either flooded or thorny or spiny vegetation and suitable foraging space providing adequate insect prey.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Aimophila ruficeps canescens southern California rufous-crowned sparrow	Fed: None CA: WL	Typically found between 3,000 and 6,000 feet in elevation. Breed in sparsely vegetated scrubland on hillsides and canyons. Prefers coastal sage scrub dominated by California sagebrush (*Artemisia californica*), but they can also be found breeding in coastal bluff scrub, low-growing serpentine chaparral, and along the edges of tall chaparral habitats.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Ammodramus savannarum grasshopper sparrow	Fed: None CA: SSC	Occurs in grassland, upland meadow, pasture, hayfield, and old field habitats. Optimal habitat contains short- to medium-height bunch grasses interspersed with patches of bare ground, a shallow litter layer, scattered forbs, and few shrubs. May inhabit thickets, weedy lawns, vegetated landfills, fence rows, open fields, or grasslands.	Yes (e)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Anniella stebbinsi southern California legless lizard	Fed: None CA: SSC	Occurs in sparsely vegetated habitat types including coastal sand dunes, chaparral, pine-oak woodland, desert scrub, open grassland, and riparian areas. Requires sandy or loose loamy substrates conducive to burrowing.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Aquila chrysaetos golden eagle	Fed: None CA: FP; WL	Occupies nearly all terrestrial habitats of the western states except densely forested areas. Favors secluded cliffs with overhanging ledges and large trees for nesting and cover. Hilly or mountainous country where takeoff and soaring are supported by updrafts is generally preferred to flat habitats. Deeply cut canyons rising to open mountain slopes and crags are ideal habitat.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Ardea alba great egret	Fed: None CA: None	Yearlong resident throughout California, except for the high mountains and deserts. Feeds and rests in fresh, and saline emergent wetlands, along the margins of estuaries, lakes, and slow-moving streams, on mudflats and salt ponds, and in irrigated croplands and pastures.	No	No	**Low** Limited foraging habitat is present within the project site. No suitable nesting opportunities are present.
Ardea herodias great blue heron	Fed: None CA: None	Forages along streams, marshes, lakes, and meadows. Nests colonially in tall trees (typically Eucalyptus sp.), on cliffsides, or in isolated spots in marshes.	Yes	No	**Low** Limited foraging habitat is present within the project site. No suitable nesting opportunities are present.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Arizona elegans occidentalis California glossy snake	Fed: None CA: SSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Artemisiospiza belli belli Bell's sparrow	Fed: None CA: WL	Generally prefers semi-open habitats with evenly spaced shrubs 1 – 2 meters in height. Dry chaparral and coastal sage scrub. Less common in tall dense, old chaparral.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Asio otus long-eared owl	Fed: None CA: SSC	Hunts mostly at night over grasslands and other open habitats. Nesting occurs in dense trees such as oaks and willows where it occupies stick nests of other species, particularly raptors or corvids.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Aspidoscelis hyperythra orangethroat whiptail	Fed: None CA: WL	Semi-arid brushy areas typically with loose soil and rocks, including washes, streamsides, rocky hillsides, and coastal chaparral.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: None CA: SCC	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Athene cunicularia burrowing owl	Fed: None CA: SSC	Occurs in open, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Dependent upon fossorial mammals for burrows, most notable ground squirrels.	Yes (c)	Yes	**Present** The project site provides line-of-sight opportunities favored by burrowing owls. Was observed in an onsite water detention basin.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Aythya americana redhead	Fed: None CA: SSC	Typically found in shallow freshwater lakes, ponds, and marshes.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Bombus crotchii Crotch bumblebee	Fed: None CA: CE	Exclusive to coastal California east towards the Sierra-Cascade Crest; less common in western Nevada.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Bombus pensylvanicus American bumblebee	Fed: None CA: None	Found in desert habitats and adjacent areas. Prefers farmlands, grasslands, and open fields. Nests embedded in grass or belowground.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Branchinecta lynchi vernal pool fairy shrimp	Fed: **THR** CA: None	Associated with vernal pools. Can be found in association with other ephemeral habits including alkali pools, seasonal drainages, stock ponds, vernal swales, and rock outcrops.	Yes (a)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Branchinecta sandiegonensis San Diego fairy shrimp	Fed: **END** CA: None	Habitat is restricted to vernal pools along coastal southern California and northwestern Baja California, Mexico. Usually observed from January to March during seasonal rainfall events.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Buteo regalis ferruginous hawk	Fed: None CA: WL	Occurs primarily in open grasslands and fields, but may be found in sagebrush flats, desert scrub, low foothills, or along the edges of pinyon-juniper woodland. Feeds primarily on small mammals and typically found in agricultural or open fields.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Buteo swainsoni Swainson's hawk	Fed: None CA: **THR**	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa fields or livestock pastures.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Calypte costae Costa's hummingbird	Fed: None CA: None	Desert and semi-desert, arid brushy foothills and chaparral. A desert hummingbird that breeds in the Sonoran and Mojave Deserts. Departs desert heat moving into chaparral, scrub, and woodland habitats.	No	No	**High** Suitable foraging and nesting habitat are present within and surrounding the project site. This species is adapted to urban environments and occurs commonly.
Chaetodipus californicus femoralis Dulzura pocket mouse	Fed: None CA: SSC	Occurs in desert and coastal habitats in southern California, Mexico, and northern Baja California, from sea level to at least 1,400 meters. Found in a variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Requires low growing vegetation or rocky outcroppings, as well as sandy soils for burrowing.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Chaetodipus fallax fallax northwestern San Diego pocket mouse	Fed: None CA: SSC	Occurs in desert and coastal habitats in southern California, Mexico, and northern Baja California, from sea level to at least 1,400 meters. Found in a variety of temperate habitats ranging from chaparral and grasslands to scrub forests and deserts. Requires low growing vegetation or rocky outcroppings, as well as sandy soils for burrowing.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Chaetura vauxi Vaux's swift	Fed: None CA: SSC	Prefers redwood and Douglas-fir habitats with nest-sites in large hollow trees and snags, especially tall, burned-out snags. Fairly common migrant throughout most of the state in April and May, and August and September.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Charadrius montanus mountain plover	Fed: None CA: SSC	Found in short grasslands, freshly plowed fields, newly-sprouting grain fields, and sometimes in sod farms. Prefers short vegetation or bare ground with flat topography, particularly grazed areas or areas with fossorial rodents.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Circus hudsonius northern harrier	Fed: None CA: SSC	Frequents meadows, grasslands, open rangelands, desert sinks, fresh and saltwater emergent wetlands; seldom found in wooded areas. Mostly found in flat, or hummocky, open areas of tall, dense grasses moist or dry shrubs, and edges for nesting, cover, and feeding.	Yes	No	**High** Suitable foraging habitat is present for raptors migrating along the San Jacinto River. No suitable nesting opportunities are present.
Coleonyx variegatus abbotti San Diego banded gecko	Fed: None CA: SCC	Occurs in coastal and cismontane southern California from interior Ventura County south, although it is absent from the extreme outer coast. It is uncommon in coastal scrub and chaparral, most often occurring in granite or rocky outcrops in these habitats.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Crotalus ruber red-diamond rattlesnake	Fed: None CA: SSC	It can be found from the desert, through dense chaparral in the foothills (it avoids the mountains above around 4,000 feet), to warm inland mesas and valleys, all the way to the cool ocean shore. It is most commonly associated with heavy brush with large rocks or boulders. Dense chaparral in the foothills, cactus or boulder associated coastal sage scrub, oak and pine woodlands, and desert slope scrub associations are known to carry populations of the northern red-diamond rattlesnake; however, chamise and red shank associations may offer better structural habitat for refuges and food resources for this species than other habitats.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Diadophis punctatus modestus San Bernardino ringneck snake	Fed: None CA: None	Common in open, relatively rocky areas within valley-foothill, mixed chaparral, and annual grass habitats.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Diadophis punctatus similis San Diego ringneck snake	Fed: None CA: None	Prefers moist habitats, including wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, and woodlands.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Dipodomys merriami parvus San Bernardino kangaroo rat	Fed: **END** CA: CE; SSC	Primarily found in Riversidian alluvial fan sage scrub and sandy loam soils, alluvial fans and flood plains, and along washes with nearby sage scrub. May occur at lower densities in Riversidian upland sage scrub, chaparral and grassland in uplands and tributaries in proximity to Riversidian alluvial fan sage scrub habitats. Tend to avoid rocky substrates and prefer sandy loam substrates for digging of shallow burrows.	Yes (c)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Dipodomys simulans Dulzura kangaroo rat	Fed: None CA: None	Typical habitat is open desert, grassland, or cropland containing scattered, large trees or small groves. Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah in the Central Valley. Forages in adjacent grassland or suitable grain or alfalfa fields or livestock pastures.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Dipodomys stephensi Stephens' kangaroo rat	Fed: **THR** CA: **THR**	Occur in arid and semi-arid habitats with some grass or brush. Prefer open habitats with less than 50% protective cover. Require soft, well-drained substrate for building burrows and are typically found in areas with sandy soil.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Egretta thula snowy egret	Fed: None CA: None	Widespread in California along shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. In southern California, common yearlong in the Imperial Valley and along the Colorado River.	No	No	**Low** Limited foraging habitat is present within and surrounding the project site. No suitable nesting opportunities are present.
Elanus leucurus white-tailed kite	Fed: None CA: FP	Occurs in low elevation, open grasslands, savannah-like habitats, agricultural areas, wetlands, and oak woodlands. Uses trees with dense canopies for cover.	Yes	Yes	**Moderate** Limited foraging and nesting habitat are present within and near the project site. One (1) adult was observed foraging near the northwest corner of the intersection of Orange Avenue and Indian Avenue.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Empidonax traillii willow flycatcher	Fed: None CA: **END**	A rare to locally uncommon, summer resident in wet meadow and montane riparian habitats (2,000 to 8,000 ft) in the Sierra Nevada and Cascade Range. Most often occurs in broad, open river valleys or large mountain meadows with lush growth of shrubby willows.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Empidonax traillii extimus southwestern willow flycatcher	Fed: **END** CA: **END**	Occurs in riparian woodlands in southern California. Typically requires large areas of willow thickets in broad valleys, canyon bottoms, or around ponds and lakes. These areas typically have standing or running water or are at least moist.	Yes (a)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Emys marmorata western pond turtle	Fed: None CA: SSC	Found in ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation, either rocky or muddy bottoms, in woodland, forest, and grassland. In streams, prefers pools to shallower areas. Logs, rocks, cattail mats, and exposed banks are required for basking. May enter brackish water and even seawater. Found at elevations from sea level to over 5,900 feet (1,800 m).	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Eremophila alpestris actia California horned lark	Fed: None CA: WL	Generally found in shortgrass prairies, grasslands, disturbed fields, or similar habitat types along the coast or in deserts. Trees are shrubs are usually scarce or absent. Generally rare in montane, coniferous, or chaparral habitats. Forms large flocks outside of the breeding season.	Yes	No	**High** Suitable foraging and nesting habitat are present within and near the project site.
Eumops perotis californicus western mastiff bat	Fed: None CA: SSC	Primarily a cliff-dwelling species, roost generally under exfoliating rock slabs. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least 3 meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Euphydryas editha quino Quino checkerspot butterfly	Fed: **END** CA: None	Range is now limited to a few populations in Riverside and San Diego counties. Common in meadows and upland sage scrub/chapparal habitat.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Falco columbarius merlin	Fed: None CA: WL	Nest in forested openings, edges, and along rivers across northern North America. Found in open forests, grasslands, and especially coastal areas with flocks of small songbirds or shorebirds.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Falco mexicanus prairie falcon	Fed: None CA: WL	Commonly occur in arid and semiarid shrubland and grassland community types. Also occasionally found in open parklands within coniferous forests. During the breeding season, they are found commonly in foothills and mountains which provide cliffs and escarpments suitable for nest sites.	Yes	Yes	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Falco peregrinus anatum American peregrine falcon	Fed: DL CA: DL; FP	Uncommon winter resident of the inland region of southern California. Active nesting sites are known along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. Breeds mostly in woodland, forest, and coastal habitats. Riparian areas and coastal and inland wetlands are important habitats yearlong, especially in nonbreeding seasons.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Haliaeetus leucocephalus bald eagle	Fed: DL CA: **END**; FP	Occur primarily at or near seacoasts, rivers, swamps, and large lakes. Need ample foraging opportunities, typically near a large water source.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Hydroprogne caspia Caspian tern	Fed: None CA: None	Occurs near large lakes, coastal waters, beaches, and bays. Found on both fresh and salt water, favoring protected waters such as bays and lagoons, rivers, not usually foraging over open sea. Nests on open ground on islands, coasts.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Icteria virens yellow-breasted chat	Fed: None CA: SSC	Primarily found in tall, dense, relatively wide riparian woodlands and thickets of willows, vine tangles, and dense brush with well-developed understories. Nesting areas are associated with streams, swampy ground, and the borders of small ponds. Breeding habitat must be dense to provide shade and concealment. It winters south the Central America.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Lanius ludovicianus loggerhead shrike	Fed: None CA: SSC	Often found in broken woodlands, shrublands, and other habitats. Prefers open country with scattered perches for hunting and fairly dense brush for nesting.	Yes	No	**Low** Limited foraging habitat is present within and surrounding the project site. No suitable nesting opportunities are present.
Larus californicus California gull	Fed: None CA: WL	Require isolated islands in rivers, reservoirs and natural lakes for nesting, where predations pressures from terrestrial mammals are diminished. Uses both fresh and saline aquatic habitats at variable elevations and degrees of aridity for nesting and for opportunistic foraging.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lasiurus xanthinus western yellow bat	Fed: None CA: SSC	Roosts in palm trees in foothill riparian, desert wash, and palm oasis habitats with access to water for foraging.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: None CA: None	Occurs in diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Openness of open scrub habitat is preferred over dense chaparral.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lynx rufus pallescens pallid bobcat	Fed: None CA: None	Found on the western edge of the great basin habitat in extreme northeast California. Live in a variety of habitats including forests, deserts, mountains, swamps and farmland.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Myotis yumanensis Yuma myotis	Fed: None CA: None	Found in forests and woodlands near water. Roosts in caves, buildings, mines, and crevices.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Nannopterum auritum double-crested cormorant	Fed: None CA: WL	Common yearlong resident in southern California. Occurs widely in freshwater and marine habitats along coastlines. Require open water where they can forage for schooling fish.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Neolarra alba white cuckoo bee	Fed: None CA: None	Found in dry, sandy areas (particularly deserts) in the American southwest near the host plants for *Perdita* bee species, of which it is a nest parasite.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Neotoma lepida intermedia San Diego desert woodrat	Fed: None CA: SSC	Occurs in coastal scrub communities between San Luis Obispo and San Diego Counties. Prefers moderate to dense canopies, and especially rocky outcrops.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Numenius americanus long-billed curlew	Fed: None CA: WL	Preferred winter habitats include large coastal estuaries, upland herbaceous areas, and croplands. On estuaries, feeding occurs mostly on intertidal mudflats.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Nycticorax nycticorax black-crowned night heron	Fed: None CA: None	Fairly common, yearlong resident in lowlands and foothills throughout most of California, including the Salton Sea and Colorado River areas, and very common locally in large nesting colonies. Feeds along the margins of lacustrine, large riverine, and fresh and saline emergent habitats and rarely, on kelp beds in marine sub tidal habitats. Nests and roosts in dense-foliaged trees and dense emergent wetlands.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Nyctinomops femorosaccus pocketed free-tailed bat	Fed: None CA: SSC	Prefers open lowland areas near water in arid or semi-arid habitats including deserts and scrublands including pinyon-juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oasis. Colonial roosting sites include caves, mines, and rock crevices, and to a lesser extent, buildings, bridges, and trees.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Onychomys torridus ramona southern grasshopper mouse	Fed: None CA: SSC	Inhabits alkali desert scrub and other desert scrub habitats, and to a lesser extent succulent shrubs, desert washes, desert riparian, coastal scrub, mixed chaparral, and sagebrush habitats. Generally rare in valley foothill and montane riparian habitats. Prefers low to moderate shrub cover and requires friable soils.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Pandion haliaetus osprey	Fed: None CA: WL	Remain close to still or slow-moving bodies of water including oceans, rivers, lakes, mangroves, coastal wetlands, lagoons, reefs, estuaries and marshes. Generally nest in high places, such as trees, power poles, or cliffs.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Pelecanus erythrorhynchos American white pelican	Fed: None CA: SSC	Locally common winter resident of southern California. Typically forage in shallow inland waters, such as open areas in marshes and along lake or river edges. Also occur in shallow coastal marine habitats.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Pelecanus occidentalis californicus California brown pelican	Fed: DL CA: DL; FP	Coastal areas, with nesting occurring on islands. Species found occasionally along Arizona's lakes and rivers. This species inhabits shallow inshore waters, estuaries and bays, avoiding the open sea. Its diet is comprised mostly of fish, causing great congregations in areas with abundant prey. Prey species include sardines and anchovies, but has been seen to take shrimps and carrion, and even nestling egrets. It regularly feeds by plunge-diving and is often the victim of kleptoparasites.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Perognathus longimembris brevinasus Los Angeles pocket mouse	Fed: None CA: SSC	Occurs in lower elevation grasslands and coastal sage scrub communities in and around the Los Angeles Basin. Prefers open ground with fine sandy soils. May not dig extensive burrows, but instead will seek refuge under weeds and dead leaves instead.	Yes (c)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Phrynosoma blainvillii coast horned lizard	Fed: None CA: SSC	Occurs in a wide variety of vegetation types including coastal sage scrub, annual grassland, chaparral, oak woodland, riparian woodland and coniferous forest. In inland areas, this species is restricted to areas with pockets of open microhabitat, created by disturbance (i.e. fire, floods, roads, grazing, fire breaks). The key elements of such habitats are loose, fine soils with a high sand fraction; an abundance of native ants or other insects; and open areas with limited overstory for basking and low, but relatively dense shrubs for refuge.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Plegadis chihi white-faced ibis	Fed: None CA: WL	Prefers to feed in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Polioptila californica californica coastal California gnatcatcher	Fed: **THR** CA: SSC	Obligate resident of sage scrub habitats that are dominated by California sagebrush (*Artemisia californica*). This species generally occurs below 750 feet elevation in coastal regions and below 1,500 feet inland. Ranges from the Ventura County, south to San Diego County and northern Baja California and it is less common in sage scrub with a high percentage of tall shrubs. Prefers habitat with more low-growing vegetation.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Polioptila melanura black-tailed gnatcatcher	Fed: None CA: WL	In Mojave, Great Basin, Colorado and Sonoran Desert communities, prefers nesting and foraging in densely lined arroyos and washes dominated by creosote bush and salt bush with scattered bursage, burrowed, ocotillo, saguaro, barrel cactus, nipple cactus, and prickly pear and cholla.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Pyrocephalus rubinus vermillion flycatcher	Fed: None CA: SSC	Can be found in any open country in the American Southwest, including arid scrublands, farmlands, deserts, parks, and canyon mouths. In more arid areas, species prefers areas near streams or other sources of water. Nests in trees usually 6 to 20 feet aboveground along stream corridors.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Salvadora hexalepis virgultea coast patch-nosed snake	Fed: None CA: SSC	Found in brushy or shrubby vegetation along the coast and requires small mammal burrows for refuge and overwintering.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Setophaga petechia yellow warbler	Fed: None CA: SSC	Nests over all of California except the Central Valley, the Mojave Desert region, and high altitudes and the eastern side of the Sierra Nevada. Winters along the Colorado River and in parts of Imperial and Riverside Counties. Nests in riparian areas dominated by willows, cottonwoods, sycamores, or alders or in mature chaparral. May also use oaks, conifers, and urban areas near stream courses.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Spea hammondii western spadefoot	Fed: None CA: SSC	Prefers open areas with sandy or gravelly soils, in a variety of habitats including mixed woodlands, grasslands, coastal sage scrub, chaparral, sandy washed, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains. Rainpools which do not contain bullfrogs, fish, or crayfish are necessary for breeding.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Spinus lawrencei Lawrence's goldfinch	Fed: None CA: None	Open woodlands, chaparral, and weedy fields. Closely associated with oaks. Nests in open oak or other arid woodland and chaparral near water.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Spizella breweri Brewer's sparrow	Fed: None CA: None	Lives in arid sagebrush steppe habitat. Prefers to nest, feed, and roost in sagebrush. Can also be found along foothill tree lines, brushy plains, and weedy fields.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Streptocephalus woottoni Riverside fairy shrimp	Fed: **END** CA: None	Freshwater crustacean that is found in vernal pools in the coastal California area.	Yes (a)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Taxidea taxus American badger	Fed: None CA: SSC	Primarily occupy grasslands, parklands, farms, tallgrass and shortgrass prairies, meadows, shrub-steppe communities and other treeless areas with sandy loam soils where it can dig more easily for its prey. Occasionally found in open chaparral (with less than 50% plant cover) and riparian zones.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Vireo bellii pusillus least Bell's vireo	Fed: **END** CA: **END**	Primarily occupy Riverine riparian habitat that typically feature dense cover within 1 -2 meters of the ground and a dense, stratified canopy. Typically it is associated with southern willow scrub, cottonwood-willow forest, mule fat scrub, sycamore alluvial woodlands, coast live oak riparian forest, arroyo willow riparian forest, or mesquite in desert localities. It uses habitat which is limited to the immediate vicinity of water courses, 2,000 feet elevation in the interior.	Yes (a)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Xanthocephalus xanthocephalus yellow-headed blackbird	Fed: None CA: SSC	Summers in the west-central United States and Canada and winters throughout the western United States. Nests primarily in large wetlands, but also in mountain meadows and along pond and river edges. Forages in fields and open country. Breeds in freshwater sloughs, marshy lake borders, and tall cattails.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
PLANT SPECIES					
Abronia villosa* var. *aurita chaparral sand-verbena	Fed: None CA: None CNPS: 1B.1	Grows in sandy soils in coastal sage scrub and in chaparral habitats. Grows in elevation from 262 to 5,249 feet. Blooming period is from January to September.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Allium munzii Munz's onion	Fed: **END** CA: **THR** CNPS: 1B.1	Found in chaparral, cismontane woodland, coastal scrub, pinyon and juniper woodland, valley and foothill grassland. Found at elevations ranging from 974 to 3,510 feet. Blooming period is from March to May.	Yes (b)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Arctostaphylos rainbowensis rainbow manzanita	Fed: None CA: None CNPS: 1B.1	Grows within chaparral habitats. Found at elevations ranging from 675 to 2,200 feet. Blooming period is from December to March.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Atriplex coronata* var. *notatior San Jacinto Valley crownscale	Fed: **END** CA: None CNPS: 1B.1	Grows in alkaline conditions within playas, mesic valley and foothill grasslands, and vernal pools. Found at elevations ranging from 456 to 1,640 feet. Blooming period is from April to August.	Yes (d)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Atriplex parishii Parish's brittlescale	Fed: None CA: None CNPS: 1B.1	Habitat types include chenopod scrub, playas, and vernal pools. Found at elevations ranging from 82 to 6,234 feet. Blooming period is from June to October.	Yes (d)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Atriplex serenana* var. *davidsonii Davidson's saltscale	Fed: None CA: None CNPS: 1B.2	Grows in alkaline soils within coastal bluff scrub and coastal scrub. Found at elevations ranging from 33 to 656 feet. Blooming period is from April to October.	Yes (d)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site. The project site occurs outside of the known elevation range for this species.
Brodiaea filifolia thread-leaved brodiaea	Fed: **THR** CA: **END** CNPS: 1B.1	Grows in chaparral openings, cismontane woodland, coastal scrub, playas, valley and foothill grassland, and vernal pools, often in clay soils. Found at elevations ranging from 82 to 3,675 feet. Blooming period is from March to June.	Yes (d)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Caulanthus simulans Payson's jewelflower	Fed: None CA: None CNPS: 4.2	Occurs on granitic sandy soils in chaparral and coastal scrub habitats. Found at elevations ranging from 295 to 7,218 feet. Blooming period is from February to June.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Centromadia pungens ssp. laevis smooth tarplant	Fed: None CA: None CNPS: 1B.1	Found in alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodland, valley, and foothill grassland habitats. Found at elevations ranging from 0 to 2,100 feet. Blooming period is from April to September.	Yes (d)	No	**Low** Limited habitat is present within the project site. This species is adapted to highly disturbed areas.
Chorizanthe leptotheca Peninsular spineflower	Fed: None CA: None CNPS: 4.2	Found in granitic soils within chaparral, coast scrub, and lower montane coniferous forest habitats. Found at elevations ranging from 984 to 6,234 feet. Blooming period is from May to August.	Yes (e)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Chorizanthe parryi* var. *parryi Parry's spineflower	Fed: None CA: None CNPS: 1B.1	Occurs on sandy and/or rocky soils in chaparral, coastal sage scrub, and sandy openings within alluvial washes and margins. Found at elevations ranging from 951 to 3,773 feet. Blooming period is from April to June.	Yes (e)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Chorizanthe polygonoides var. longispina long-spined spineflower	Fed: None CA: None CNPS: 1B.2	Typically found on clay lenses which are largely devoid of shrubs. Can be found on the periphery of vernal pool habitat and even on the periphery of montane meadows near vernal seeps. Found at elevations ranging from 98 to 5,020 feet. Blooming period is from April to July.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Convolvulus simulans small-flowered morning-glory	Fed: None CA: None CNPS: 4.2	Grows in clay soils within serpentinite seeps, chaparral, coastal scrub, valley and foothill grassland habitats. Found at elevations ranging from 98 to 2,297 feet. Blooming period is from March to July.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Deinandra paniculata paniculate tarplant	Fed: None CA: None CNPS: 4.2	Typically found in vernally mesic, sometimes sandy soils in coastal scrub, valley and foothill grasslands, and vernal pools. Found at elevations ranging from 82 to 3,084 feet. Blooming period is from April to November.	No	No	**Low** Limited habitat is present within the project site. This species is adapted to highly disturbed areas.
Harpagonella palmeri Palmer's grapplinghook	Fed: None CA: None CNPS: 4.2	Occurs on clay soils in chaparral, coastal scrub, and valley and foothill grasslands. Found at elevations ranging from 66 to 3,133 feet. Blooming period is from March to May.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Hordeum intercedens vernal barley	Fed: None CA: None CNPS: 3.2	Found in coastal dunes, coastal scrub, vernal pools, and valley and foothill grassland habitats. Found at elevations ranging from 16 to 3,281 feet. Blooming period is from March to June.	Yes	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Lasthenia glabrata* ssp. *coulteri Coulter's goldfields	Fed: None CA: None CNPS: 1B.1	Prefers playas, vernal pools, and coastal salt marshes and swamps. Found at elevations ranging from 3 to 4,003 feet. Blooming period is from February to June.	Yes (d)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Covered by MSHCP**	**Observed On-site**	**Potential to Occur**
Lepidium virginicum var. robinsonii Robinson's pepper-grass	Fed: None CA: None CNPS: 4.3	Dry soils on chaparral and coastal sage scrub. Found at elevations ranging from 3 to 2,904 feet. Blooming period is from January to July.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Myosurus minimus ssp. apus little mousetail	Fed: None CA: None CNPS: 3.1	Occurs in alkaline soils in valley and foothill grassland and vernal pools. Found at elevations ranging from 66 to 2,100 feet. Blooming period is from March to June.	Yes (d)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Navarretia fossalis spreading navarretia	Fed: **THR** CA: None CNPS: 1B.1	Grows in chenopod scrub, assorted shallow freshwater marshes and swamps, playas, and vernal pools. Found at elevations ranging from 98 to 2,149 feet. Blooming period is from April to June.	Yes (b)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Romneya coulteri Coulter's matilija poppy	Fed: None CA: None CNPS: 4.2	Found in recently burned areas within chaparral and coastal scrub habitats. Found at elevations ranging from 66 to 3,937 feet. Blooming period is from March to July.	Yes (e)	No	**Presumed Absent** There is no suitable habitat present within the project site.
Texosporium sancti-jacobi woven-spored lichen	Fed: None CA: None CNPS: 3	Found on soil, small mammal pellets, dead twigs, and on *Selaginella* sp. within openings in chaparral habitat. Found at elevations ranging from 951 to 2,165 feet.	No	No	**Presumed Absent** There is no suitable habitat present within the project site.
Tortula californica California screw moss	Fed: None CA: None CNPS: 1B.2	Found in chenopod scrub and valley and foothill grassland. Grows on sandy soil. Found at elevations ranging from 33 to 4,790 feet.	No	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.
Trichocoronis wrightii* var. *wrightii Wright's trichocoronis	Fed: None CA: None CNPS: 2B.1	Grows in alkaline soils in meadows and seeps, marshes and swamps, riparian forest, and vernal pools. Found at elevations ranging from 16 to 1,427 feet. Blooming period is from May to September.	Yes (b)	No	**Presumed Absent** There is no suitable habitat present within or adjacent to the project site.

CDFW SENSITIVE HABITATS					
Southern Coast Live Oak Riparian Forest	CDFW Sensitive Habitat	Open to locally dense evergreen riparian woodlands dominated by *Quercus agrifolia*. This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities. Bottomlands and outer floodplains along larger streams, on fine-grained, rich alluvium. Canyons and valleys of coastal southern California.	NA	No	**Absent**
Southern Cottonwood Willow Riparian Forest	CDFW Sensitive Habitat	Dominated by cottonwood (*Populus* sp.) and willow (*Salix* sp.) trees and shrubs. Considered to be an early successional stage as both species are known to germinate almost exclusively on recently deposited or exposed alluvial soils.	NA	No	**Absent**
Southern Sycamore Alder Riparian Woodland	CDFW Sensitive Habitat	Occurs below 2,000 meters in elevation, sycamore and alder often occur along seasonally-flooded banks; cottonwoods and willows are also often present. Poison oak, mugwort, elderberry and wild raspberry may be present in understory.	NA	No	**Absent**

U.S. Fish and Wildlife Service (Fed) - Federal
END- Federal Endangered
THR- Federal Threatened

California Department of Fish and Wildlife (CA) - California
END- California Endangered
THR- California Threatened
Candidate- Candidate for listing under the California Endangered Species Act
FP- California Fully Protected
SSC- Species of Special Concern
WL- Watch List

California Native Plant Society (CNPS)
California Rare Plant Rank
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2B Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 Plants About Which More Information is Needed – A Review List
4 Plants of Limited Distribution – A Watch List

CNPS Threat Ranks
0.1- Seriously threatened in California
0.2- Moderately threatened in California
0.3- Not very threatened in California

Western Riverside County MSHCP
Yes- Fully covered
No- Not covered
Yes (a)- May require surveys under MSHCP Section 6.1.2
Yes (b)- May require surveys under MSHCP Section 6.1.3
Yes (c)- May require surveys under MSHCP Section 6.3.2
Yes (d)- May require surveys under MSHCP Section 6.3.2
Yes (e)- Conditionally covered pending the achievement of species-specific conservation measures

Appendix D Regulations

Special status species are native species that have been afforded special legal or management protection because of concern for their continued existence. There are several categories of protection at both federal and state levels, depending on the magnitude of threat to continued existence and existing knowledge of population levels.

Federal Regulations

Endangered Species Act of 1973

Federally listed threatened and endangered species and their habitats are protected under provisions of the Federal Endangered Species Act (ESA). Section 9 of the ESA prohibits "take" of threatened or endangered species. "Take" under the ESA is defined as to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." The presence of any federally threatened or endangered species that are in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the ESA, the United States Fish and Wildlife Service (USFWS) may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Critical Habitat is designated for the survival and recovery of species listed as threatened or endangered under the ESA. Critical Habitat includes those areas occupied by the species, in which are found physical and biological features that are essential to the conservation of an ESA listed species and which may require special management considerations or protection. Critical Habitat may also include unoccupied habitat if it is determined that the unoccupied habitat is essential for the conservation of the species.

Whenever federal agencies authorize, fund, or carry out actions that may adversely modify or destroy Critical Habitat, they must consult with USFWS under Section 7 of the ESA. The designation of Critical Habitat does not affect private landowners, unless a project they are proposing uses federal funds, or requires federal authorization or permits (e.g., funding from the Federal Highway Administration or a permit from the U.S. Army Corps of Engineers (Corps)).

If USFWS determines that Critical Habitat will be adversely modified or destroyed from a proposed action, the USFWS will develop reasonable and prudent alternatives in cooperation with the federal institution to ensure the purpose of the proposed action can be achieved without loss of Critical Habitat. If the action is not likely to adversely modify or destroy Critical Habitat, USFWS will include a statement in its biological opinion concerning any incidental take that may be authorized and specify terms and conditions to ensure the agency is in compliance with the opinion.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S. Government Code [USC] 703) makes it unlawful to pursue, capture, kill, possess, or attempt to do the same to any migratory bird or part, nest, or egg of any such bird listed in wildlife protection treaties between the United States, Great Britain, Mexico, Japan, and the countries of the former Soviet Union, and authorizes the U.S. Secretary of the Interior to protect and regulate the taking of migratory birds. It establishes seasons and bag limits for hunted species and protects migratory birds, their occupied nests, and their eggs (16 USC 703; 50 CFR 10, 21).

The MBTA covers the taking of any nests or eggs of migratory birds, except as allowed by permit pursuant to 50 CFR, Part 21. Disturbances causing nest abandonment and/or loss of reproductive effort (i.e., killing or abandonment of eggs or young) may also be considered "take." This regulation seeks to protect migratory birds and active nests.

In 1972, the MBTA was amended to include protection for migratory birds of prey (e.g., raptors). Six families of raptors occurring in North America were included in the amendment: Accipitridae (kites, hawks, and eagles); Cathartidae (New World vultures); Falconidae (falcons and caracaras); Pandionidae (ospreys); Strigidae (typical owls); and Tytonidae (barn owls). The provisions of the 1972 amendment to the MBTA protects all species and subspecies of the families listed above. The MBTA protects over 800 species including geese, ducks, shorebirds, raptors, songbirds and many relatively common species.

State Regulations

California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) provides for the protection of the environment within the State of California by establishing State policy to prevent significant, avoidable damage to the environment through the use of alternatives or mitigation measures for projects. It applies to actions directly undertaken, financed, or permitted by State lead agencies. If a project is determined to be subject to CEQA, the lead agency will be required to conduct an Initial Study (IS); if the IS determines that the project may have significant impacts on the environment, the lead agency will subsequently be required to write an Environmental Impact Report (EIR). A finding of non-significant effects will require either a Negative Declaration or a Mitigated Negative Declaration instead of an EIR. Section 15380 of the CEQA Guidelines independently defines "endangered" and "rare" species separately from the definitions of the California Endangered Species Act (CESA). Under CEQA, "endangered" species of plants or animals are defined as those whose survival and reproduction in the wild are in immediate jeopardy, while "rare" species are defined as those who are in such low numbers that they could become endangered if their environment worsens.

California Endangered Species Act (CESA)

In addition to federal laws, the state of California implements the CESA which is enforced by CDFW. The CESA program maintains a separate listing of species beyond the FESA, although the provisions of each act are similar.

State-listed threatened and endangered species are protected under provisions of the CESA. Activities that may result in "take" of individuals (defined in CESA as; "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill") are regulated by CDFW. Habitat degradation or modification is not included in the definition of "take" under CESA. Nonetheless, CDFW has interpreted "take" to include the destruction of nesting, denning, or foraging habitat necessary to maintain a viable breeding population of protected species.

The State of California considers an endangered species as one whose prospects of survival and reproduction are in immediate jeopardy. A threatened species is considered as one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the

absence of special protection or management. A rare species is one that is considered present in such small numbers throughout its range that it may become endangered if its present environment worsens. State threatened and endangered species are fully protected against take, as defined above.

The CDFW has also produced a species of special concern list to serve as a species watch list. Species on this list are either of limited distribution or their habitats have been reduced substantially, such that a threat to their populations may be imminent. Species of special concern may receive special attention during environmental review, but they do not have formal statutory protection. At the federal level, USFWS also uses the label species of concern, as an informal term that refers to species which might be in need of concentrated conservation actions. As the Species of Concern designated by USFWS do not receive formal legal protection, the use of the term does not necessarily ensure that the species will be proposed for listing as a threatened or endangered species.

Fish and Game Code

Fish and Game Code Sections 3503, 3503.5, 3511, and 3513 are applicable to natural resource management. For example, Section 3503 of the Code makes it unlawful to destroy any birds' nest or any birds' eggs that are protected under the MBTA. Further, any birds in the orders Falconiformes or Strigiformes (Birds of Prey, such as hawks, eagles, and owls) are protected under Section 3503.5 of the Fish and Game Code which makes it unlawful to take, possess, or destroy their nest or eggs. A consultation with CDFW may be required prior to the removal of any bird of prey nest that may occur on a project site. Section 3511 of the Fish and Game Code lists fully protected bird species, where the CDFW is unable to authorize the issuance of permits or licenses to take these species. Pertinent species that are State fully protected by the State include golden eagle (*Aquila chrysaetos*) and white-tailed kite (*Elanus leucurus*). Section 3513 of the Fish and Game Code makes it unlawful to take or possess any migratory nongame bird as designated in the MBTA or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the MBTA.

Native Plant Protection Act

Sections 1900–1913 of the Fish and Game Code were developed to preserve, protect, and enhance Rare and Endangered plants in the state of California. The act requires all state agencies to use their authority to carry out programs to conserve Endangered and Rare native plants. Provisions of the Native Plant Protection Act prohibit the taking of listed plants from the wild and require notification of the CDFW at least ten days in advance of any change in land use which would adversely impact listed plants. This allows the CDFW to salvage listed plant species that would otherwise be destroyed.

California Native Plant Society Rare and Endangered Plant Species

Vascular plants listed as rare or endangered by the CNPS, but which have no designated status under FESA or CESA are defined as follows:

California Rare Plant Rank

1A- Plants Presumed Extirpated in California and either Rare or Extinct Elsewhere

1B- Plants Rare, Threatened, or Endangered in California and Elsewhere

2A- Plants Presumed Extirpated in California, But More Common Elsewhere

2B- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere

3- Plants about Which More Information is Needed - A Review List

4- Plants of Limited Distribution - A Watch List

Threat Ranks

.1- Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2- Moderately threatened in California (20-80% occurrences threatened / moderate degree and immediacy of threat)

.3- Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known).

Local Policies

Western Riverside County MSHCP

The MSHCP is a comprehensive, multi-jurisdictional HCP focusing on conservation of species and their associated habitats in western Riverside County. The goal of the MSHCP is to maintain biological and ecological diversity within a rapidly urbanizing region.

The approval of the MSHCP and execution of the Implementing Agreement (IA) by the wildlife agencies allows signatories of the IA to issue "take" authorizations for all species covered by the MSHCP, including state- and federal-listed species as well as other identified sensitive species and/or their habitats. Each city or local jurisdiction will impose a Development Mitigation Fee for projects within their jurisdiction. With payment of the mitigation fee to the County and compliance with the survey requirements of the MSHCP where required, full mitigation in compliance with the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), CESA, and FESA will be granted. The Development Mitigation Fee varies according to project size and project description. The fee for industrial development is $7,382 per acre (County Ordinance 810.2). Payment of the mitigation fee and compliance with the requirements of Section 6.0 of the MSHCP are intended to provide full mitigation under CEQA, NEPA, CESA, and FESA for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the USFWS, the CDFW, and/or any other appropriate participating regulatory agencies and as set forth in the IA for the MSHCP.

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Branch regulates activities pursuant to Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFG regulates activities under the Fish and Game Code Section 1600-1616, and the Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Federal Regulations

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) *Waters of the United States* means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted

cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) *Wetlands* means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) *Adjacent* means having a continuous surface connection

(3) *High tide line* means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line 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 gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high 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.

(4) *Ordinary high water mark* means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) *Tidal waters* means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Section 401 of the Clean Water Act

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits, and helps insure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Water Quality Control Boards (Regional Board) that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board assumed this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

State Regulations

Fish and Game Code

Fish and Game Code Sections 1600 et. seq. establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided.

Fish and Game Code Section 1602 requires any person, state, or local governmental agency or public utility to notify the CDFW before beginning any activity that will do one or more of the following:

(1) substantially obstruct or divert the natural flow of a river, stream, or lake;
(2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or
(3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Fish and Game Code Section 1602 applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. CDFW's regulatory authority extends to include riparian habitat (including wetlands) supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. Generally, the CDFW takes jurisdiction to the top of bank of the stream or to the outer limit of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place in or in the vicinity of a river, stream, lake, or their tributaries. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish or other aquatic life and watercourses having a surface or subsurface flow that support or have supported riparian vegetation. A Section 1602 Streambed Alteration Agreement would be required if impacts to identified CDFW jurisdictional areas occur.

Porter Cologne Act

The California *Porter-Cologne Water Quality Control Act* gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Act has become an important tool in the post SWANCC and Rapanos regulatory environment, with respect to the state's authority over isolated and insignificant waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any waste substance associated with human habitation, the Regional Board also interprets this to include fill discharged into water bodies.

Appendix D Delineation of State and Federal Jurisdictional Waters

HARVEST LANDING RETAIL CENTER & BUSINESS PARK PROJECT

CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Prepared For:

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Prepared By:

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909.816.1646

January 2025

HARVEST LANDING RETAIL CENTER & BUSINESS PARK PROJECT

CITY OF PERRIS, RIVERSIDE COUNTY, CALIFORNIA

DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

The undersigned certify that the statements furnished in this report and exhibits present data and information required for this biological evaluation, and the facts, statements, and information presented is a complete and accurate account of the findings and conclusions to the best of our knowledge and beliefs.

Travis J. McGill
Director

Thomas J. McGill, Ph.D.
Managing Director

January 2025

Executive Summary

ELMT Consulting (ELMT) has prepared this Delineation of State and Federal Jurisdictional report for the Harvest Landing Specific Plan project located in the City of Perris, Riverside County, California. The jurisdictional delineation documents the regulatory authority of the U.S. Army Corps of Engineers (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et. seq.* of the California Fish and Game Code.[1]

Two ephemeral drainage features (Drainage 1 and Drainage 2) were observed onsite. Drainage 1 enters the site at the northeast corner of Orange Avenue and the Interstate 215 Frontage Road from a 48-inch box culvert which originates from the west under Interstate 215 and beyond. Flows from Drainage 1 are conveyed east along the northern shoulder of Orange Avenue through a concrete channel for approximately 165 feet before the channel yields to an earthen basin. Flows are consolidated through a 36-inch culvert and conveyed further east under Indian Avenue before exiting the project site through an 18-inch culvert at the northwest corner of Barrett Avenue and Orange Avenue. From here, flows are directed further east beyond the project site. Drainage 2 enters the site from the lower western boundary of the project site, through a 60-inch box culvert which originates from underneath the Interstate 215 Frontage Road and beyond Interstate 215 to the west. The drainage runs from west to east within the project site, extending from the Interstate 215 Frontage Road at the western boundary, and terminating within the project site before reaching Indian Avenue.

The onsite ephemeral drainage features are not relatively permanent, standing, or a continuously flowing bodies of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336). However, the onsite drainage features will likely qualify as waters of the State and fall under the regulatory authority of the Regional Board and CDFW. Table ES-1 identifies the on-site jurisdictional areas including the total acreage of jurisdiction for each regulatory agency within the boundaries of the project site.

Table ES-1: Jurisdictional Areas

Jurisdictional Feature	Stream Flow	Cowardin Class	Class of Aquatic Resource	Regional Board Jurisdiction		CDFW Jurisdiction	
				Acreage	Linear Feet	Acreage	Linear Feet
Drainage 1	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.17	2,330	0.17	2,330
Drainage 2	Ephemeral	Riverine	Non-Section 10 Non-Wetland	0.06	648	0.08	648
			TOTALS	**0.23**	**2,978**	**0.25**	**2,978**

[1] The field surveys for this jurisdictional delineation were conducted on August 30, 2023 pursuant to the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008); and *Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (Corps 2017); *The MESA Field Guide: Mapping Episodic Stream Activity* (CDFW 2014); and a *Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010).

Approximately 0.23 acre (2,978 linear feet) of non-wetland waters of the State occur on-site under the jurisdictional authority of the Regional Board. Likewise, the on-site drainage features exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed totaling 0.25 acre (2,978 linear feet).

Impacts to the on-site jurisdictional areas will require a Corps Approved Jurisdictional Determination or Waiver, Regional Board CWA Section Report of Waste Discharge, and a CDFW Section 1602 Lake and Streambed Alteration Agreement prior to project implementation. Refer to Sections 1-7 for a detailed analysis of site conditions and regulatory requirements.

Table of Contents

EXHIBITS

TABLES

APPENDIX

Section 1 Introduction

This delineation has been prepared for the proposed Harvest Landing Retail Center & Business Park Project in order to document the jurisdictional authority of the U.S. Army Corps of Engineers' (Corps), the Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW) pursuant to Section 401 and 404 of the Federal Clean Water Act (CWA), the California Porter-Cologne Water Quality Control Act, and Sections 1600 *et seq.* of the California Fish and Game Code. The analysis presented in this report is supported by a field survey of site conditions conducted on August 30, 2023.

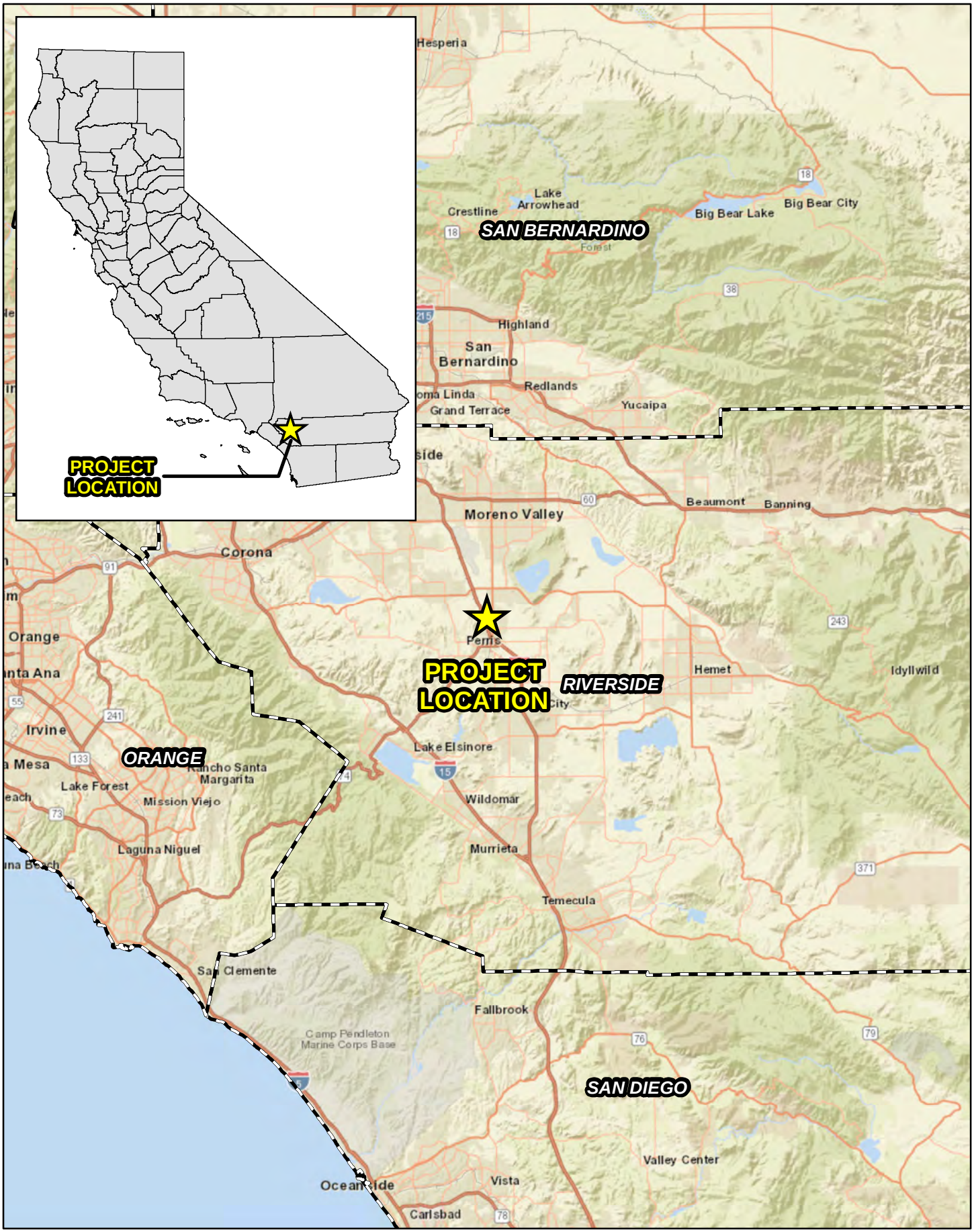
This jurisdictional delineation explains the methodology undertaken by ELMT Consulting (ELMT) to define the regulatory authority of the aforementioned regulatory agencies and documents the findings made by ELMT. This report presents our best effort at documenting the jurisdictional boundaries using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries.

1.1 PROJECT LOCATION

The project site is generally located south of State Route 60, west of State Route 79, and north and east of Interstate 215 within the City of Perris, Riverside County, California (Exhibit 1, *Regional Vicinity*). The site is depicted on the Perris quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series in Section 18 and 19 of Township 4 South, Range 3 West (Exhibit 2, *Site Vicinity*). Specifically, the project site is bounded to the west by the Interstate 215 Frontage Road, to the east by North Perris Boulevard, and lies north of West Nuevo Road and south of Placentia Avenue, straddling Orange Avenue and spanning multiple parcels (Exhibit 3, *Project Site*).

1.2 PROJECT DESCRIPTION

The project involves the proposed construction and operation of a commercial and business park specific plan over 358.28 acres which will be developed in two phases. The first phase of the project consists of construction of seven (7) industrial buildings, a commercial shopping center, a big box retail building, and a Water Quality Management Plan (WQMP) drainage and detention area. The total area of development for Phase I encompasses approximately 187.43 acres. In addition, the project would include the construction of approximately 35.09 acres of roadways and a 13.08-acre WQMP basin. Phase II will consist of future business park uses north of Orange Avenue. Phase II area totals 122.68 acres. Refer to Appendix A, *Site Plan*.



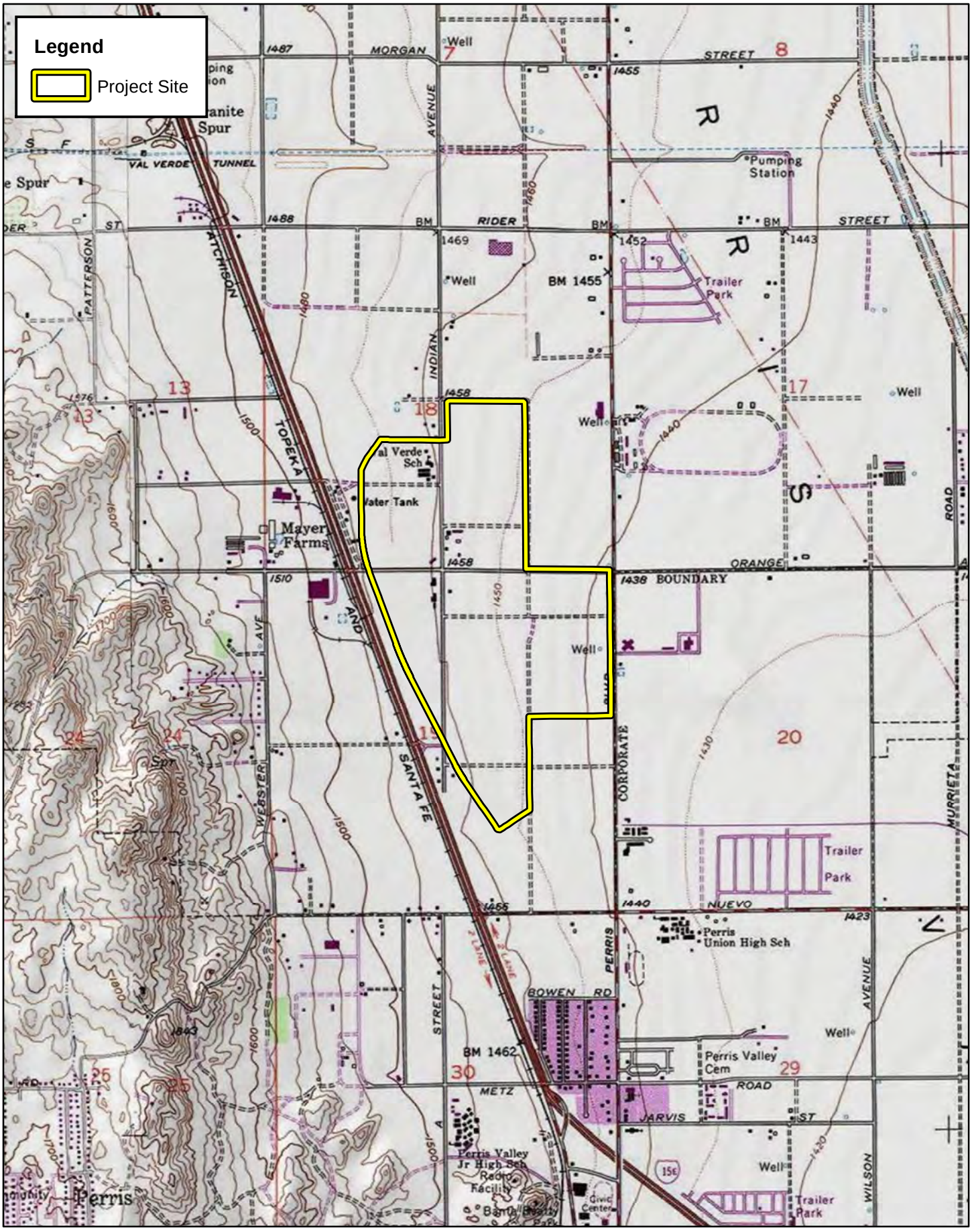
ELMT CONSULTING

Source: World Street Map, Riverside County

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Regional Vicinity

Exhibit 1



HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Site Vicinity

ELMT CONSULTING

0 625 1,250 2,500 Feet

Source: USA Topographic Map, Riverside County

Exhibit 2

HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Project Site

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 3

Section 2 Regulations

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The Corps Regulatory Division regulates activities pursuant to Section 404 of the CWA, Section 10 of the Rivers and Harbors Act, and Section 103 of the Marine Protection, Research, and Sanctuaries Act. The Regional Board regulates activities pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act and the CDFW regulates activities under Sections 1600 *et seq*. of the California Fish and Game Code.

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." The terms *waters of the United States* and *wetlands* are defined under CWA Regulations 33 Code of Federal Regulations (CFR) §328.3 (a) through (b).

2.2 REGIONAL WATER QUALITY CONTROL BOARD

Pursuant to Section 401 of the CWA, any applicant for a federal license or permit to conduct any activity which may result in any discharge to waters of the United States must provide certification from the State or Indian tribe in which the discharge originates. This certification provides for the protection of the physical, chemical, and biological integrity of waters, addresses impacts to water quality that may result from issuance of federal permits and helps ensure that federal actions will not violate water quality standards of the State or Indian tribe. In California, there are nine Regional Boards that issue or deny certification for discharges to waters of the United States and waters of the State, including wetlands, within their geographical jurisdiction. The State Water Resources Control Board (SWRCB) assumes this responsibility when a project has the potential to result in the discharge to waters within multiple Regional Boards.

Additionally, the California Porter-Cologne Water Quality Control Act gives the State very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline waters. The Porter-Cologne Water Quality Control Act has become an important tool post *Solid Waste Agency of Northern Cook County vs. United States Corps of Engineers*[2] (SWANCC) and *Rapanos v. United States*[3] (Rapanos) court cases with respect to the State's regulatory authority over isolated and insignificant waters. Generally, any applicant proposing to discharge waste into a water body must file a Report of Waste Discharge in the event that there is no Section 404/401 nexus. Although "waste" is partially defined as any

[2] Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001)
[3] Rapanos v. United States, 547 U.S. 715 (2006)

waste substance associated with human habitation, the Regional Board also interprets this to include discharge of dredged and fill material into water bodies.

Under the State Water Resources Control Board State Wetland Definition, an area is a 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.

2.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq.* of the California Fish and Game Code establishes a fee-based process to ensure that projects conducted in and around lakes, rivers, or streams do not substantially adversely impact fish and wildlife resources, or, when adverse impacts cannot be avoided, ensures that adequate mitigation and/or compensation is provided. Pursuant to Section 1602 of the California Fish and Game Code, a notification must be submitted to the CDFW for any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream or use material from a streambed. One CDFW guidance document, although not a formally adopted rule or policy, requires notification for activities taking place within rivers or streams that flow perennially or episodically and that are defined by the area in which surface water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical and biological indicators. If the project will not "substantially adversely affect an existing fish or wildlife resource," following notification to CDFW, the project may commence without an agreement with CDFW. (Fish & G. Code, § 1602(a)(4)(A)(i).)

Section 3 Methodology

The analysis presented in this report is supported by a field survey and verification of site conditions conducted August 30, 2023. ELMT conducted a field delineation to determine the jurisdictional limits of "waters of the State" and jurisdictional streambed (including potential wetlands), located within the boundaries of the project site. While in the field, jurisdictional features were recorded on an aerial base map at a scale of 1" = 50' using topographic contours and visible landmarks as guidelines. Data points were obtained with a Garmin Map62 Global Positioning System to record and identify specific widths for ordinary high water mark (OHWM) indicators and the locations of photographs, soil pits, and other pertinent jurisdictional features, if present. This data was then transferred as a .shp file and added to the project's jurisdictional exhibits. The jurisdictional exhibits were prepared using ESRI ArcInfo Version 10 software.

3.1 WATERS OF THE UNITED STATES

In the absence of adjacent wetlands, the limits of the Corps jurisdiction in non-tidal waters extend to the OHWM, which is defined as " . . . *that 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 soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.*"[4] Indicators of an OHWM are defined in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Corps 2008). An OHWM can be determined by the observation of a natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; presence of litter and debris; wracking; vegetation matted down, bent, or absent; sediment sorting; leaf litter disturbed or washed away; scour; deposition; multiple observed flow events; bed and banks; water staining; and/or change in plant community. The Regional Board shares the Corps' jurisdictional methodology, unless SWANCC or Rapanos conditions are present. In the latter case, the Regional Board considers such drainage features to be jurisdictional waters of the State.

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

[4] CWA regulations 33 CFR §328.3(e).

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;
(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line 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 gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high 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.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

Pursuant to the Corps Wetland Delineation Manual (Corps 1987), the identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soils, and wetland hydrology. In order to qualify as a wetland, a feature must exhibit at least minimal characteristics within each of these three parameters. It should also be noted that both the Regional Board and CDFW follow the methods utilized by the Corps to identify wetlands. For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008).

3.2 WATERS OF THE STATE

3.2.1 REGIONAL WATER QUALITY CONTROL BOARD

The California *Porter-Cologne Water Quality Control Act* gives the Regional Board very broad authority to regulate waters of the State, which are defined as any surface water or groundwater, including saline

waters. The Regional Board shares the Corps' methodology for delineating the limits of jurisdiction based on the identification of OHWM indicators and utilizing the three parameter approach for wetlands.

3.2.2 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Sections 1600 *et seq*. of the California Fish and Game Code applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State. Generally, the CDFW's jurisdictional limit is not defined by a specific flow event, nor by the presence of OHWM indicators or the path of surface water as this path might vary seasonally. Instead, CDFW's jurisdictional limit is based on the topography or elevation of land that confines surface water to a definite course when the surface water rises to its highest point. Further, the CDFW's jurisdictional limit extends to include any habitat (e.g. riparian), including wetlands and vernal pools, supported by a river, stream, or lake regardless of the presence or absence of hydric soils and saturated soil conditions. For this project location, CDFW jurisdictional limits were delineated using the methods outlined in the *MESA Field Guide* (Brady, III and Vyverberg 2013) and *A Review of Stream Processes and Forms in Dryland Watersheds* (Vyverberg 2010), which were developed to provide guidance on the methods utilized to describe and delineate episodic streams within the inland deserts region of southern California.

Section 4 Literature Review

ELMT conducted a thorough review of relevant literature and materials to preliminarily identify areas that may fall under the jurisdiction of the regulatory agencies. A summary of materials utilized during ELMT's literature review is provided below and in Appendix B. In addition, refer to Section 8 for a complete list of references used throughout the course of this delineation.

4.1 WATERSHED REVIEW

The project site is located within the Perris hydrologic area in the Lower San Jacinto River Watershed, which is a subset of the larger San Jacinto River Watershed (HUS 18070202). The Perris Valley Storm Drain flows approximately 1.15 miles to the east of the project site. This feature consolidates surface flows from Rancho las Perris and the surrounding areas to the north and east of the site and conveys them southwest to the San Jacinto River. The San Jacinto River conveys flows through Canyon Lake (Railroad Canyon Reservoir) and terminates at Lake Elsinore.

The Lower San Jacinto Watershed encompasses approximately 765 square miles in western Riverside County. This watershed is bounded by several mountain ranges, including the Badlands Mountain Range to the north, San Jacinto Mountains to the east, the Santa Ana Mountains to the west, and the Santa Margarita Mountains to the south. Currently, this watershed is primarily undeveloped. With natural open spaces at the headwaters areas and mostly agricultural and urban development in the middle and downstream areas.

The San Jacinto River Watershed consists of a single major drainage, the San Jacinto River, which is comprised of several smaller tributaries. The San Jacinto River begins in the San Jacinto Mountains and veers northwest to follow the lower elevations of the San Jacinto Valley. The mainstem begins at the confluence of South Fork San Jacinto River and North Fork San Jacinto River. The most notable south-flowing tributary is the Perris Valley Storm Drain and Salt Creek flows westward from the San Jacinto Mountains to meet the San Jacinto River at Canyon Lake. The San Jacinto River is approximately 42 miles long, supports the majority of existing agricultural land in the San Jacinto Valley, and discharges into Canyon Lake, the overflow from which discharges into Lake Elsinore, which qualifies as a traditional navigable water (TNW). Discharges from Lake Elsinore drain into Walker Canyon, which is a tributary to Temescal Wash, and Temescal Wash is a tributary to the Santa Ana River, which ultimately conveys flows to the Pacific Ocean, a TNW.

4.2 LOCAL CLIMATE

The City of Perris features a somewhat cooler version of a Mediterranean climate, or semi-arid climate, with warm, sunny, dry summers and cool, rainy, mild winters. Relative to other areas in Southern California, winters are colder with chilly to cold morning temperatures with frost common. Climatological data obtained for the City of Riverside indicates the annual precipitation averages 11.11 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and April, with hardly any occurring between the months of May and September. The wettest months are January and February, with monthly average totals precipitation of 2.24 and 3.29 inches, respectively, and the driest

months are June and July, both with monthly average total precipitation of 0.04 inch. The average maximum and minimum temperatures are 86 and 46 degrees Fahrenheit (°F), respectively, with July and August (monthly average high 100°F) being the hottest months and December and January (monthly average lows 34 and 35°F) being the coldest. The temperature during the site visit was in the high-80s°F with clear skies and calm winds.

4.3 USGS TOPOGRAPHIC QUADRANGLE

The USGS 7.5 Minute Series Topographic Quadrangle maps show geological formations and their characteristics, describing the physical setting of an area through contour lines and major surface features including lakes, rivers, streams, buildings, landmarks, and other factors that may fall under an agency's jurisdiction. Additionally, the maps depict topography through color and contour lines, which are helpful in determining elevations and latitude and longitude within a project site.

The proposed project site is depicted on the Perris quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within Sections 18 and 19 of Township 4 South, Range 3 West. The project site ranges in elevation from 1,435 to 1,480 feet above mean sea level. On-site topography is relatively flat with limited topographic relief present in the form of water detention basins, flood control channels, and spoils piles.

4.4 AERIAL PHOTOGRAPH

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1985-2023) of the project site as available from Google Earth Pro Imaging. Aerial photographs can be useful during the delineation process, as they often indicate the presence of drainage features and riverine habitat within the boundaries of the project site, if any.

The project site occurs in an area formerly dominated by agricultural land uses that has been becoming urbanized in recent decades. Present land uses in the vicinity include tract neighborhoods, anchor retail centers, and assorted commercial, industrial, and institutional developments, with scattered undeveloped parcels supporting former agricultural land. The site is bounded to the north by undeveloped, vacant land; to the northeast, east, and south by commercial and industrial developments with tract neighborhoods beyond; and to the west by Interstate 215.

The project site primarily supports undeveloped land with some developed areas. The entirety of the site has been subject to several decades of anthropogenic disturbances associated with historic agricultural land uses, grading activities, flood control infrastructure, weed abatement, and other on-site and surrounding development. Historic aerials show these activities have been ongoing since at least 1959.

4.5 SOILS

On-site and adjoining soils were researched prior to the field visits using the U.S. Department of Agriculture National Resources Conservation Service and Soil Survey for Western Riverside Area, California. Soil surveys furnish soil maps and interpretations originally needed in providing technical assistance to farmers and ranchers; in guiding other decisions about soil selection, use and management; and in planning, research

and disseminating the results of the research. In addition, soil surveys are now heavily utilized in order to obtain soil information with respect to potential wetland environments and jurisdictional areas (i.e., soil characteristics, drainage, and color). Based on the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service U.S. Department of Agriculture (NRCS) Web Soil Survey, the project site is underlain entirely by Domino silt loam (saline-alkali), Exeter sandy loam (deep, 0 to 2 percent slopes), Exeter sandy loam (deep, 2 to 8 percent slopes, eroded), Exeter very fine sandy loam (deep, 0 to 5 percent slopes), Greenfield sandy loam (0 to 2 percent slopes), Greenfield sandy loam (2 to 8 percent slopes, eroded), and Pachappa fine sandy loam (0 to 2 percent slopes). Refer to Exhibit 4, *Soils*. Soils on-site have been mechanically disturbed and heavily compacted from historic land uses (i.e., agricultural activities, grading activities, and weed abatement). (Exhibit 4, *Soils*).

4.6 HYDRIC SOILS LIST OF CALIFORNIA

ELMT reviewed the USDA NRCS Hydric Soils List of California in an effort to verify whether on-site soils are considered to be hydric[5]. It should be noted that lists of hydric soils along with soil survey maps provide off-site ancillary tools to assist in wetland determinations, but they are not a substitute for field investigations. The presence of hydric soils is initially investigated by comparing the mapped soil series for the site to the County list of hydric soils. According to the hydric soils list, Domino silt loam (saline-alkali) is listed as hydric in Western Riverside County.

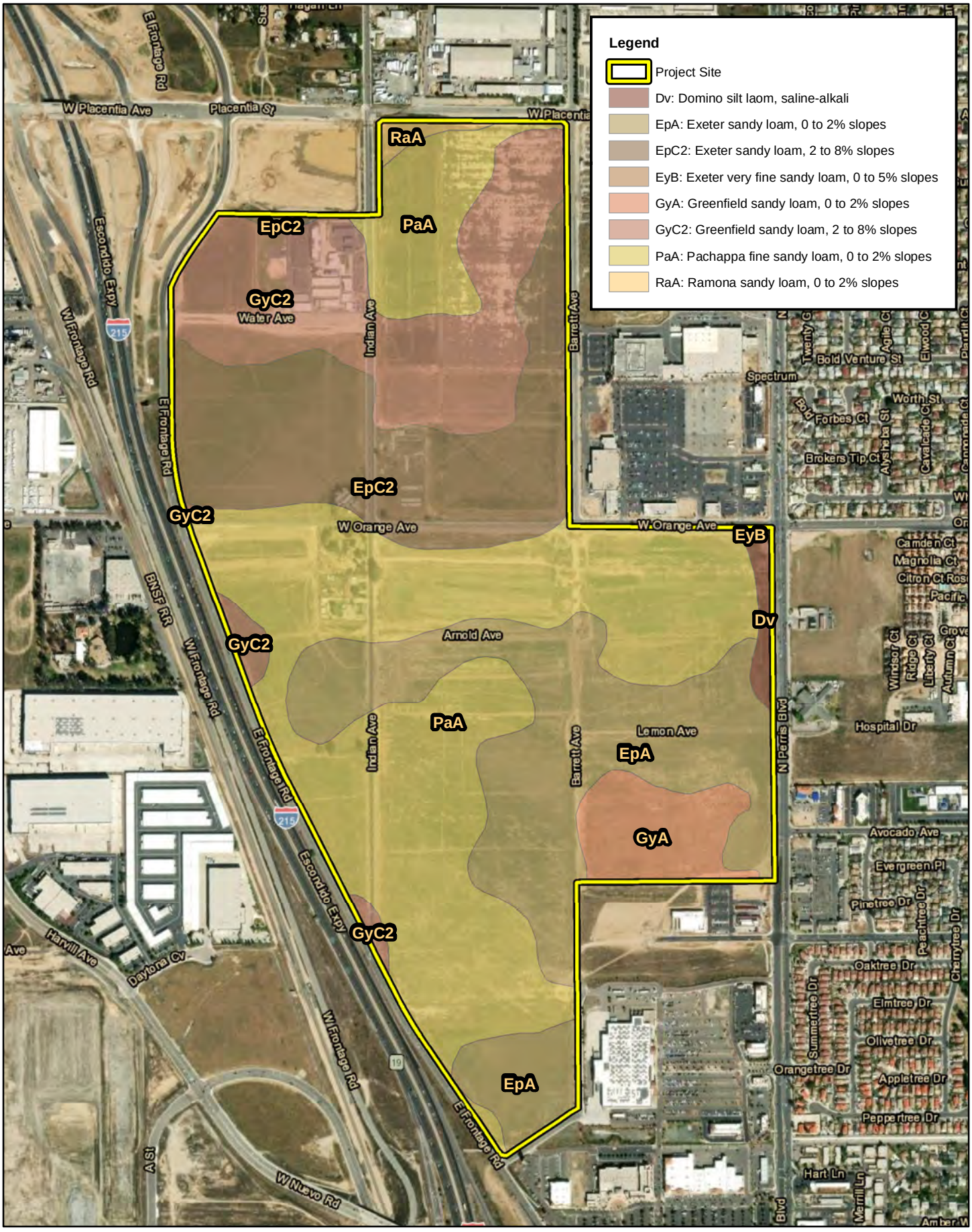
4.7 NATIONAL WETLANDS INVENTORY

The U.S. Fish and Wildlife Service National Wetlands Inventory and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented within or immediately surrounding the project site. Based on this review, no riverine features were observed within or adjacent to the boundaries of the site. Refer to Appendix B, *Documentation*.

4.8 FLOOD ZONE

The Federal Emergency Management Act (FEMA) website was searched for flood data for the project site. Based on Flood Insurance Rate Map Nos. 06065C1430H, the project site is located within Zone X – areas determined to be within the 1.0% annual chance floodplain; Zone X – areas determined to be outside the 0.2% annual chance floodplain, minimal risk of flooding.

[5] A hydric soil is a soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part.



HARVEST LANDING RETAIL CENTER AND BUSINESS PARK

Soils

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Soil Survey Geographic Database, Riverside County

Exhibit 4

Section 5 Site Conditions

ELMT biologists Jacob H. Lloyd Davies, Rachael A. Lyons, and Megan E. Peukert conducted a field delineation on August 30, 2023, to verify existing site conditions and document the extent of potential jurisdictional areas within the boundaries of the project site. ELMT field staff encountered no limitations during the field delineation. Refer to Appendix B for representative photographs taken throughout the project site.

5.1 JURISDICTIONAL FEATURES

5.1.1 DRAINAGE FEATURES

ELMT carefully assessed the site for depressions, inundation, presence of hydrophytic vegetation, staining, cracked soil, ponding, and indicators of active surface flow and corresponding physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris. Suspected jurisdictional areas were checked for the presence of definable channels, soils, and hydrology. Two (2) unnamed drainages were documented within the project site during the time of the investigation.

Drainage 1

Drainage 1 extends from the western boundary of the project site, at the northeast corner of the intersection of Orange Avenue and the Interstate 215 Frontage Road to the northwest corner of the intersection of Orange Avenue and Barrett Avenue, parallelling Orange Avenue. The drainage runs from west to east through the middle of the site, terminating before reaching the northwest corner of the intersection of Barrett Avenue and Orange Avenue. Drainage 1 receives flows from 48-inch paved box culvert leading from the Interstate 215 Frontage Road and beyond Interstate 215 to the west. Heading east, the paved banks of Drainage 1 give way into an entirely earthen roadside ditch which runs parallel to the northern shoulder of Orange Avenue. The flows of Drainage 1 are conveyed through a 36-inch paved culvert leading under Indian Avenue within the project site, and continue further west within the project site, eventually exiting the site through an 18-inch culvert which leads beneath Barrett Avenue on the eastern boundary and beyond further east. Drainage 1 then flows into the underground storm drain system that likely conveys flows into the Perris Valley Storm Channel southeast of the site.

No surface water was present within Drainage 1 at the time of the investigation. Evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM ranged from approximately 2-4 feet in width throughout the length of the drainage within site boundaries.

In-channel vegetation within site boundaries consisted primarily of non-native plant species such as golden crownbeard (*Verbesina encelioides*), Jimson weed (*Dartura stramonium*), Russian thistle, Mediterranean mustard, horseweed (*Ergeron canadensis*), tree of heaven (*Ailanthus altissima*), and oleander (*Nerium* sp.); as well as common species California buckwheat (*Erigonium fasciculatum*) and common sunflower (*Helianthus annus*).

No surface water was present at the time of the investigation. In-channel vegetation within site boundaries consisted primarily of non-native plant species such as golden crownbeard (*Verbesina encelioides*), Jimson weed (*Dartura stramonium*), Russian thistle, Mediterranean mustard, horseweed (*Ergeron canadensis*), tree of heaven (*Ailanthus altissima*), and oleander (*Nerium* sp.); as well as common species California buckwheat (*Erigonium fasciculatum*) and common sunflower (*Helianthus annus*).

Drainage 2

Drainage 2 enters the site from the lower western boundary of the project site, through a 60-inch box culvert which originates from underneath the Interstate 215 Frontage Road and beyond Interstate 215 to the west. The drainage runs from west to east within the project site, extending from the Interstate 215 Frontage Road at the western boundary, and terminating within the project site before reaching Indian Avenue. Drainage 2 is concrete lined paved at its entrance to the project site and is reinforced by a stepped spillway before transitioning into an entirely earthen channel. Drainage 2 diminishes as its flows are conveyed east, eventually infiltrating entirely within the boundaries of the project site.

No surface water was present within Drainage 2 at the time of the investigation. Evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM ranged from approximately 1-6 feet in width throughout the length of the drainage within site boundaries.

In-channel vegetation within site boundaries consisted of common plant species such as slender oat (*Avena barbata*), horseweed, California buckwheat, common sunflower, and Mediterranean mustard.

5.1.2 WETLAND FEATURES

In order to qualify as a wetland, a feature must exhibit all three wetland parameters (i.e., vegetation, soils, and hydrology) described in the Corps' Arid West Regional Supplement. No riparian vegetation or wetland obligate plant species were observed within any of the four drainages described above. All four drainages only convey flows during and following storm events and do not hold water for long enough to create anaerobic conditions or form hydric soils. Therefore, these drainages do not meet wetland requirements.

ELMT CONSULTING

0 250 500 1,000 Feet

Source: ESRI Aerial Imagery, Riverside County

HARVEST LANDING BUSINESS PARK

Jurisdictional Areas

Exhibit 5

Section 6 Findings

This report presents the extent of jurisdictional features using the most up-to-date regulations, written policy, and guidance from the regulatory agencies. Please refer to the following sections for a summary of jurisdictional areas within the project site.

6.1 U.S. ARMY CORPS OF ENGINEERS DETERMINATION

6.1.1 WATERS OF THE UNITED STATES DETERMINATION

The onsite ephemeral drainage features are not relatively permanent, standing, or continuously flowing bodies of water and, therefore, will not qualify as waters of the United States under the regulatory authority of the Corps (*Sackett v. EPA* (2022) 143 S. Ct. 1322, 1336).

6.1.2 WETLAND DETERMINATION

An area must exhibit all three wetland parameters described in the Corps' Arid West Regional Supplement to be considered a jurisdictional wetland. Based on the results of the field delineation, it was determined that no areas within the project site met all three wetland parameters. Therefore, no jurisdictional wetland features exist within the project site.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

Drainage 1 and Drainage 2 exhibit characteristics consistent with the Regional Board's methodology and would likely be considered jurisdictional waters of the State. Approximately 0.23 acre (2,978 linear feet) of non-wetland waters of the State occur on-site.

Table 1: Regional Board Jurisdictional Waters

Jurisdictional Feature	Regional Board Jurisdiction
	On-Site Jurisdiction Acreage (Linear Feet)
Drainage 1	0.17 (2,330)
Drainage 2	0.06 (648)
TOTAL	**0.23 (2,978)**

6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Drainage 1 and Drainage 2 exhibit characteristics consistent with CDFW's methodology and would be considered CDFW streambed. Approximately 0.25 acre (2,978 linear feet) of CDFW jurisdiction was mapped within boundaries of the project site.

Table 2: CDFW Jurisdictional Streambed

Jurisdictional Feature	CDFW Jurisdiction
	On-Site Jurisdiction Acreage (Linear Feet)
Drainage 1	0.17 (2,330)
Drainage 2	0.08 (648)
TOTAL	**0.25 (2,978)**

Section 7 Regulatory Approval Process

The following is a summary of the various permits, certifications, and agreements that may be necessary prior to construction and/or alteration within jurisdictional areas. Ultimately the regulatory agencies make the final determination of jurisdictional boundaries and permitting requirements.

7.1 U.S. ARMY CORPS OF ENGINEERS

The Corps regulates discharges of dredged or fill materials into waters of the United States and wetlands pursuant to Section 404 of the CWA. No Corps jurisdictional areas were identified within the project site and a CWA Section 404 permit would not be required for the proposed project.

It is recommended that the project applicant coordinate with the Corps to confirm existing site conditions and document the absence of Corps jurisdiction within the boundaries of the project site. The Corps may require an Approved Jurisdictional Determination (AJD) to be processed to confirm the absence of waters of the United States; however, they may waive the need for a AJD to be processed.

7.2 REGIONAL WATER QUALITY CONTROL BOARD

The Regional Board regulates discharges to surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act. Any impacts to on-site jurisdictional areas will require a Report of Waste Discharge prior to project implementation. Therefore, it will be necessary for the applicant to acquire a Report of Waste Discharge Certification prior to impacts occurring within Regional Board jurisdictional areas. The Regional Board also requires that California Environmental Quality Act (CEQA) compliance be obtained prior to obtaining the 401 Certification. A Regional Board Application fee is required with the application package and is calculated based on the acreage and linear feet of jurisdictional impacts.

7.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Pursuant to Section 1602 of the California Fish and Game Code, the CDFW regulates any activity that will divert or obstruct the natural flow or alter the bed, channel, or bank (which may include associated biological resources) of a river or stream. A Section 1602 Streambed Alteration Agreement from the CDFW will be required for impacts to the onsite drainage features prior to project implementation. The notification is based on the term and cost of a project. The Section 1602 Streambed Alteration Agreement will not be issued until all fees are paid to the CDFW. CDFW also requires that CEQA compliance be obtained prior to issuance of the Streambed Alteration Agreement.

7.4 RECOMMENDATIONS

It is recommended that this delineation be forwarded to the regulatory agencies for their review and concurrence. The concurrence/receipt would solidify findings noted within this report. Mitigation for impacts to jurisdictional resources will be finalized during the permitting process.

Section 8 References

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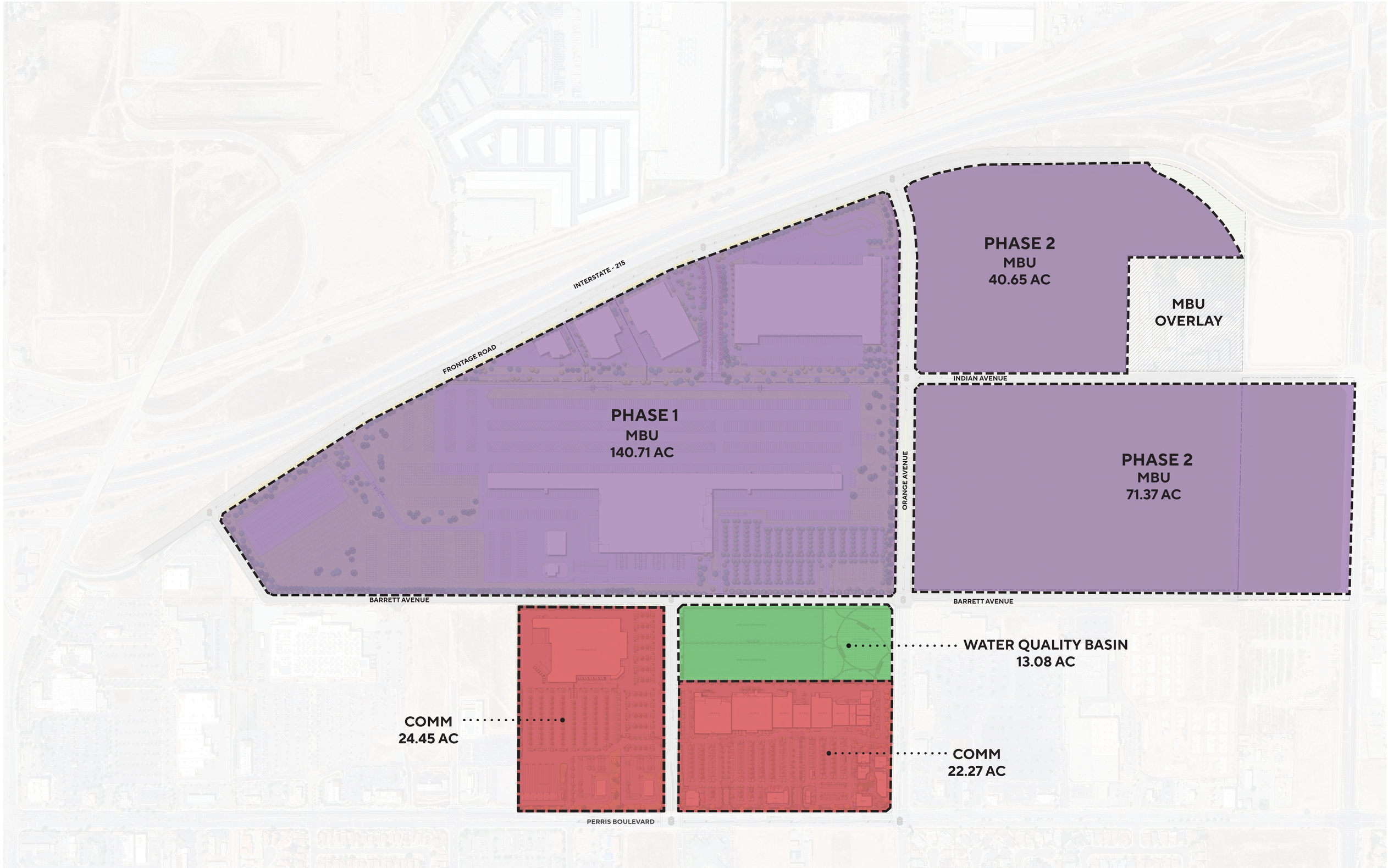
Appendix A Site Plan



HARVEST LANDING RETAIL CENTER & BUSINESS PARK

PERRIS, CA

0 100' 200' 300' 400' 500' 600'

LAND USE PLAN

Architecture. Design. Relationships.

A1

Scale 1" = 200'
Job No. 2020-392
Date 2024-04-18

Appendix B Documentation

U.S. Fish and Wildlife Service
National Wetlands Inventory

Harvest Landing Business Park

January 23, 2024

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Wetlands Inventory (NWI)
This page was produced by the NWI mapper

Appendix C Site Photographs

Photograph 1: From the top of the culvert under I-215, looking east at the beginning of Drainage 1 on the western boundary of the project site.

Photograph 2: From the northern banks of Drainage 1, looking southwest at a paved box culvert and stepped spillway that convey flows east through the project site.

Photograph 3: From inside Drainage 1, looking east through existing vegetation, at the edge of the concrete spillway.

Photograph 4: From the middle of Drainage 1, looking west.

Photograph 5: View of the terminus of Drainage 1 west of Indian Avenue, where water begins to sheet flow. rea of the project site, looking further east.

Photograph 6: Looking at the culvert that conveys flows from the west along Orange Avenue.

Photograph 7: From the culvert, looking east at the paved portion of the road-side ditch that conveys flows to the east.

Photograph 8: Looking east at the roadside ditch that conveys flows along Orange Avenue, just east of the paved portion of the ditch.

Photograph 9: From Indian Avenue looking west at the road side ditch along Orange Avenue.

Photograph 10: Looking west at the road side ditch along Orange Avenue between Barnett Avenue and Indian Avenue.

Photograph 11: Looking east toward a culvert which conveys flows under Barrett Avenue to the east of the project site.

Appendix D Methodology

WATERS OF THE UNITED STATES

Section 404 of the Clean Water Act

In accordance with the Revised Definition of "Waters of the United States"; Conforming (September 8, 2023), "waters of the United Sates" are defined as follows:

(a) ***Waters of the United States*** means:

(1) Waters which are:
(i) Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
(ii) The territorial seas; or
(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:
(i) Waters identified in paragraph (a)(1) of this section; or
(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section

(b) The following are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;
(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (*e.g.*, gullies, small washes) characterized by low volume, infrequent, or short duration flow.

(c) In this section, the following definitions apply:

(1) ***Wetlands*** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

(2) ***Adjacent*** means having a continuous surface connection

(3) ***High tide line*** means the line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line 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 gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high 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.

(4) ***Ordinary high water mark*** means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

(5) ***Tidal waters*** means those waters that rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by hydrologic, wind, or other effects.

WETLANDS

For this project location, Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0* (Corps 2008). This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters. The Regional Supplement presents wetland indicators, delineation guidance, and other information that is specific to the Arid West Region. In the field, vegetation, soils, and evidence of hydrology are examined using the methodology listed below and documented on Corps wetland data sheets, when applicable. It should be noted that both the Regional Board and the CDFW jurisdictional wetlands encompass those of the Corps.

Vegetation

Nearly 5,000 plant types in the United States may occur in wetlands. These plants, often referred to as hydrophytic vegetation, are listed in regional publications by the U.S. Fish and Wildlife Service (USFWS). In general, hydrophytic vegetation is present when the plant community is dominated by species that can tolerate prolonged inundation or soil saturation during growing season. Hydrophytic vegetation decisions are based on the assemblage of plant species growing on a site, rather than the presence or absence of particular indicator species. Vegetation strata are sampled separately when evaluating indicators of hydrophytic vegetation. A stratum for sampling purposes is defined as having 5 percent or more total plant cover. The following vegetation strata are recommended for use across the Arid West:

- *Tree Stratum:* Consists of woody plants 3 inches or more in diameter at breast height (DBH), regardless of height;
- *Sapling/shrub stratum:* Consists of woody plants less than 3 inches DBH, regardless of height;
- *Herb stratum:* Consists of all herbaceous (non-woody) plants, including herbaceous vines, regardless of size; and,
- *Woody vines:* Consists of all woody vines, regardless of size.

The following indicator is applied per the test method below.[1] Hydrophytic vegetation is present if any of the indicators are satisfied.

<u>Indicator 1 – Dominance Test</u>

[1] Although the Dominance Test is utilized in the majority of wetland delineations, other indicator tests may be employed. If one indicator of hydric soil and one primary or two secondary indicators of wetland hydrology are present, then the Prevalence Test (Indicator 2) may be performed. If the plant community satisfies the Prevalence Test, then the vegetation is hydric. If the Prevalence Test fails, then the Morphological Adaptation Test may be performed, where the delineator analyzes the vegetation for potential morphological features.

Cover of vegetation is estimated and is ranked according to their dominance. Species that contribute to a cumulative total of 50% of the total dominant coverage, plus any species that comprise at least 20% (also known as the "50/20 rule") of the total dominant coverage, are recorded on a wetland data sheet. Wetland indicator status in California (Region 0) is assigned to each species using the *National Wetland Plant List, version 2.4.0* (Corps 2012). If greater than 50% of the dominant species from all strata were Obligate, Facultative-wetland, or Facultative species, the criteria for wetland vegetation is considered to be met. Plant indicator status categories are described below:

- *Obligate Wetland (OBL):* Plants that almost always occur in wetlands;
- *Facultative Wetland (FACW):* Plants that usually occur in wetlands, but may occur in non-wetlands;
- *Facultative (FAC):* Plants that occur in wetlands and non-wetlands;
- *Facultative Upland (FACU):* Plants that usually occur in non-wetlands, but may occur in wetlands; and,
- *Obligate Upland (UPL):* Plants that almost never occur in wetlands.

Hydrology

Wetland hydrology indicators are presented in four (4) groups, which include:

Group A – Observation of Surface Water or Saturated Soils

Group A is based on the direct observation of surface water or groundwater during the site visit.

Group B – Evidence of Recent Inundation

Group B consists of evidence that the site is subject to flooding or ponding, although it may not be inundated currently. These indicators include water marks, drift deposits, sediment deposits, and similar features.

Group C – Evidence of Recent Soil Saturation

Group C consists of indirect evidence that the soil was saturated recently. Some of these indicators, such as oxidized rhizospheres surrounding living roots and the presence of reduced iron or sulfur in the soil profile, indicate that the soil has been saturated for an extended period.

Group D – Evidence from Other Site Conditions or Data

Group D consists of vegetation and soil features that indicate contemporary rather than historical wet conditions, and include shallow aquitard and the FAC-neutral test.

If wetland vegetation criteria is met, the presence of wetland hydrology is evaluated at each transect by recording the extent of observed surface flows, depth of inundation, depth to saturated soils, and depth to free water in the soil test pits. The lateral extent of the hydrology indicators are used as a guide for locating soil pits for evaluation of hydric soils and jurisdictional areas. In portions of the stream where the flow is divided by multiple channels with intermediate sand bars, the entire area between the channels is considered within the OHWM and the wetland hydrology indicator is considered met for the entire area.

Soils

A hydric soil is a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper 16-20 inches.[2] The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils. It should also be noted that the limits of wetland hydrology indicators are used as a guide for locating soil pits. If any hydric soil features are located, progressive pits are dug moving laterally away from the active channel until hydric features are no longer present within the top 20 inches of the soil profile.

Once in the field, soil characteristics are verified by digging soil pits along each transect to an excavation depth of 20 inches; in areas of high sediment deposition, soil pit depth may be increased. Soil pit locations are usually placed within the drainage invert or within adjoining vegetation. At each soil pit, the soil texture and color are recorded by comparison with standard plates within a *Munsell Soil Chart* (2009). Munsell Soil Charts aid in designating color labels to soils, based by degrees of three simple variables – hue, value, and chroma. Any indicators of hydric soils, such as organic accumulation, iron reduction, translocation, and accumulation, and sulfate reduction, are also recorded.

Hydric soil indicators are present in three groups, which include:

<u>All Soils</u>

"All soils" refers to soils with any United States Department of Agriculture (USDA) soil texture. Hydric soil indicators within this group include histosol, histic epipedon, black histic, hydrogen sulfide, stratified layers, 1 cm muck, depleted below dark surface, and thick dark surface.

<u>Sandy Soils</u>

"Sandy soils" refers to soil materials with a USDA soil texture of loamy fine sand and coarser. Hydric soil indicators within this group include sandy mucky mineral, sandy gleyed matrix, sandy redox, and stripped matrix.

[2] According to the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (Corps 2008), growing season dates are determined through on-site observations of the following indicators of biological activity in a given year: (1) above-ground growth and development of vascular plants, and/or (2) soil temperature.

Loamy and Clayey Soils

"Loamy and clayey soils" refers to soil materials with a USDA soil texture of loamy very fine sand and finer. Hydric soil indicators within this group include loamy mucky mineral, loamy gleyed matrix, depleted matrix, redox dark surface, depleted dark surface, redox depressions, and vernal pools.

SWANCC WATERS

The term "isolated waters" is generally applied to waters/wetlands that are not connected by surface water to a river, lake, ocean, or other body of water. In the presence of isolated conditions, the Regional Board and CDFW take jurisdiction through the application of the OHWM/streambed and/or the 3 parameter wetland methodology utilized by the Corps.