Determination of Biologically Equivalent or Superior Preservation Report

The Terraces

Permittee 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. The proposed project would construct 900 apartment units on a 37.8-acre site (30 units/acre) located north of Murrieta Hot Springs Road, west of Interstate 15, east of the existing Sparkman Court corridor and south of Vista Murrieta Road in the City of Murrieta, California

Three (3) unnamed drainage features (Drainages 1, 2and 3) were observed within the boundaries of the project site. Drainage 1 generally flows in an east to west direction on the southeast corner of the project site, and only conveys large surface flows in direct response to precipitation and urban runoff. Within Drainage 1, a small wetland was observed at the easternmost portion of the drainage that is subject to a continual water source from urban runoff. Drainage 2 is an ephemeral feature that generally flows in an east to west direction in the middle of the northern portion of the project site and only conveys flows in direct response to precipitation. Drainage 3 flows in an east to west direction across Monroe Avenue via a low water crossing within the offsite improvement area. These drainage features eventually discharge into Murrieta Creek, which exhibits a surface hydrologic connection to the Santa Margarita River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water).

A combined 0.87-acre (1,415 linear feet) of riparian/riverine habitat was mapped within the proposed project site. The riparian/riverine habitat is synonymous with the jurisdiction of the California Department of Fish and Wildlife (CDFW) jurisdictional streambed.

Based on the proposed project footprint, approximately 0.3 acre (933 linear feet) of CDFW jurisdictional streambed/riparian habitat will be impacted from project implementation. Refer to Table 3 for a summary of on-site jurisdictional areas, and Exhibit 6, *Jurisdictional Impacts*, for an illustration of on-site CDFW jurisdictional areas and anticipated impacts. Further, approximately 0.57 acre within Drainage 1 will be avoided. A deed restriction, conservation easement, or other appropriate mechanism will be put in place for the long-term conservation of the 0.57 acre within Drainage 1.

The proposed project design will result in permanent impacts of 0.3-acre (933 linear feet) of riparian/riverine habitat within Drainages 1, 2, and 3. The applicant proposes to mitigate offsite through the purchase of mitigation credits through the Riverpark Mitigation Bank and/or other approved bank, or combination thereof at an agreed upon ratio with the regulatory agencies (likely at a 3:1 ratio). The applicant will be responsible for the purchase of mitigation credits consisting of at least 1:1 mitigation of re-establishment credits, and any combination of 2:1 mitigation of rehabilitation/re-establishment credits to compensate for impacts to waters of the United States, waters of the State and CDFW jurisdictional streambed/riparian vegetation.

The above actions would result in a net increase in the function and ecological value of riparian/riverine habitat within the region by preserving/enhancing high quality habitat along the San Jacinto River within the Riverpark Mitigation Bank.

2 INTRODUCTION

2.1 Project Area

The project site is generally located east of Interstate 15, west of Interstate 215, and south of State Route 74 in the City of Murrieta, Riverside County, California. The site is depicted on the Murrieta quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within an unsectioned portion of Township 7 South, Range 3 West . Specifically, the project site is bordered by Murrieta Hot Springs Road to the south, Vista Murrieta to the north, Interstate 15 to the west, and Sparkman Court. Additionally, offsite road improvements will occur along Monroe Avenue from Los Alamos Road to the project site. Refer to Exhibits 1-3 in Appendix A.

2.2 Project Description

The proposed Project would construct 899 apartment units on a 38.7 gross (31.39 net) acre Site located north of Murrieta Hot Springs Road, west of Interstate 15, east of the existing Sparkman Court corridor and south of Vista Murrieta Road in the City of Murrieta, California (APNs 910-031-001, -002, -003, -004, -005, -007, -008, -009, -010, -015, -017, -018, -021, -022, -023, -024, -025 and -026; 949-190-012, -013, -014, -015, -016 -017, -018 and -019). The Site is bordered to the south by Murrieta Hot Springs Road and undeveloped land, to the west by the Interstate 15 corridor, to the north by Vista Murrieta Road and single-family residences, and to the east by Sparkman Court and office research park uses.

The Project consists of 11, four-story apartment buildings and 12 two-story carriage unit buildings in two phases. Phase I consists of buildings B1 and B6-B11 containing 634 one-, two- and three-bedroom units ranging in size from 743 square feet to 1,292 square feet. A total of 24 two-story, one-bedroom/one-bathroom (1,052 square feet) carriage units will also be constructed in Phase I. A total of 1,135 parking spaces (312 garage spaces, 216 tandem spaces, 22 parallel and 585 open stall) will be provided. A leasing center, clubhouse, swimming pool and various walking paths and green space areas will be provided throughout the Project. A dog park and other outdoor open space area will be provided at the northeast corner of the Site. Phase 2 consists of 241 one- and two-bedroom units in Buildings B2-B5 and 379 parking spaces (86 garage, 86 tandem, 14 parallel and 193 open stalls). In total, the Project will provide 359 one-bedroom/one-bathroom units, 482 two-bedroom/two-bathroom units and 58 three-bedroom/two-bathroom units.

The main Project entrance will be on Monroe Avenue north of Murrieta Hot Springs Road. Secondary access will be provided from Vista Murrieta Road along the northern Site boundary. A 28-foot wide, paved and gated emergency vehicle access will be constructed along the southern Site boundary between Sparkman Court and the Interstate 15 northbound on-ramp. The Project will be required to construct a full width segment of Monroe Avenue in the Sparkman Court corridor from Walsh Center Drive southeast to the existing Eastern Municipal Water District (EMWD) wastewater lift station and then half width improvements will be required from that point south. These improvements will terminate just north of the intersection with Murrieta Hot Springs Road. The Project will be required to pay a fair share of costs to install a new traffic signal at the intersection of Sparkman Court (Monroe Avenue) and Murrieta Hot

Springs Road. Further, half width frontage improvements (i.e., paving the road and adding curb/gutter/sidewalk) along Vista Murrieta Road between old Monroe Avenue northwest of the Site to the new Monroe Avenue alignment at the northeast corner of the Site will be required.

Eastern Municipal Water District (EMWD) will provide water and sewer service to the Site. The Project will extend existing sewer lines to the Site from an existing mainline located north of Sparkman Court/Monroe Avenue lift station. A new 18" water main will be installed in the old Monroe Avenue alignment from the northwest corner of the Site at the Vista Murrieta Road intersection north to Los Alamos Road. Construction will utilize an open trench on either side of an existing at-grade jurisdictional crossing. Directional drilling will be used to install the waterline under the jurisdictional feature to avoid directly impacting this resource. Wet and dry utility improvements will occur while road improvements are being installed to minimize the need for road closure and overall construction-related impacts to neighboring residents.

Offsite runoff will be treated with modular wetland systems. Onsite Project runoff will be treated with a combination of modular wetland systems and biofiltration basins. Both off- and on-site stormwater will be mitigated for hydromodification with underground basins. The total area dedicated to an on-site stormwater management system will be approximately 0.38 acres.

Project construction is scheduled to begin in late 2023 with Phase I completed in early 2026. Build out of Phase II is expected by 2028.

2.3 Existing Conditions

The project site is located in an area that consist of a mosaic of residential, commercial, institutional, and transportation related developments. At present, the site is bordered by rural residential developments to the north, multifamily homes and rural residential developments to the east, Murrieta Hot Springs Road and undeveloped land to the south, and Interstate 15 and commercial developments to the west. There are existing residential foundations on the northern boundary of the project site, undeveloped land that has been routinely disked/mowed and subject to off-road vehicle activities, and large stands of eucalyptus trees and ornamental trees onsite. There is an earthen storm drain on the southeast corner of the site that receives flows via three storm drain outlets that all flow into a concrete headwall that was constructed to convey storm flows from the site and under Murrieta Hot Springs Road.

Vegetation

The site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances. The project site has been subjected to routine weed abatement activities, off-road vehicle use, and additional disturbance associated with surrounding development. The project site supports three (3) plant communities, buckwheat scrub, southern willow scrub/eucalyptus stand, and eucalyptus stand. In addition the project site supports three (3) land cover types that would be classified as ornamental, disturbed and developed.

Jurisdictional Resources

Drainage 1

Drainage 1 is an unnamed drainage, that has been mapped as a blueline stream that flows in an east to west direction on the southeast corner of the project site for approximately 570 linear feet. Drainage 1 receives flows via three storm drain outlets on the southeast corner of the site and flows through an earthen channel to a culvert with a concrete headwall in the middle of the southern boundary of the site. This drainage was constructed to convey storm flows from the surrounding area and under Murrieta Hot Springs Road. The upper reach of Drainage 1 (easternmost end) can be considered an intermittent stream since it is subject to a continual water source from urban runoff/nuisance flows, and ponds in the eastern end of the drainage. The remainder to the drainage is ephemeral an only receives flows during large storm events. Approximately 1-3 inches of water was observed ponding on the eastern end of Drainage 1 during the survey. Evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM ranged from approximately 4-50 feet in width throughout the length of the drainage. Drainage 1 supports a southern willow scrub/eucalyptus stand plant community. This plant community is heavily mixed with native riparian plant species (mainly willows) and eucalyptus trees. Common plant species within this plant community include arroyo willow (*Salix lasiolepis*, FACW), black willow (*Salix gooddingii*, FACW), golden leaf willow (*Salix lucida*, NI), eucalyptus (*Eucalyptus sp*, FAC). fig (*Ficus carica*, FACU), Mexican fan palm (*Washingtonia robusta*, FACW), salt cedar (*Tamarix ramosissima*, NI), cottonwood (*Populus fremontii*, NI). This plant community is heavily degraded by the invasion of eucalyptus.

Drainage 2

Drainage 2 is an unnamed ephemeral drainage that flows in an east to west direction across the middle of the northern half of the project site for approximately 795 linear feet. Drainage 2 begins in the middle of the northern half of the project site in the topographic low spot on the property at the bottom of the rolling hills and only conveys water flows immediately following and during storm events. Drainage 2 exists the project site on the western boundary via a 36-inch culvert and eventually flows into another offsite culvert under Interstate 15. No surface water was present within Drainage 2 during the site visit; however, evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM ranged from approximately 1-4 feet in width throughout the length of the drainage. The in-channel vegetation consisted of mostly non-native plant species including wild oat (*Avena fatua*, UPL), rigpgut (*Bromus diandrus*, NI), and short-podded mustard (*Hirschfeldia incana*, NI).

Drainage 3

Drainage 3 is an unnamed drainage, that has been mapped as a blueline stream east and west of Monroe Avenue. Drainage 3 flows in an east to west direction across Monroe Avenue within the offsite street improvement area via a low water crossing for approximately 50 linear feet before flowing offsite and into a concrete lined trapezoidal channel west of the project site at Interstate 15. Monroe Avenue, at the low water crossing, is paved with asphalt. Drainage 3 is ephemeral an only receives flows during large storm events. No surface water was present within Drainage 3 during the site visit; however, evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM was

approximately 26 linear feet. The in-channel vegetation, outside of the existing paved road, consisted of eucalyptus trees. Common plant species within this plant community include eucalyptus, cottonwood. This plant community is heavily degraded by the invasion of eucalyptus.

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, 2021) prepared under a separate cover, three (3) unnamed drainage features were observed on the project site. These features will be considered riparian/riverine habitat under Section 6.1.2 of the MSHCP. The extent of the riparian/riverine habitat on the project site is synonymous with the jurisdiction of CDFW. The riparian habitat associated with Drainage 1 and 2 are heavily degraded and supports a high density of eucalyptus trees that does not provide suitable habitat for any of the riparian obligate species listed under the MSHCP that may occur within the regional vicinity, including as the State- and federally-listed as endangered least Bell's Vireo (*Vireo bellii pusillus* [LBVI]), southwestern willow flycatcher (*Empidonax traillii extimus*), or yellow-billed cuckoo (*Coccyzus americanus*). As a result, no focused surveys were conducted or recommended, and no impacts to this species will occur from project implementation.

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 listed and special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and 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 plant or wildlife species associated with vernal pools can occur on the project site. None of these soils have been documented within the project site.

A review of recent and historic aerial photographs (1985-2021) of the project site did not provide visual evidence of an astatic or vernal pool conditions within the project site. No ponding was observed, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regimes needed for vernal pools. 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.

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 drainages collectively perform 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. In their current states, these drainages can be considered to have limited resource value to local and migratory wildlife since they are generally disturbed on the project site, and both receive flows from

and convey immediate flows from developed areas. Both drainage features are considered to be riparian/riverine habitat under the MSHCP.

The proposed project will result in permanent impacts to approximately 0.3 acre (933 linear feet) of riparian/riverine habitat within Drainages 1, 2, and 3.

Table 1: Impacts to Riparian/Riverine Habitat

Jurisdictional Feature	Riparian/Riverine Habitat	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	0.78 (570)	0.21 (88)
Drainage 2	0.06 (795)	0.06 (795)
Drainage 3	0.03 (50)	0.03 (50)
TOTAL	**0.87 (1,415)**	**0.3 (933)**

3.3 Mitigation and Equivalency

3.3.1 Direct Effects

Mitigation for the loss of 0.3 acre (933 linear feet) of riparian/riverine habitat within Drainage 1, 2, and 3 will be mitigated offsite through the purchase of mitigation credits through the Riverpark Mitigation Bank or other approved bank at a ratio of 3:1; the Bank has 613 acres of rehabilitation and re-establishment credits. The applicant will be responsible for the purchase of 0.9 acre of mitigation credits. The applicant will be responsible for the purchase of mitigation credits consisting of at least 1:1 mitigation of re-establishment credits (0.3 acre), and any combination of 2:1 mitigation of rehabilitation/re-establishment credits (0.6 acre) to compensate for impacts to waters of the United States, waters of the State and CDFW jurisdictional streambed/riparian vegetation. Additionally, a deed restriction, conservation easement, or other appropriate mechanism will be put in place for the long-term conservation of the 0.57 acre within Drainage 1 that will be avoided.

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, are 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 County 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.

[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.

- 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:

- 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.

Post-Construction Human Disturbances

The project shall incorporate special edge treatments designed to minimize edge effects by providing a safe transition between developed areas and conserved riparian/riverine habitat, and which would be compatible with project operation and the protection and sustainability of conserved areas. Special edge treatments shall include native landscaping on manufactured slopes within the conserved areas and fencing/signage

near the top of slope adjacent to conserved areas to prevent unauthorized public access, vandalism, illegal dumping, and other adverse human disturbances.

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 onsite. The habitat assessment was conducted on August 18, 2021. 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 onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, 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. Results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the Project Site. Accordingly, if suitable habitat is documented onsite 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 by walking across all suitable habitats mapped within the project site on August 18, 2021. 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. Potentially suitable burrows/sites, including rock piles and non-natural substrates, were thoroughly examined for signs of presence.

4.1.2 Results/Impacts

Despite a systematic search of the project site, no burrowing owls or sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Portions of the project site are vegetated with a variety of low-growing plant species that allow for minimal line-of-sight observation favored by burrowing owls. However, no small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat (>4 inches in diameter) were observed within the boundaries of the site. Additionally, the site supports and is bordered by tall trees and power poles that provide perching opportunities for large raptors (i.e., red-tailed hawk) that can prey on burrowing owls. Being that no appropriate burrows or burrowing owl habitat was found, Part B-Focused Burrowing Owl surveys are not required.

4.1.3 Mitigation and Equivalency

4.1.3.1 Direct Effects

Based on the information provided above, and as a result of current and historic onsite disturbances, it was determined that burrowing owls do not have potential to occur onsite, and no focused surveys are recommended. Being that no appropriate burrows or burrowing owl habitat was found, Part B-Focused Burrowing Owl surveys were not required. Therefore, the project is consistent with Section 6.3.2. However, out of an abundance of caution a pre-construction burrowing owl clearance survey shall be conducted prior to ground disturbing activities to ensure no direct effects to burrowing owl occur form project implementation.

Pre-Construction Burrowing Owl Survey

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

4.1.3.2 Indirect Effects

With implementation of a pre-construction burrowing owl clearance survey, no indirect effects to burrowing owl are expected to occur.

5 REFERENCES

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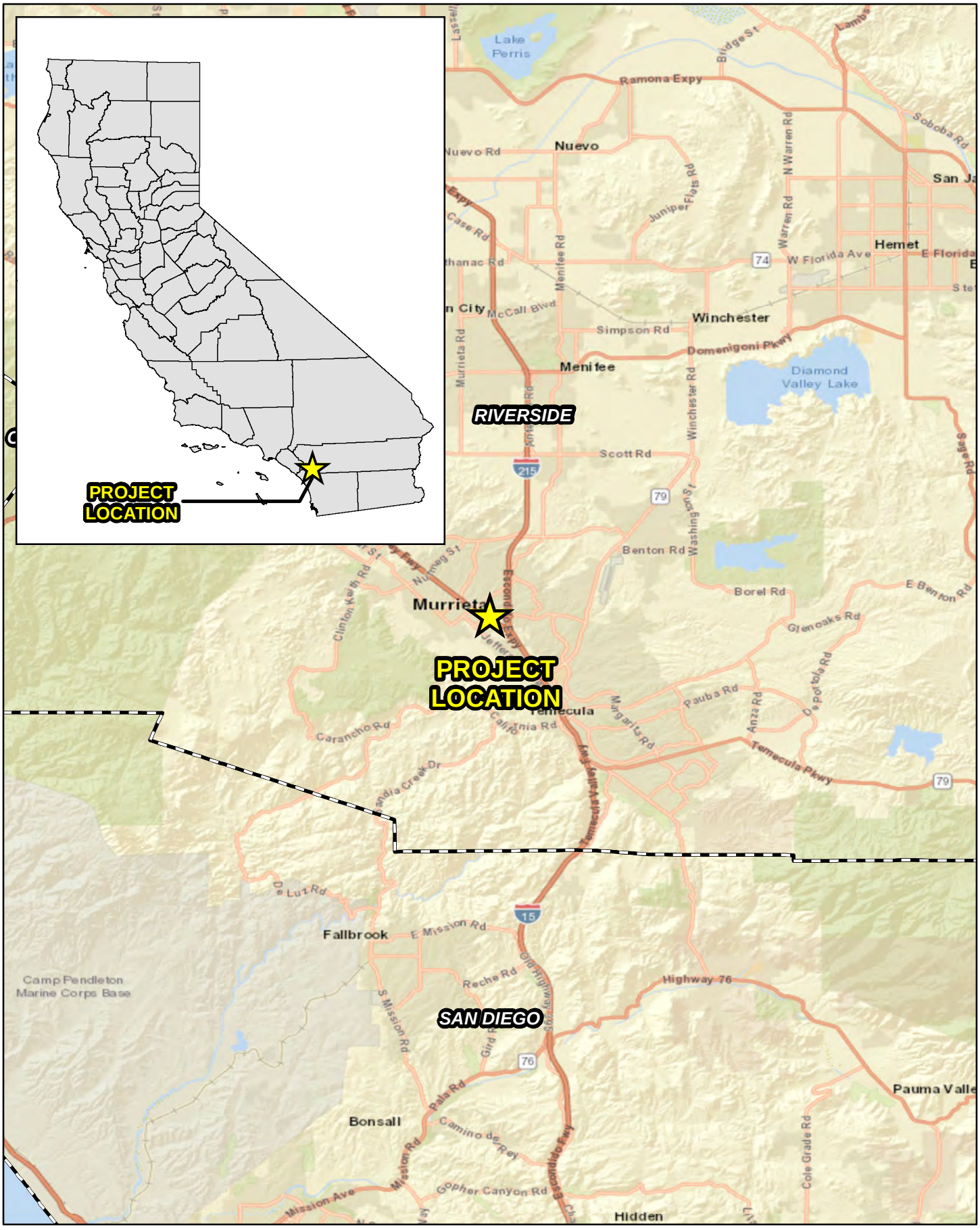
Appendix A Project Exhibits



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

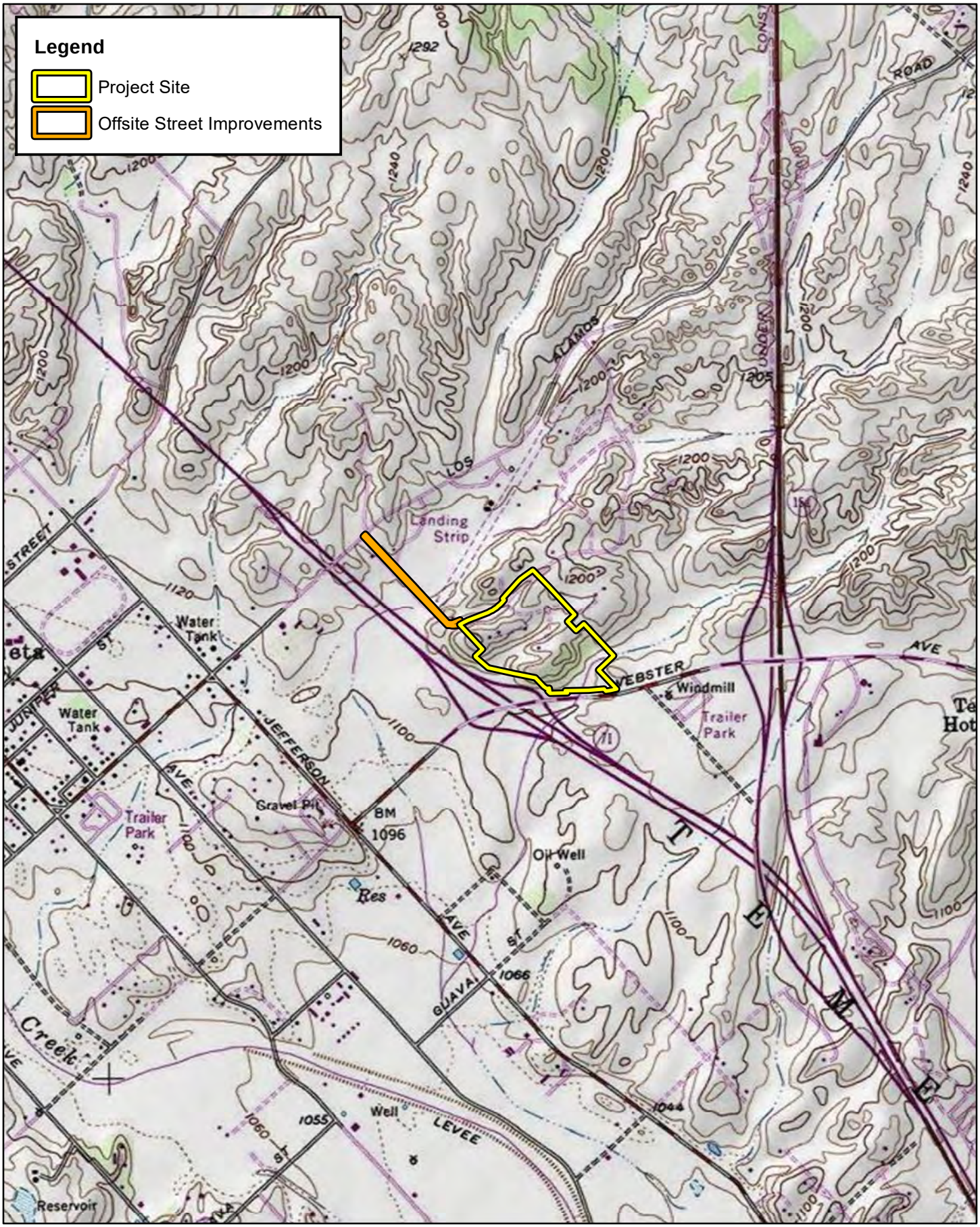
Regional Vicinity

ELMT CONSULTING

0 1.25 2.5 5 Miles

Source: World Street Map, Riverside County

Exhibit 1



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

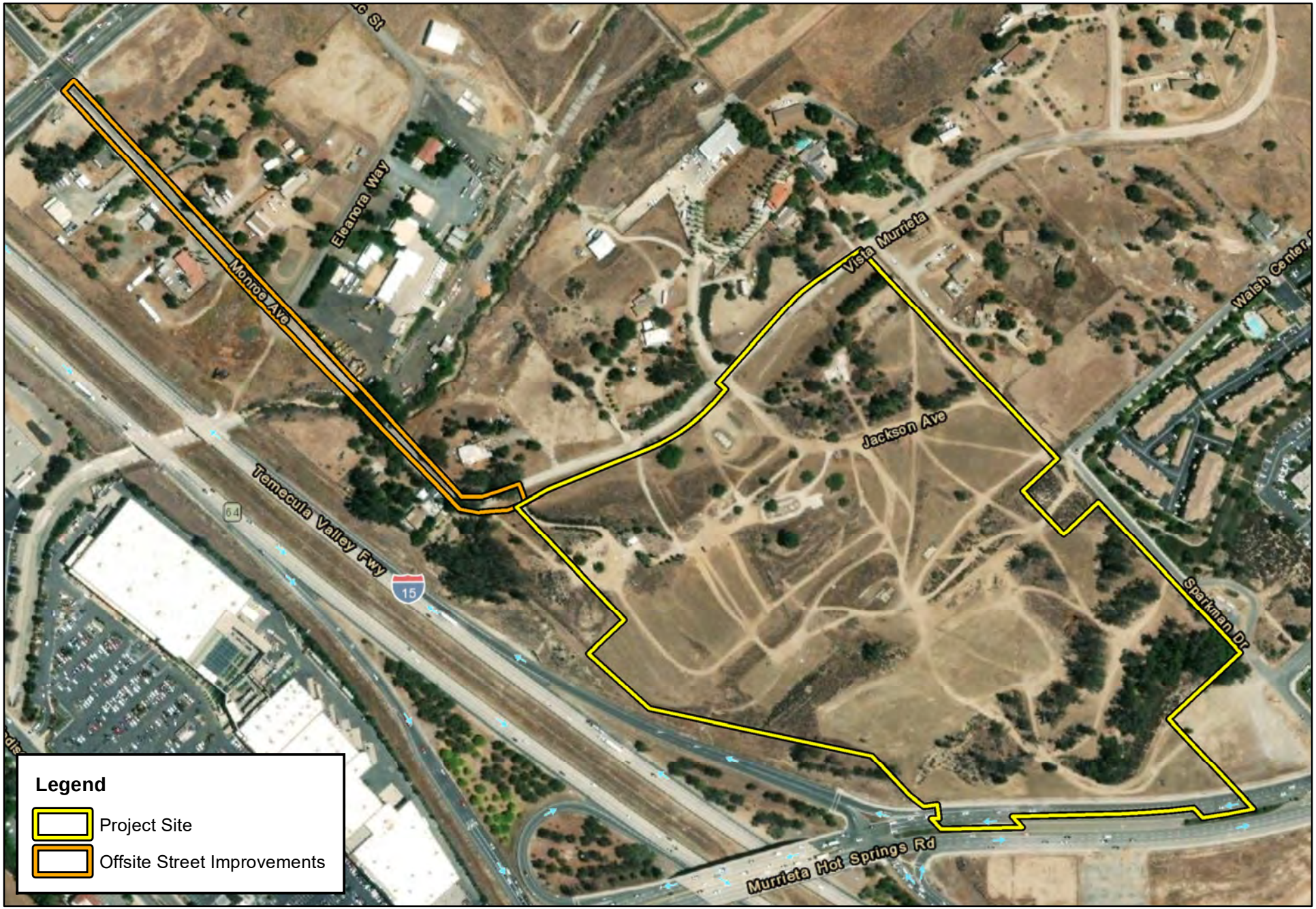
ELMT CONSULTING

0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

Site Vicinity

Exhibit 2



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Project Site

Exhibit 3

THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

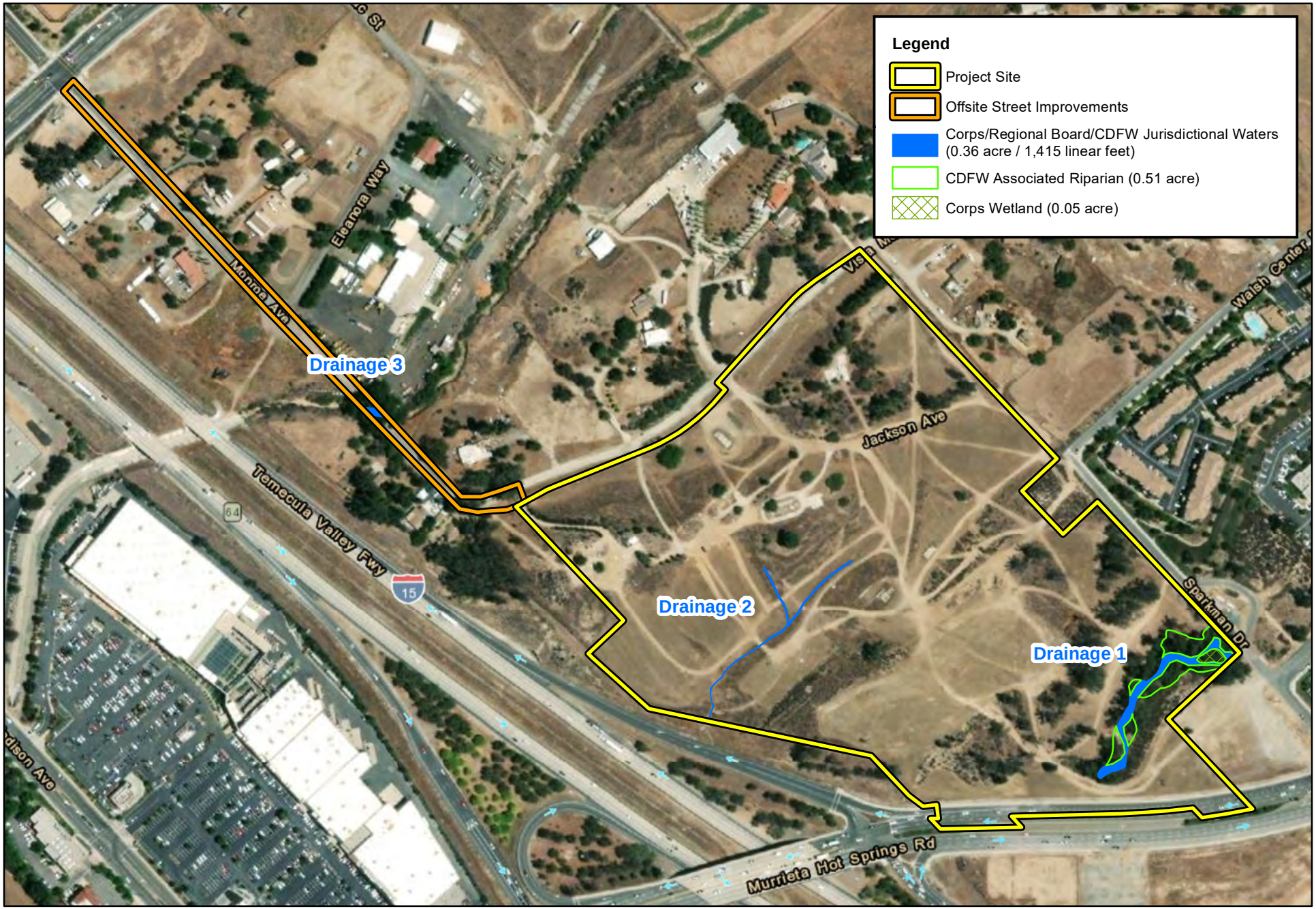
Soils

ELMT CONSULTING

0 125 250 500 Feet

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

Exhibit 4



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

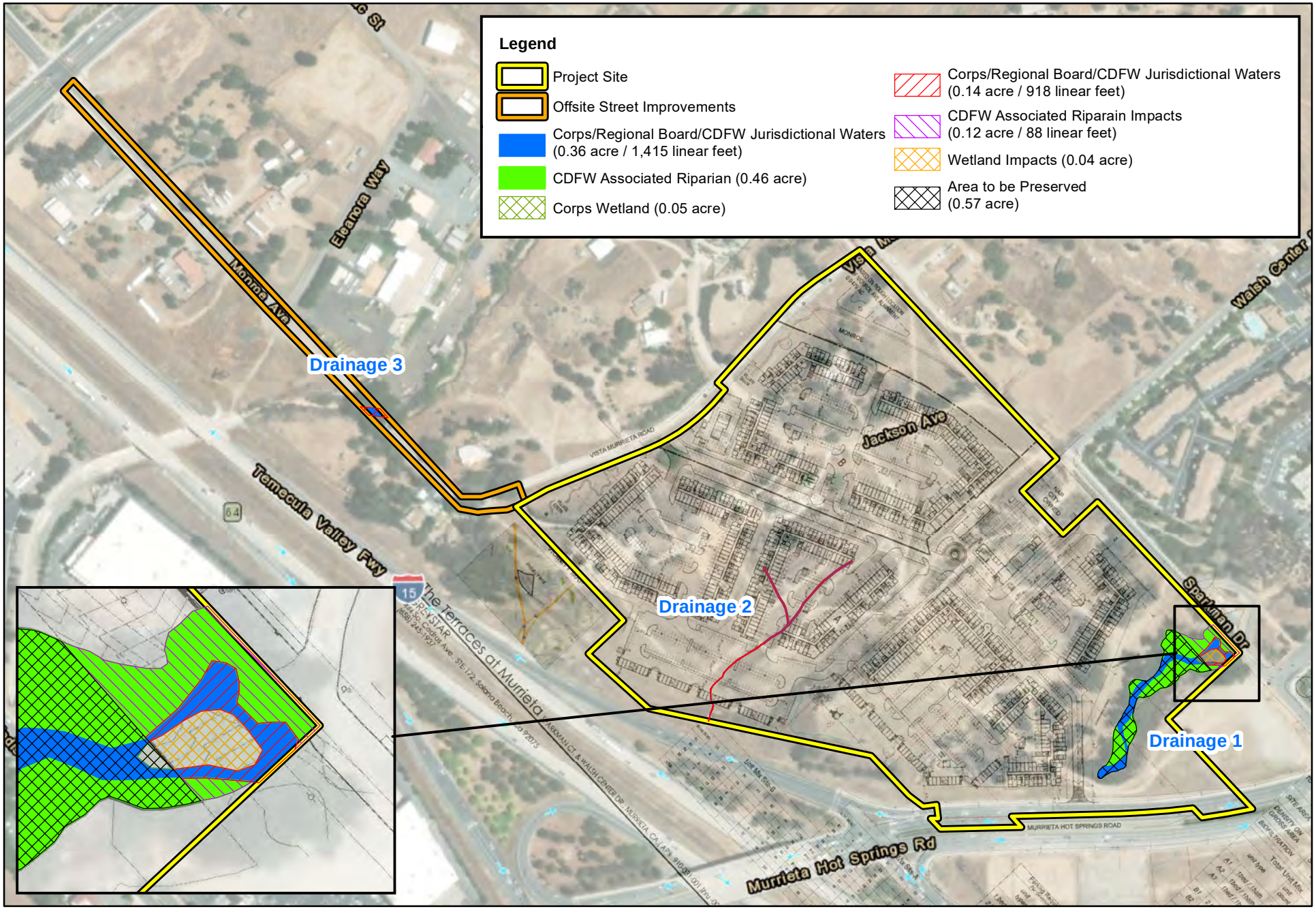
Jurisdictional Areas

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 5



ELMT CONSULTING

0 125 250 500 Feet

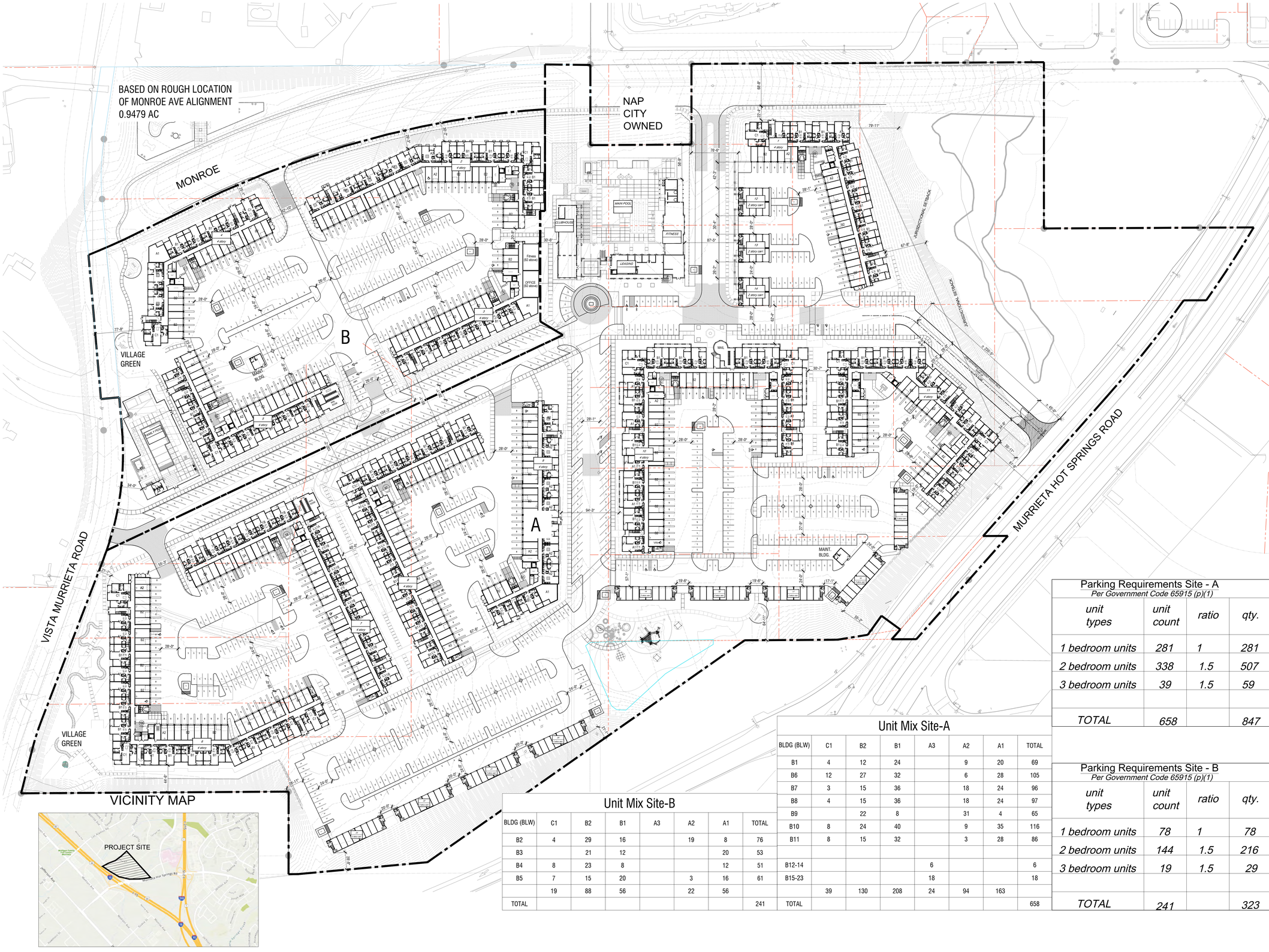
Source: ESRI Aerial Imagery, Riverside County

THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Jurisdictional Impacts

Exhibit 6

Appendix B Site Plan



VICINITY MAP

Project Description		
SITE NET AREA	31.39 acres	
SITE ADDRESS		
TOTAL UNITS	Site A = 658 units	
	Site B = 241 units	
	= 899 units	
SITE AREA	Site A = 24.55 acres	
	Site B = 7.22 acres	
DENSITY ON GROSS AREA	Site A= 26.8 DU/AC	
	Site B= 33.3 DU/AC	
BIOFILTRATION	0.38 acres	

Total Unit Mix			
unit type		unit count	unit area
A1	1bed / 1bath	219	743 s.f.
A2	1bed / 1bath	116	803s.f.
A3	1bed / 1bath	24	1052 s.f.
	total	359	39%
B1	2 bed / 2 bath	264	1,054 s.f.
B2	2 bed / 2 bath	218	1,057 s.f.
	total	482	54%
C1	3 bed / 2 bath	58	1,292 s.f.
	total	58	7%
TOTAL		899 UNITS	
		864,731 NRSF	
		961.9 AVG. NRSF	

Parking Requirements Site - A Per Government Code 65915 (p)(1)			
unit types	unit count	ratio	qty.
1 bedroom units	281	1	281
2 bedroom units	338	1.5	507
3 bedroom units	39	1.5	59
TOTAL	658		847

Parking Provided Site - A		
parking type	parking count	%
total garage	312	27%
tandem	216	19%
parallel	22	2%
open stall	585	52%
TOTAL	1,135	1.72 spaces/du

Unit Mix Site-A							
BLDG (BLW)	C1	B2	B1	A3	A2	A1	TOTAL
B1	4	12	24		9	20	69
B6	12	27	32		6	28	105
B7	3	15	36		18	24	96
B8	4	15	36		18	24	97
B9		22	8		31	4	65
B10	8	24	40		9	35	116
B11	8	15	32		3	28	86
B12-14				6			6
B15-23				18			18
	39	130	208	24	94	163	
TOTAL							658

Unit Mix Site-B							
BLDG (BLW)	C1	B2	B1	A3	A2	A1	TOTAL
B2	4	29	16		19	8	76
B3		21	12			20	53
B4	8	23	8			12	51
B5	7	15	20		3	16	61
	19	88	56		22	56	
TOTAL							241

Parking Requirements Site - B Per Government Code 65915 (p)(1)			
unit types	unit count	ratio	qty.
1 bedroom units	78	1	78
2 bedroom units	144	1.5	216
3 bedroom units	19	1.5	29
TOTAL	241		323

Parking Provided Site - B		
parking type	parking count	%
garage	86	23%
tandem	86	23%
parallel	14	4%
open stall	193	50%
TOTAL	379	1.57 spaces/du

NORTH

A1.4

PRELIMINARY PROJECT MASTER PLAN

SCALE : 1"=60'

DATE: 04-28-22

JOB NO.: 2021-230

The Terraces at Murrieta

SPARKMAN CT. & WALSH CENTER DR., MURRIETA, CA.(AP# 910-031-001 thru -005; 007; thru -010; -015; -017; -018; 910-031-021 thru -026; 910-190-012 thru -019)

GREYSTAR
444 So. Cedros Ave., STE-172, Solana Beach, Ca 92075
(858) 245-1937

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860

Architecture.
Design.
Relationships.

Appendix C Habitat Assessment and Western Riverside County MSHCP Consistency Analysis

THE TERRACES

CITY OF MURRIETA RIVERSIDE COUNTY, CALIFORNIA

MURRIETA USGS 7.5-MINUTE TOPOGRAPHIC QUADRANGLE
UNSECTIONED PORTION OF TOWNSHIP 7 SOUTH, RANGE 3 WEST
APNS: 910-031-001, -002, -003, -004, -005, -007, -008, -009, -010, -015, -017, -018, -021, -022, -023, -024, -025 AND -026; 949-190-012, -013, -014, -015, -016 -017, -018 AND -019

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

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Prepared For:

Birdseye Planning Group
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Contact: *Ryan Birdseye*

Prepared By:

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

THE TERRACES

CITY OF MURRIETA, 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

August 2022

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 Terraces Project located in the City of Murrieta, Riverside County, California. The field investigation was conducted by biologist Travis J. McGill on August 18, 2021 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. Follow up site visits were conducted on June 14 and July 15, 2022. Special attention was given to the suitability of the on-site habitat to support burrowing owl (*Athene cunicularia*) and several other 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 on or within the general vicinity of the project site.

Additionally, the Western Riverside County Regional Conservation Authority (RCA) MSHCP Information Map was queried to determine if the MSHCP identifies any potential survey requirements for the project. 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 Southwest Area Plan of the MSHCP, but is not located within any Criteria Cells or MSHCP Conservation Areas. Further, it was determined that only the western parcel of the project site is located within the MSHCP designated survey area for burrowing owl.

1.1 PROJECT LOCATION

The project site is generally located east of Interstate 15, west of Interstate 215, and south of State Route 74 in the City of Murrieta, Riverside County, California (refer to Exhibit 1, *Regional Vicinity*). The site is depicted on the Murrieta quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within an unsectioned portion of Township 7 South, Range 3 West (refer to Exhibit 2, *Site Vicinity*). Specifically, the project site is bordered by Murrieta Hot Springs Road to the south, Vista Murrieta to the north, Interstate 15 to the west, and Sparkman Court (Exhibit 3, *Project Site*). Additionally, offsite road improvements will occur along Monroe Avenue from Los Alamos Road to the project site.

1.2 PROJECT DESCRIPTION

The proposed Project would construct 899 apartment units on a 38.7 gross (31.39 net) acre Site located north of Murrieta Hot Springs Road, west of Interstate 15, east of the existing Sparkman Court corridor and south of Vista Murrieta Road in the City of Murrieta, California (APNs 910-031-001, -002, -003, -004, -005, -007, -008, -009, -010, -015, -017, -018, -021, -022, -023, -024, -025 and -026; 949-190-012, -013, -014, -015, -016 -017, -018 and -019). The Site is bordered to the south by Murrieta Hot Springs Road and

[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.

undeveloped land, to the west by the Interstate 15 corridor, to the north by Vista Murrieta Road and single-family residences, and to the east by Sparkman Court and office research park uses.

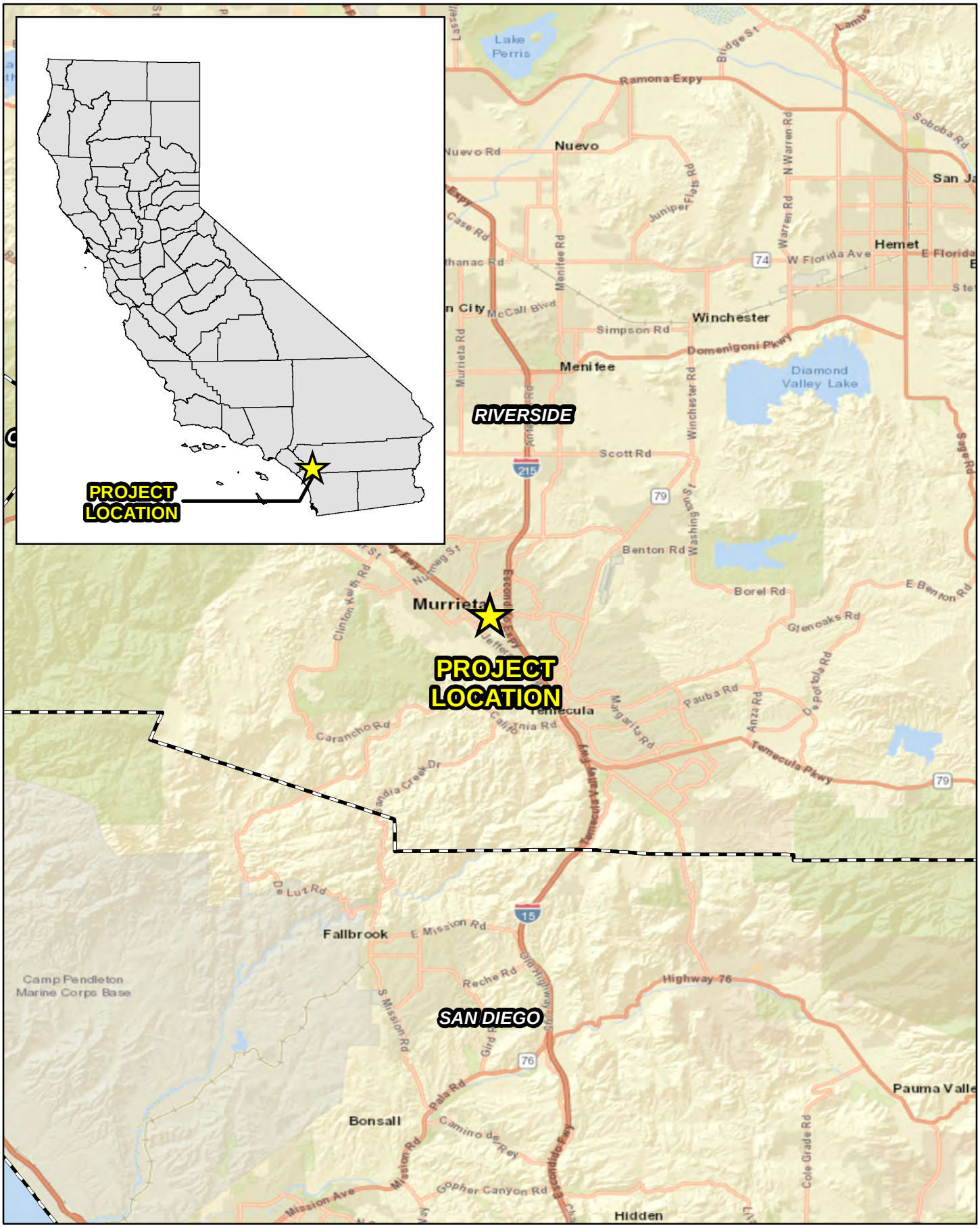
The Project consists of 11, four-story apartment buildings and 12 two-story carriage unit buildings in two phases. Phase I consists of buildings B1 and B6-B11 containing 634 one-, two- and three-bedroom units ranging in size from 743 square feet to 1,292 square feet. A total of 24 two-story, one-bedroom/one-bathroom (1,052 square feet) carriage units will also be constructed in Phase I. A total of 1,135 parking spaces (312 garage spaces, 216 tandem spaces, 22 parallel and 585 open stall) will be provided. A leasing center, clubhouse, swimming pool and various walking paths and green space areas will be provided throughout the Project. A dog park and other outdoor open space area will be provided at the northeast corner of the Site. Phase 2 consists of 241 one- and two-bedroom units in Buildings B2-B5 and 379 parking spaces (86 garage, 86 tandem, 14 parallel and 193 open stalls). In total, the Project will provide 359 one-bedroom/one-bathroom units, 482 two-bedroom/two-bathroom units and 58 three-bedroom/two-bathroom units.

The main Project entrance will be on Monroe Avenue north of Murrieta Hot Springs Road. Secondary access will be provided from Vista Murrieta Road along the northern Site boundary. A 28-foot wide, paved and gated emergency vehicle access will be constructed along the southern Site boundary between Sparkman Court and the Interstate 15 northbound on-ramp. The Project will be required to construct a full width segment of Monroe Avenue in the Sparkman Court corridor from Walsh Center Drive southeast to the existing Eastern Municipal Water District (EMWD) wastewater lift station and then half width improvements will be required from that point south. These improvements will terminate just north of the intersection with Murrieta Hot Springs Road. The Project will be required to pay a fair share of costs to install a new traffic signal at the intersection of Sparkman Court (Monroe Avenue) and Murrieta Hot Springs Road. Further, half width frontage improvements (i.e., paving the road and adding curb/gutter/sidewalk) along Vista Murrieta Road between old Monroe Avenue northwest of the Site to the new Monroe Avenue alignment at the northeast corner of the Site will be required.

Eastern Municipal Water District (EMWD) will provide water and sewer service to the Site. The Project will extend existing sewer lines to the Site from an existing mainline located north of Sparkman Court/Monroe Avenue lift station. A new 18" water main will be installed in the old Monroe Avenue alignment from the northwest corner of the Site at the Vista Murrieta Road intersection north to Los Alamos Road. Construction will utilize an open trench on either side of an existing at-grade jurisdictional crossing. Directional drilling will be used to install the waterline under the jurisdictional feature to avoid directly impacting this resource. Wet and dry utility improvements will occur while road improvements are being installed to minimize the need for road closure and overall construction-related impacts to neighboring residents.

Offsite runoff will be treated with modular wetland systems. Onsite Project runoff will be treated with a combination of modular wetland systems and biofiltration basins. Both off- and on-site stormwater will be mitigated for hydromodification with underground basins. The total area dedicated to an on-site stormwater management system will be approximately 0.38 acres.

Project construction is scheduled to begin in late 2023 with Phase I completed in early 2026. Build out of Phase II is expected by 2028.



THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

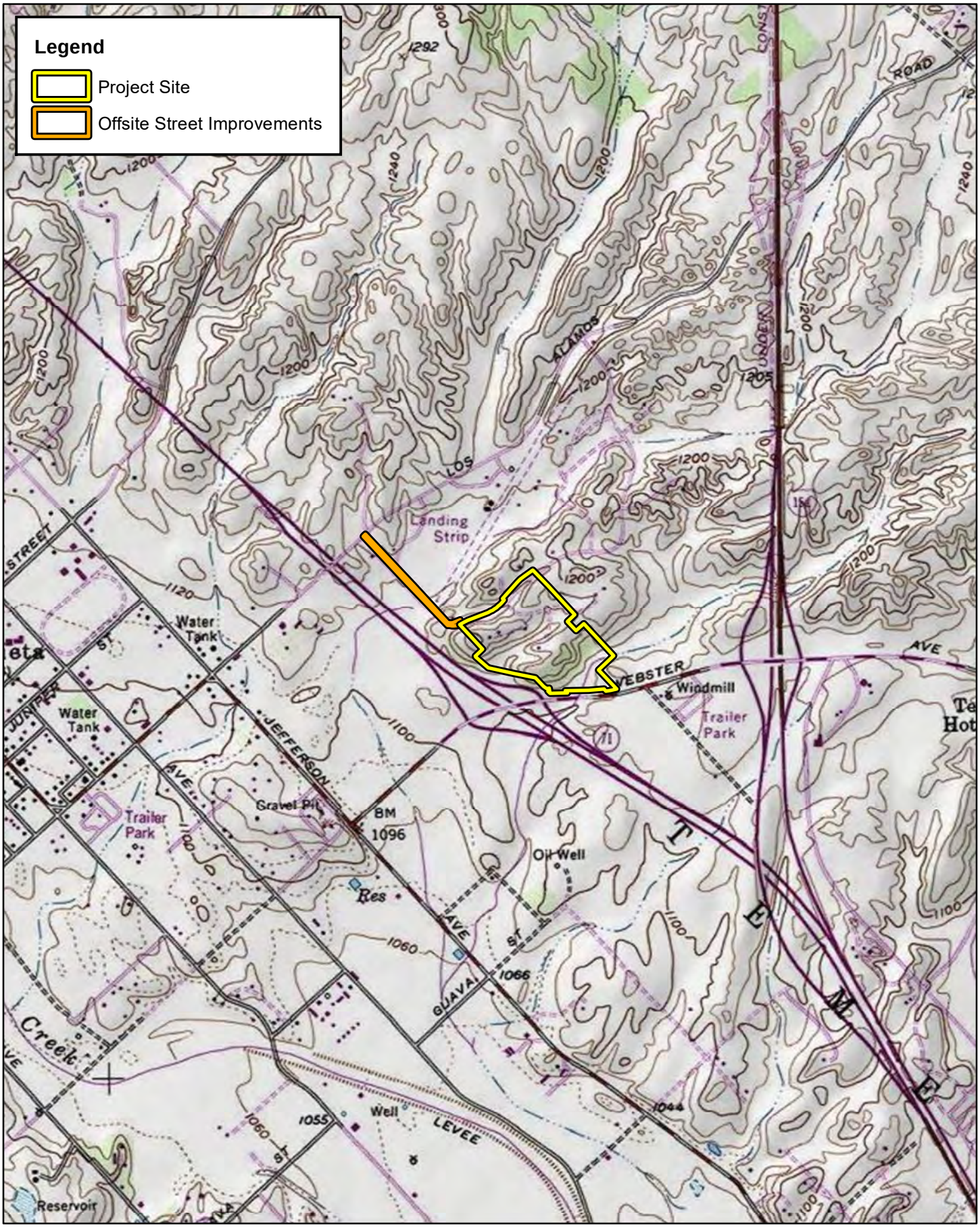
Regional Vicinity

ELMT CONSULTING

0 1.25 2.5 5 Miles

Source: World Street Map, Riverside County

Exhibit 1



THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

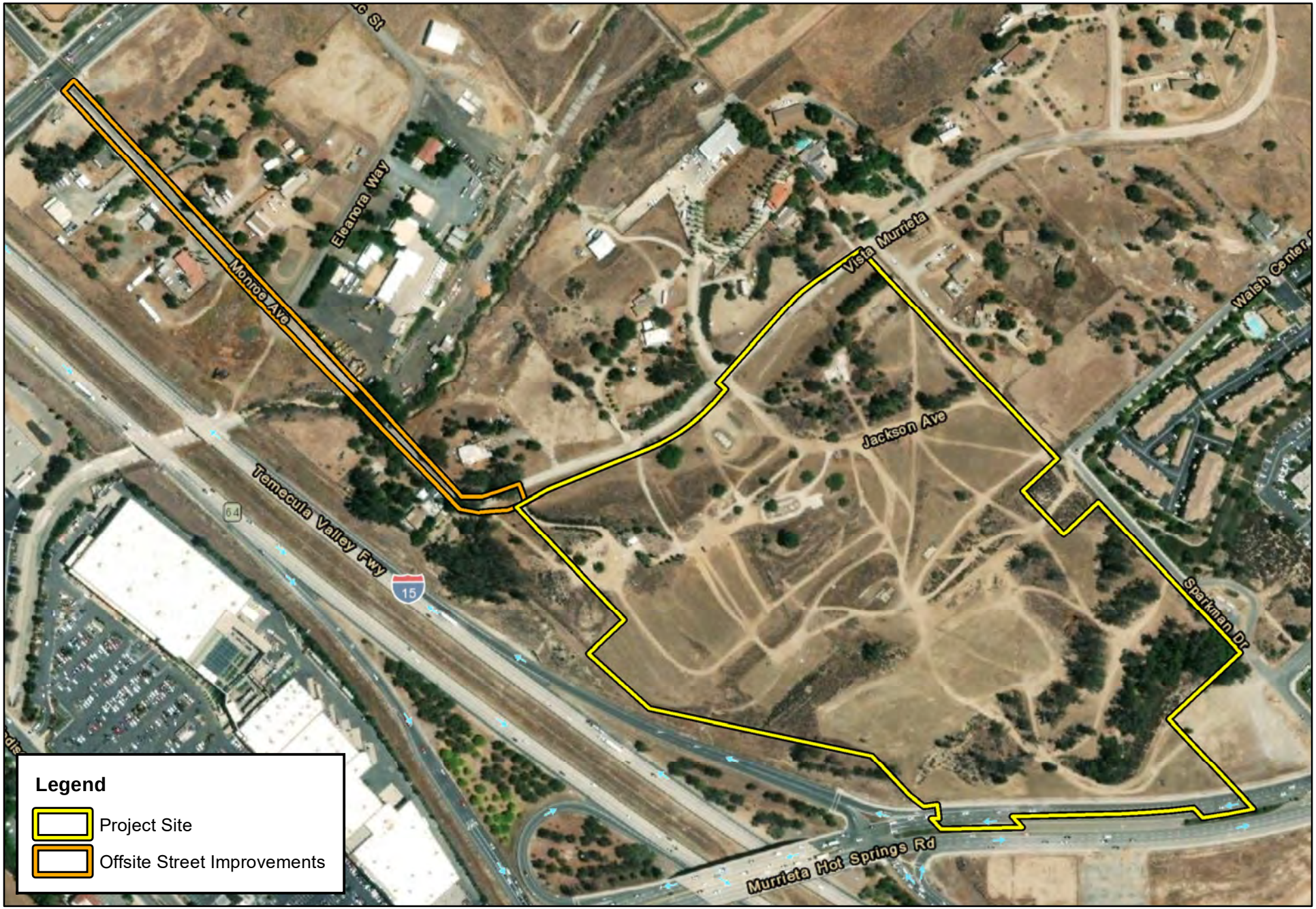
ELMT CONSULTING

0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

Site Vicinity

Exhibit 2



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Project Site

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 on 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 *Murrieta* USGS quadrangle 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 (1985-2021);
- 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; and
- 2006 Burrowing Owl Survey Instructions for the Western Riverside Multiple Species Habitat Conservation Plan Area.

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, biologist Travis J. McGill initially inventoried and evaluated the condition of the habitat within the project site on August 18, 2021. Follow up site visits were conducted on June 14

[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.

and July 15, 2022. Plant communities identified on aerial photographs during the literature review were verified by walking meandering transects through the plant communities and along boundaries between plant communities. In addition, aerial photography was reviewed prior to the site investigation to locate potential natural corridors and linkages that may support the movement of wildlife through the area. These areas identified on aerial photography were then walked during the field survey.

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 potentials 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. Surveys were conducted during the appropriate season to observe the target species, in good weather conditions, by a qualified biologist 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 classified in accordance with Sawyer, Keeler-Wolf and Evens (2009), delineated on an aerial photograph, and then digitized into ArcGIS. The ArcGIS 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 during field surveys by sight, calls, tracks, scat, or other sign were recorded during surveys 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 fairly 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 a 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 United States Army Corps of Engineers (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 on or within the vicinity of the project site.

Section 3 Existing Conditions

3.1 LOCAL CLIMATE

Western Riverside County 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 chilly to cold morning temperatures with frost common. Climatological data obtained for the nearby City of Beaumont indicates the annual precipitation averages 14.53 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and March, with hardly any occurring between the months of June and September. The wettest months are January and February, with monthly average total precipitation of 2.68 and 3.23 inches, respectively, and the driest months are June and September, with monthly average total precipitation of 0.16 and 0.31 inches, respectively. The average maximum and minimum temperatures are 76.1- and 53.3-degrees Fahrenheit (° F), respectively, with August (monthly average high 91.9° F) being the hottest month and December and January (monthly average lows 40.5° F) being the coldest. The temperature during the site visit was in the mid-70s ° F with clear skies and calm winds.

3.2 TOPOGRAPHY AND SOILS

The project site is ranges in elevation from 1,120 to 1,190 feet above mean sea level. On-site topography consists of rolling hills and valleys, with small ridgelines that historically supported residential developments. Based on the NRCS USDA Web Soil Survey, the project site is underlain by Arlington and Greenfield fine sandy loam (8 to 15 percent slopes), Greenfield sandy loam, eroded (2 to 8 percent slopes), Hanford coarse sandy loam (2 to 8 percent slopes), and Ramona and Buren sandy loam (15 to 25 percent slopes). Refer to Exhibit 4, *Soils*. The majority of the soils on-site have been mechanically disturbed and heavily compacted from historic land uses (i.e., agricultural activities, disking/mowing, and on-site surrounding development.

3.3 SURROUNDING LAND USES

The project site is located in an area that consist of a mosaic of residential, commercial, institutional, and transportation related developments. At present, the site is bordered by rural residential developments to the north, multifamily homes and rural residential developments to the east, Murrieta Hot Springs Road and undeveloped land to the south, and Interstate 15 and commercial developments to the west.

THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Soils

ELMT CONSULTING

0 125 250 500 Feet

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

Exhibit 4

Section 4 Discussion

4.1 SITE CONDITIONS

There are existing residential foundations on the northern boundary of the project site, undeveloped land that has been routinely disked/mowed and subject to off-road vehicle activities, and large stands of eucalyptus trees and ornamental trees onsite. There is an earthen storm drain on the southeast corner of the site that receives flows via three storm drain outlets that all flow into a concrete headwall that was constructed to convey storm flows from the site and under Murrieta Hot Springs Road.

4.2 VEGETATION

The site primarily consists of vacant, undeveloped land that has been subject to a variety of anthropogenic disturbances. The project site has been subjected to routine weed abatement activities, off-road vehicle use, and additional disturbance associated with surrounding development. The project site supports three (3) plant communities, buckwheat scrub, southern willow scrub/eucalyptus stand, and eucalyptus stand. In addition the project site supports three (3) land cover types that would be classified as ornamental, disturbed and developed (refer to Exhibit 5, *Vegetation*). Refer to Attachment B, *Site Photographs*, for representative site photographs.

4.2.1 Buckwheat Scrub (Eriogonum fasciculatum Alliance)

The buckwheat scrub plant community (Eriogonum fasiculatum Alliance) is located in small patches on the southern half of the project site. This plant community primarily consist of California buckwheat (*Erigonum fasciculatum*), and has been heavily disturbed from historic agricultural activities and routine weed abatement activities. This plant community primarily occurs on the slopes of the rolling slopes onsite. Other common plant species within this plant community include brittlebush (*Encelia farinosa*), coyote bush (*Baccharis pilularis*), California sagebrush (*Artemisia californica*), cudweed aster (*Lessingia filaginifolia*), deerweed (*Acmispon glaber*), western ragweed (*Ambrosia psilostachya*).

4.2.2 Southern Willow Scrub/Eucalyptus Stand (Salix lasiolepis-Salix lucida Alliance)

The southern willow scrub/eucalyptus stand (Salix lasiolepis-Salix lucida Alliance) plant community occurs on the southeastern corner of the site in association with the drainage. This plant community is heavily mixed with native riparian plant species (mainly willows) and eucalyptus trees. Common plant species within this plant community include arroyo willow (*Salix lasiolepis*), black willow (*Salix gooddingii*), golden leaf willow (*Salix lucida*), eucalyptus (*Eucalyptus sp*). fig (*Ficus carica*), Mexican fan palm (*Washingtonia robusta*), salt cedar (*Tamarix ramosissima*), cottonwood (*Popolus fremontii*). This riparian plant community is heavily degraded by the invasion of eucalyptus.

Likely due to the prominence of eucalyptus within this plant community, there was little structural complexity within this community. The understory of this plant community was relatively open and supported minimal vegetation. Plant species within the understory consisted of California buckwheat, salt

cedar, Mexican fan palm, fig, horehound (*Mirrubium vulgare*), horseweed (*Conyza bonariensis*), and Mediterannean mustard (*Hirschfeldia incana*), and leaf litter.

4.2.3 Eucalyptus Stand

The several stands of eucalyptus are primarily found on the southeast corner of the project site. These large stands are dominated by eucalyptus with minimal vegetation in the understory and can be seen in historic aerials dating back to the early 1960s.

4.2.4 Ornamental

Ornamental, or landscaped/planted trees are primarily found on the northeast and northwest corners of the project site in association with historic residential developments. Plant species associated with the onsite residential developments include Peruvian pepper (*Schinus molle*), italian cypress (*Cupressus sempervirens*), silk oak (*Grevillea robusta*), pine (*Pinus sp.*) and eucalyptus.

4.2.5 Disturbed

The majority of the project site supports a disturbed land cover type that has been subject to routine disturbances from historic agricultural activities, weed abatement (i.e., disking/mowing), and off-road vehicle use. The disturbed areas onsite are dominated by early successional and non-naitve/ruderal plant species. Common plant species found within the disturbed areas include non-native grasses such as bromes (*Bromus* spp.), oats (*Avena* spp.), prickly lettuce (*Lactuca serriola*), Russian thistle (*Salsola tragus*), Mediterannean mustard, tacolote (*Centaurea melitensis*), and morning glory (*Calystegia sp*).

4.2.6 Developed

Developed areas within the project site generally consists of paved, impervious surfaces, and remnant residential structures. These areas are generally found on the northern boundary of the project site where the residential structures were previously located, and on the southern boundary of the project site in association with Murrieta Hot Springs Road.

4.3 WILDLIFE

Plant communities provide foraging habitat, nesting and denning sites, and shelter from adverse weather or predation. This section provides a discussion of those 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 in 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. Further, the onsite drainage features do no provide suitable habitat for fish. Therefore, no fish are expected to occur and are presumed absent.

4.3.2 Amphibians

The MSHCP does not identify any covered or special-status amphibian species as potentially occurring within the project site. The southern willow scrub plant community and perennial flows from urban runoff have the potential to support local amphibian species. Common amphibian species that could be expected to occur include garden slender salamander (*Batrachoseps major major*), Baja California tree frog (*Pseudacris hypochondriaca hypochondriaca*), and western toad (*Anaxyrus boreas*).

4.3.3 Reptiles

The MSHCP does not identify any covered or special-status reptilian species as potentially occurring within the project site. The site provides a limited amount of habitat for reptile species adapted to a high degree of human disturbance associated with the on-site weed abatement activities and development. No reptilian species were observed during the field investigation. Common reptilian species that could be expected to occur on-site include Great Basin fence lizard (*Sceloporus occidentalis longipes*) and common side-blotched lizard (*Uta stansburiana elegans*), San Diego gophersnake (*Pituophis catenifer annectens*), and southern alligator lizard (*Elgaria multicarinata*). Due to the high level of anthropogenic disturbances and surrounding development, no special-status reptilian species are expected to occur within project site.

4.3.4 Birds

The project site provides marginal foraging and nesting habitat for bird species adapted to a high degree of routine human disturbance. Bird species detected during the field survey include house finch (*Haemorhouse mexicanus*), mourning dove (*Zenaida macroura*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), American crow (*Corvus brachyrhynchoCalypte anna*), and Cassin's kingbird (*Tyrannus vociferans*).

4.3.5 Mammals

The MSHCP does not identify any covered or special-status mammalian species as potentially occurring within the project site. The only mammalian species detected during the field investigation was pocket gopher (*Thomomys bottae*). Common mammalian species that could be expected to occur include coyote (*Canis latrans*), opossum (*Didelphis virginiana*), California ground squirrel (*Otospermophilus beecheyi*), and raccoon (*Procyon lotor*).

Additionally, the eucalyptus trees onsite have the potential to provide limited foraging habitat for common bat species known to occur in the area. Common bat species that have the potential to occur onsite include Mexican free-tailed bat (*Tadarida brasilliensis*), Hoary bat (*Lasiurus cinereus*), and little brown bat (*Myotis lucifugus*). The project site and immediately surrounding area do not suitable buildings, bridges, mines or caves for roosting. Further, the eucalyptus trees onsite have the potential to provide suitable day resting opportunities for bat species within minimal tree hollows for roosting.

4.4 NESTING BIRDS

No active nests or birds displaying nesting behavior were observed during the field survey, which was conducted during breeding season. Although subjected to routine disturbance, the ornamental vegetation, southern willow scrub, and eucalyptus stand found on-site have the potential to provide suitable nesting habitat for year-round and seasonal avian residents, as well as migrating songbirds that could occur in the area that area adapted to urban environments. (*Charadrius vociferans*).
Nesting birds are protected pursuant to the Migratory Bird Treaty Act (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). If construction occurs between February 1st and August 31st, 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 proposed project will be confined to existing areas that have been heavily disturbed and are isolated from regional wildlife corridors and linkages. In addition, there are no useful patches of steppingstone habitat (natural areas) within or connecting the site to a recognized wildlife corridor or linkage. As such, implementation of the proposed project is not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not 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 Clean Water Act (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.

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 or fill materials into “waters of the United States” pursuant to Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the State agencies, the CDFW regulates alterations to streambed and bank under Fish and

Wildlife Code Sections 1600 et seq., and the Regional Board regulates discharges into surface waters pursuant to Section 401 of the CWA and the California Porter-Cologne Water Quality Control Act.

Based on the results of a Delineation of State and Federal Jurisdictional Waters Report (ELMT, 2021), prepared under a separate cover, two (2) unnamed drainage features were observed on the project site and one (1) unnamed drainage feature was observed within the proposed offsite street improvement area. There is an earthen storm drain channel (Drainage 1) on the southeast corner of the site that receives flows via three storm drain outlets that all flow into a concrete headwall that was constructed to convey storm flows from the site and under Murrieta Hot Springs Road. Additionally, there is a small ephemeral drainage (Drainage 2) in the middle of the northern half of the project site that is located in the topographic low spot on the property at the bottom of the rolling hills that conveys water flows immediately following storm events. Drainage 2 exists the project site on the western boundary via a 36-inch culvert and eventually flows into another culvert under Interstate 15. The drainage feature (Drainage 3) within the proposed offsite street improvement area along Monroe Avenue is an ephemeral drainage that flows in an east to west direction via a low water crossing along Monroe Avenue before entering a concrete lined trapezoidal channel west of the project site.

The three drainage features are ephemeral features that eventually discharge into Murrieta Creek, which exhibits a surface hydrologic connection to the Santa Margarita River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water). Therefore, Drainages 1, 2, and 3 will likely qualify as waters of the United States under the regulatory authority of the Corps, waters of the State under the regulatory authority of the Regional Board, and jurisdictional streambed under the regulatory authority of CDFW.

Activities impacting these drainage features will require a CWA Section 404 permit from the Corps, CWA Section 401 Water Quality Certification from the Regional Board, and a Section 1602 Streambed Alteration Agreement from CDFW.

4.7 SPECIAL-STATUS BIOLOGICAL RESOURCES

The CNDDB was queried for reported locations of special-status plant and wildlife species as well as natural communities of special concern in the Murrieta USGS 7.5-minute quadrangle. A search of published records within this quadrangle was conducted using the CNDDB Rarefind 5 online software and the CDFW BIOS database and the CNPS Inventory of Rare and Endangered Plants of California that supplied information regarding the distribution and habitats of vascular plants in the vicinity of the project site. The field investigation evaluated the conditions of the habitat(s) within the boundaries of the project site to determine if the existing plant communities, at the time of the survey, have the potential to provide suitable habitat(s) for special-status plant and wildlife species.

The literature search identified forty-six (46) special-status plant species, sixty-one (61) special-status wildlife species, and four (4) special-status plant communities as having potential to occur within the Murrieta quadrangle. Special-status plant and wildlife species were evaluated for their potential to occur within the project boundaries based on habitat requirements, availability and quality of suitable habitat, and known distributions. Species determined to have the potential to occur within the general vicinity of the

project are presented in Appendix C, *Potentially Occurring Special-Status Biological Resources*, and discussed below.

4.7.1 Special-Status Plants

According to the CNDDB and CNPS, forty-six (46) special-status plant species have been recorded in the Murrieta quadrangle (refer to Appendix C). No special-status plants were observed on the project site during the field investigation. The project site is heavily disturbed and no longer supports native plant communities that have the potential to provide suitable habitat for special-status plant species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined no special-status plant species have potential to occur on-site due to the lack of native habitats, historic agricultural activities, and routine on-site disturbances. All special-status plant species are presumed absent.

4.7.2 Special-Status Wildlife

According to the CNDDB, sixty-one (61) special-status wildlife species have been reported in the Murrieta quadrangle (refer to Appendix C). No special-status wildlife species were observed on the project site during the field investigation. 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 moderate potential to support Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*Accipiter striatus*), and California horned lark (*Eremophila alpestris actia*); and a low potential to support orange-throated whiptail (*Aspidoscelis hyperythra*), coastal whiptail (*Aspidoscelis tigris steinegeri*), western mastiff bat (*Eumops perotis californicus*), and western spadefoot (*Spea hammondii*). All remaining special-status wildlife species were presumed to be absent from the project site.

To ensure no impacts to the aforementioned special-status species do not occur from implementation of the proposed project, pre-construction clearance surveys shall be conducted prior to ground disturbance. With implementation of pre-construction clearance surveys, impacts to the aforementioned special-status species will be less than significant and no mitigation will be required.

4.7.3 Special-Status Plant Communities

The CNDDB lists four (4) special-status habitats as being identified within the Murrieta quadrangle: Southern Coast Live Oak Riparian Forest, Southern Interior Basalt Flow Vernal Pool, Southern Sycamore Alder Riparian Woodland, and Valley Needlegrass Grassland. No CDFW special-status plant communities occur within the boundaries of the project area. Therefore, no special-status plant communities will be impacted by project implementation.

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 a 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 (refer to Exhibit 6, *Critical Habitat*, in Attachment A). The nearest designated Critical Habitat is located approximately 3.5 miles north of the site for California gnatcatcher (*Polioptila californica*), and 3 miles west of the project for spreading navarretia (*Navarretia fossalis*). Therefore, the loss or adverse modification of Critical Habitat will not occur as a result of the proposed project and consultation with the USFWS will not be required for implementation of the proposed project.

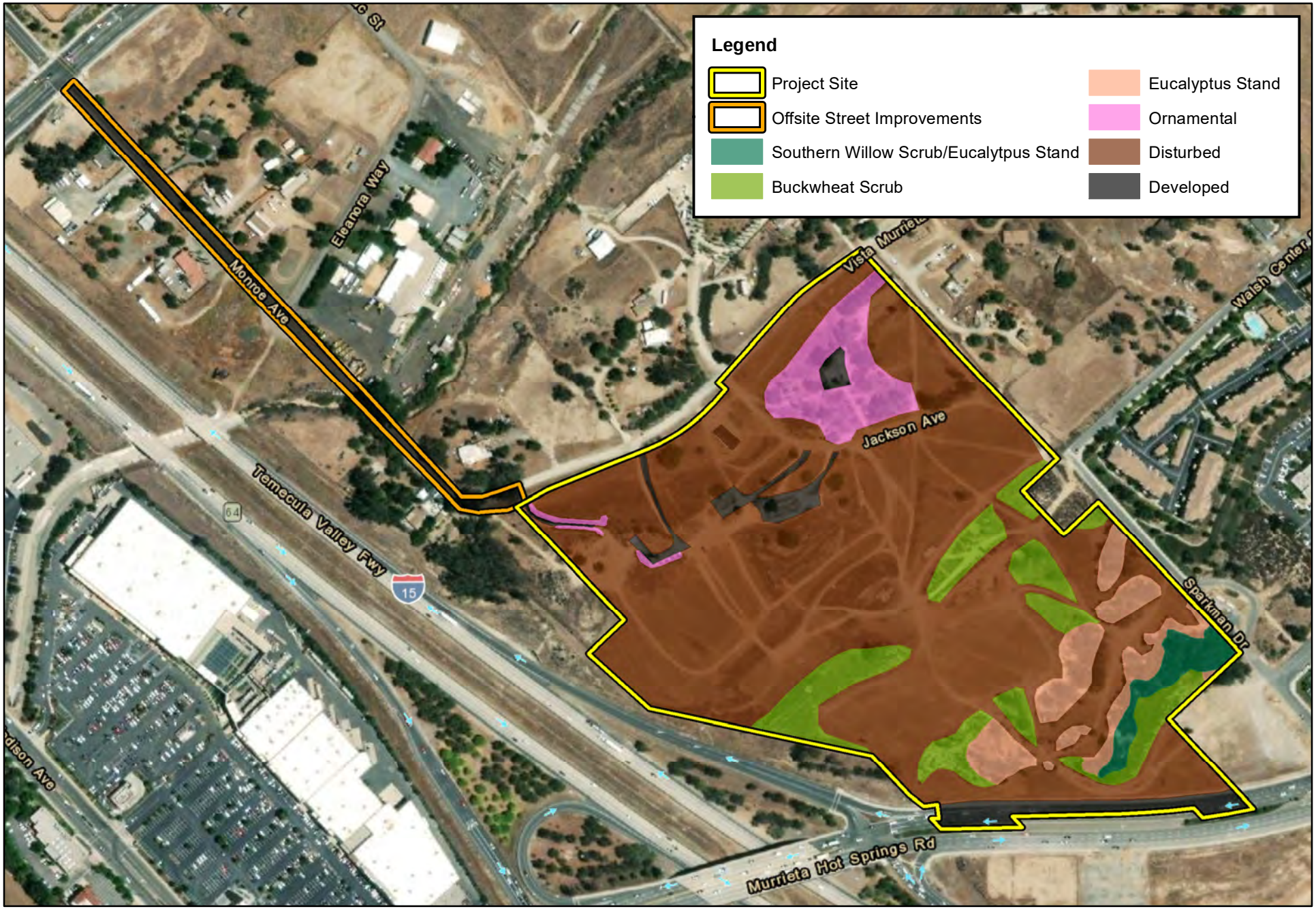
4.9 TREE ORDINANCE

According to the City of Murrieta's Municipal Code (Murrieta Municipal Code Chapter 16.42), protection is afforded to native and non-native trees based on their size and significance. Trees native to California and/or the Murrieta climate zone including, but not limited to, the California Sycamore (*Platanus racemosa*), Western Cottonwood (*Populus fremontii*), California Bay Laurel (*Umbellularia California*), and California Black Walnut (*Juglans California*) are protected with a DBH (diameter at breast height) of 4 inches or greater. Non-native mature trees are also protected with a DBH of 9.5 inches or greater. Additional provisions within the Code are outlined below:

> Damaging Protected Trees Prohibited – Chapter 16.42.060
>
> With few exceptions, no person shall cut down, remove, relocate, or otherwise destroy a Protected Tree without first securing a Tree Removal Permit.
>
> Tree Removal Permit – Chapter 16.42.070
>
> No protected tree shall be removed, cut down, or otherwise destroyed, unless a tree removal permit has been approved by the director. A tree removal permit shall not be required in the event that the removal or relocation of a protected tree is proposed as part of a discretionary permit application. While a tree removal permit is not required, all other provisions of this chapter shall still apply to the discretionary permit.
>
> Protected Tree Replacement Standards – Chapter 16.42.095
>
> A. Replacement standards
> 1) A protected tree shall be replaced at a ratio of one-inch DSH (aka DBH) of tree replaced for each inch DSH of tree removed.
> B. Replacement equivalents

2) Trees planted as replacement trees for native Oak trees or native trees shall be the same species as those removed or a species that is acceptable to the director, with consideration given to species diversity.
3) Trees planted as replacement trees for mature trees shall be limited to species that are drought tolerant and ignition-resistant and not deemed to be an invasive species, to the satisfaction of the director.
4) The following equivalent sizes shall be used whenever new trees, or combination thereof, are planted (either on-site or off-site) pursuant to a tree replacement plant
    a. A tree in a 15-gallon container equates to a one-inch DSH.
    b. A tree in a 24-inch box equates to a two-inch DSH.
    c. A tree in a 36-inch box or larger equates to a three-inch DSH.

Several of the trees on the project site will likely qualify under the City of Murrieta's tree ordinance. Prior to removal of the onsite trees, an arborist study shall be completed to determine which trees qualify, and tree removal permit shall be obtained from the City.



THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Vegetation

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 5

THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

Critical Habitat

ELMT CONSULTING

0 0.5 1 2 Miles

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

Exhibit 6

Section 5 MSHCP Consistency Analysis

The project site is located within the Southwest Area Plan of the MSHCP but are not located within any Criteria Cells or MSHCP Conservation Areas (refer to Exhibit 7, *MSHCP Criteria Area*). Additionally, only the western portion of the project site is only located within the designated survey area for burrowing owl as depicted in Figures 6-4 within Section 6.3.2 of the MSHCP. The eastern portion of the stie is not located within any designated species survey areas.

Additionally, the project site is located within the following designated species survey areas as identified by the MSHCP:

- Amphibian — Not in an amphibian survey area
- Owls — Burrowing Owl Survey Area (only western parcel)
- Criteria Area Species — Not in a criteria area species survey area
- Mammals — Not in a mammal survey area
- Narrow Endemic Plants — Not in a narrow endemic plant survey area

Since the City is a permittee under the MSHCP and, while the project is not specifically identified as a Covered Activity under Section 7.1 of the MSHCP, public and private development that are outside of Criteria Areas and Public/Quasi-Public (PQP) 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 of the MSHCP;
- The requirements for conducting additional surveys as set forth in Section 6.3.2 of the MSHCP;
- Guidelines pertaining to the Urban/Wildlands Interface intended to address indirect effects associated with locating Development in proximity to the MSHCP Conservation Area as detailed in Section 6.1.4 of the MSHCP.

5.1 RIPARIAN/RIVERINE AREAS AND VERNAL POOLS

The MSHCP requires that an assessment be completed if impacts to riparian/riverine areas and vernal pools could occur from construction of the proposed project. According to the MSHCP, the documentation for the assessment shall include mapping and a description of the functions and values of the mapped areas with respect to the species listed in Section 6.1.2 of the MSHCP, *Protection of Species Associated with 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 regards to the listed species. This assessment is independent from considerations given to waters of the United States and 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.

Based on the results of a Delineation of State and Federal Jurisdictional Waters Report (ELMT, 2021), prepared under a separate cover, two (2) unnamed drainage features were observed within the proposed project footprint, and one (1) unnamed feature within the propose offsite improvement area that would qualify as riparian/riverine habitat under the MSHCP. The limits of the riparian/riverine habitat are synonymous with CDFW jurisdiction. A DBESP has been prepared under separate cover that provides compensatory mitigation for the loss of riparian/riverine habitat.

The habitat on the project site has been heavily degraded from existing and ongoing anthropogenic disturbances as described above, and surrounding development. As a result, these disturbances and removed if not eliminated the site's potential to provide suitable habitat for species listed in Section 6.1.2 of the MSHCP. Based on regional significance and it previously documented occurrences in the along Murrieta Creek, the potential for least Bell's vireo is provided below.

Least Bell's Vireo

Least Bell's vireo is a federally and state endangered subspecies of the Bell's vireo. It is a summer migrant to California and is the only regularly-occurring subspecies of Bell's vireo in San Bernardino County. Its nesting habitat typically consists of a well-developed over-story and understory, along with low densities of aquatic and herbaceous plant cover. The understory frequently contains dense sub-shrub or shrub thickets that are often dominated by plants such as willow, mulefat, and one or more herbaceous species. Least Bell's vireos begin to arrive at their breeding grounds in southern California riparian areas from mid-March to early April. Upon arrival, males establish breeding territories that range in size from 0.5 to 7.4 acres, with an average size of approximately two acres. In California, females begin laying eggs in April, fledging birds until the end of July (Kus et al. 2010). The fledglings will remain in the parental territory for up to a month. Bell's vireos leave the breeding grounds and migrate south mid- to late September. Although not common, a few have been found wintering in southern California (Hamilton and Willick 1996).

The southern willow scrub plant community onsite does not provide the preferred plant species composition, density, and structure needed to provide suitable nesting habitat for least Bell's vireo. Further, during the three site visits, conducted on August 18, 2021, June 14, 2022 and July 15, 2022, no least Bell's

vireo were observed onsite. Least Bell's vireo is presumed absent from the project site. No focused surveys are recommended.

5.1.2 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 listed and special-status plant species; clay soils and Traver-Domino Willow association soils. The specific clay soils known to be associated with listed and 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 plant or wildlife species associated with vernal pools can occur on the project site. None of these soils have been documented within the project site.

A review of recent and historic aerial photographs (1985-2020) of the project site did not provide visual evidence of an astatic or vernal pool conditions within the project site. No ponding was observed, further supporting the fact that the drainage patterns currently occurring on the project site do not follow hydrologic regimes needed for vernal pools. 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.

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.

The project site is underlain by Arlington and Greenfield fine sandy loam (8 to 15 percent slopes), Greenfield sandy loam, eroded (2 to 8 percent slopes), Hanford coarse sandy loam (2 to 8 percent slopes), and Ramona and Buren sandy loam (15 to 25 percent slopes). The aforementioned soils that Riverside fairy shrimp are typically associated within Riverside County do not occur on-site. Due to the lack of soils associated with Riverside fairy shrimp and no indicators of water ponding or astatic water conditions, 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 water ponding or astatic water conditions, 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 know populations, and no indicators of water ponding or astatic water conditions, 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 not located within the designated survey area for Narrow Endemic Plant Species. Through the field investigation, it was determined that the project site does not provide suitable habitat for any of the Narrow Endemic Plant Species listed under Section 6.1.3 of the MSHCP, and, therefore, the project is consistent with Section 6.1.3 of the MSHCP. No additional surveys or analysis is required.

5.3 URBAN/WIDLANDS 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 immediately adjacent to any Criteria Cells, corridors, or linkages. The urban/Wildlands Interface Guidelines do not apply to this project, and, therefore, the project is consistent with Section 6.1.4 of the MSHCP.

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 western portion of the project site is located within the designated survey area for burrowing owl 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 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 onsite. The habitat assessment was conducted on August 18, 2021. 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 onsite. Primary indicators of suitable burrowing owl habitat in western Riverside County include, but are not limited to, native and non-native grassland, interstitial grassland within shrub lands, shrub lands with low density shrub cover, golf courses, drainage ditches, earthen berms, unpaved airfields, pastureland, dairies, fallow fields, and agricultural use areas. Burrowing owls typically use burrows made by fossorial mammals, 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. Results from the habitat assessment indicate that suitable resources for burrowing owl are present throughout the Project Site. Accordingly, if suitable habitat is documented onsite 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.

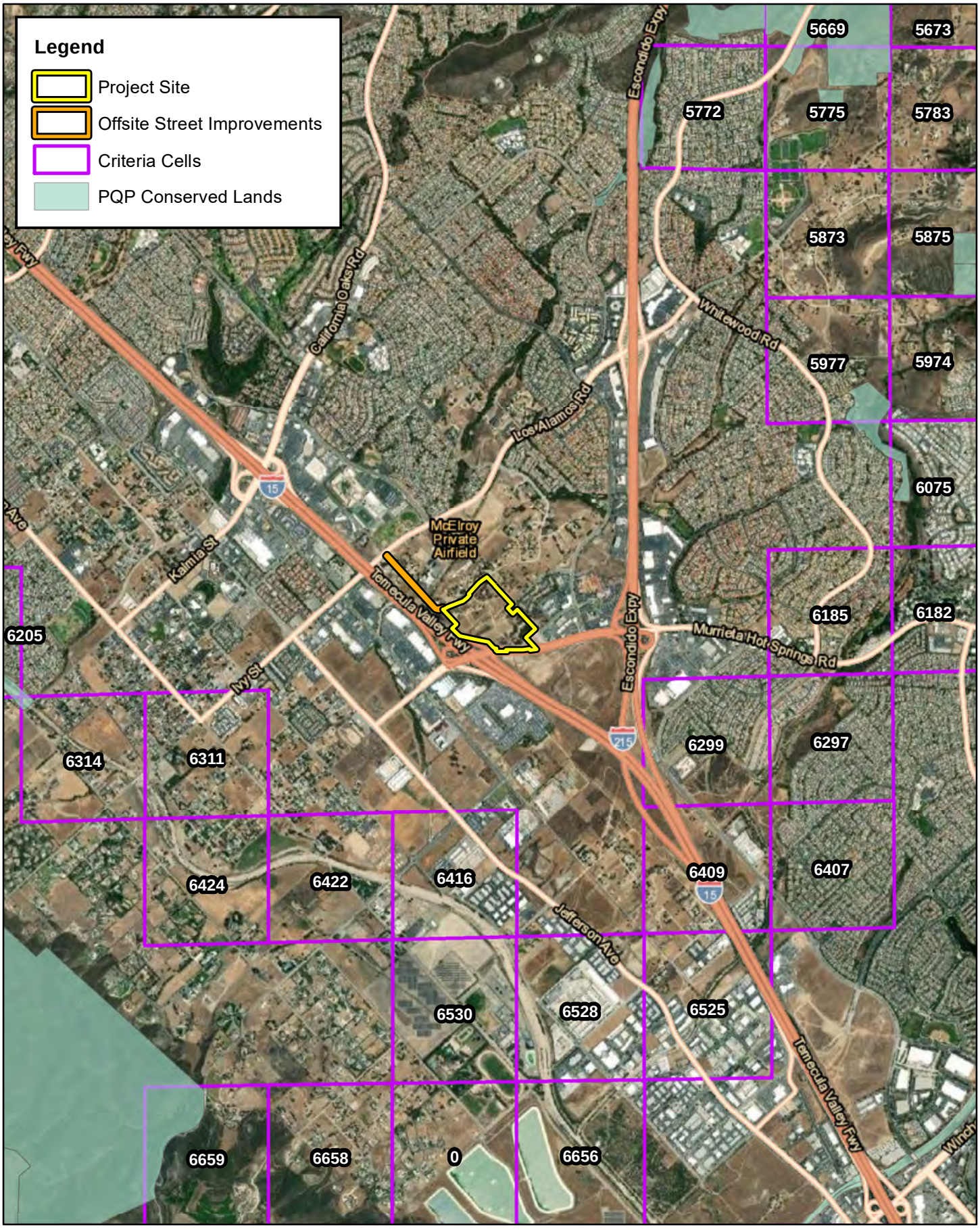
- Step II – Locating Burrows and Burrowing Owls: Concurrent with the initial habitat assessment, a detailed focused burrow survey was conducted and included documentation of appropriately sized natural burrows or suitable man-made structures that may be utilized by burrowing owl - as part of the MSHCP 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 by walking across all suitable habitats mapped within the project site on August 18, 2021. 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.

Despite a systematic search of the project site, no burrowing owls or sign (i.e., pellets, feathers, castings, or whitewash) were observed during the field investigation. Portions of the project site are vegetated with a variety of low-growing plant species that allow for minimal line-of-sight observation favored by burrowing owls. However, no small mammal burrows that have the potential to provide suitable burrowing owl nesting habitat (>4 inches in diameter) were observed within the boundaries of the site. Additionally, the site supports and is bordered by tall trees and power poles that provide perching opportunities for large raptors (i.e., red-tailed hawk) that can prey on burrowing owls. Being that no appropriate burrows or burrowing owl habitat was found, Part B-Focused Burrowing Owl surveys are not required. Therefore, the project is consistent with Section 6.3.2.

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



THE TERRACES
HABITAT ASSESSMENT AND MSHCP CONSISTENCY ANALYSIS

MSHCP Criteria Area

ELMT CONSULTING

0 1,250 2,500 5,000 Feet

Source: ESRI Aerial Imagery, Riverside County

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 HCP; 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. Therefore, the applicant will be required to pay the SKR HCP Mitigation Fee prior to development of the project site.

Section 7 Conclusion and Recommendtions

Based on the literature review and field survey, implementation of the project will have no significant impacts on federally, State, or MSHCP listed species known to occur in the general vicinity of the project site. Additionally, the project will have no effect on designated Critical Habitat because none exists within the area. Three jurisdictional drainage features were observed on the project site that would require the preparation and processing of regulatory approvals. Additionally, the project site is not located within or adjacent to any criteria cell, and no vernal pool habitat was found onsite.

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 CEQA, based on Appendix G (Environmental Checklist Form) of the CEQA Guidelines:

CEQA Threshold*: Would the proposed 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 plants were observed on the project site during the field investigation. The project site is heavily disturbed and no longer supports native plant communities that have the potential to provide suitable habitat for special-status plant species. Based on habitat requirements for specific species and the availability and quality of on-site habitats, it was determined no special-status plant species have potential to occur on-site due to the lack of native habitats, historic agricultural activities, and routine on-site disturbances. All special-status plant species are presumed absent. As a result, no impacts to special-status plant species are expected to occur. No additional surveys are recommended.

Special-Status Wildlife Species

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 moderate potential to support Cooper's hawk, sharp-shinned hawk, and California horned lark; and a low potential to support orange-throated whiptail, coastal whiptail, western mastiff bat, and western spadefoot. All remaining special-status wildlife species were presumed to be absent from the project site. To ensure no impacts to the aforementioned special-status species do not occur from implementation of the proposed project, the following mitigation measures shall be implemented prior to ground disturbance.

BIO-1: Migratory Bird Treaty Act and Fish and Game Code Compliance

Vegetation within and surrounding the project site has the potential to provide refuge cover from predators, perching sites and favorable conditions for avian nesting that could be impacted by construction activities associated with the project. Nesting birds are protected pursuant to the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (Sections 3503, 3503.3,

3511, and 3513 of the California Fish and Game Code prohibit the take, possession, or destruction of birds, their nests or eggs). In order to protect migratory bird species, a nesting bird clearance survey should be conducted prior to any ground disturbance or vegetation removal activities that may disrupt the birds during the nesting season. Consequently, if avian nesting behaviors are disrupted, such as nest abandonment and/or loss of reproductive effort, it is considered "take" and is potentially punishable by fines and/or imprisonment.

If construction occurs between February 1st and August 31st, 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 biologist conducting the clearance survey should document a negative survey with a brief letter report indicating that no impacts to active avian nests will occur. If an active avian nest is discovered during the pre-construction clearance survey, construction activities should stay outside of a no-disturbance buffer. The size of the no-disturbance buffer will be determined by the wildlife biologist and will depend on the level of noise and/or surrounding anthropogenic disturbances, line of sight between the nest and the construction activity, type and duration of construction activity, ambient noise, species habituation, and topographical barriers. These factors will be evaluated on a case-by-case basis when developing buffer distances. Limits of construction to avoid an active nest will be established in the field with flagging, fencing, or other appropriate barriers; and construction personnel will be instructed on the sensitivity of nest areas. A biological monitor should be present to delineate the boundaries of the buffer area and to monitor the active nest to ensure that nesting behavior is not adversely affected by the construction activity. Once the young have fledged and left the nest, or the nest otherwise becomes inactive under natural conditions, construction activities within the buffer area can occur.

BIO-2: Burrowing Owl Pre-Construction Clearance Survey

A 30-day pre-construction burrowing owl survey shall be conducted prior to any ground disturbing activities to avoid direct take of burrowing owls, in accordance Objectives 6 of the Species Account for the Burrowing Owl included in the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP).

BIO-3: Pre-Construction Bat Survey

A qualified biologist shall conduct bat clearance surveys within areas that have the potential to provide suitable roosting habitat for bats (plus a 100-foot buffer as access allows) in order to identify potential habitat that could provide daytime and/or nighttime roost sites, and any maternity roosts.

If no nesting bats are detected during the pre-construction surveys, no further actions would be necessary. If maternity roosts are found, to the extent feasible, work should be scheduled between October 1 and February 28, outside of the maternity roosting season when young bats are present but are yet ready to fly out of the roost (March 1 to September 30). Work should not occur within 100 feet of or directly under or adjacent to an active roost. Work should also not occur between 30 minutes before subset and 30 minutes after sunrise.

BIO-4: Pre-Construction Survey for Orange-throated Whiptail and Coastal Whiptail

Three days prior to any ground disturbing activities or vegetation removal, a qualified biologist shall conduct a pre-construction survey to identify if the project site supports orange-throated whiptail or coastal whiptail. Any reptile species found to be present within the project area shall be relocated outside of the impact areas under the supervision of a qualified biologist. Biological monitors shall be on-call to relocate any reptile or amphibian that is encountered during construction activities.

BIO-5: Pre-Construction Survey for Western Spadefoot

Initial construction activities within the project impact area shall occur during the dry season when no portions of the project impact area contain areas of ponded or flowing water with the potential to support the breeding of western spadefoot. If construction must occur during a time when portions of the site may support the breeding of this species, a Qualified Biologist shall conduct a survey of all potential western spadefoot breeding areas no more than 3 days prior to construction impacts within these areas. If any areas are determined to be occupied by western spadefoot, these areas shall be staked or fenced by, or under the supervision of, a Qualified Biologist, with a minimum 50-foot buffer. No construction/ activities shall occur within these avoidance areas unless authorized by the Qualified Biologist or until the western spadefoot individuals and/or larvae have left of their own accord, or a Qualified Biologist with appropriate take authorization has moved them out of harm's way and to a suitable location.

CEQA Threshold: *Would the proposed 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

Three (3) unnamed drainage features (Drainages 1, 2and 3) were observed within the boundaries of the project site. Approximately 0.41 acre (1,415 linear feet) of Corps and Regional Board jurisdiction are located within the boundaries of the project site. Based on the proposed project footprint, approximately 0.18 acre (918 linear feet) of Corps waters of the United State and Regional Board waters of the State will be impacted from project implementation. Additionally, approximately 0.87 acre (1,415 linear feet) of CDFW jurisdictional streambed/riparian habitat occur within boundaries of the project site. Based on the proposed project footprint, approximately 0.3 acre (933 linear feet) of CDFW jurisdictional streambed/riparian habitat will be impacted from project implementation.

To offset impacts to onsite jurisdictional areas, the applicant proposes to mitigate offsite through the purchase of mitigation credits through the Riverpark Mitigation Bank, San Luis Rey Mitigation Bank, and/or other approved bank, or combination thereof at an agreed upon ratio with the regulatory agencies (likely at a 3:1 ratio). The applicant will be responsible for the purchase of mitigation credits to compensate for impacts to waters of the United States, waters of the State and CDFW jurisdictional streambed/riparian vegetation.

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

CEQA Threshold: *Would the proposed 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

An approximately 0.05-acre wetland area occurs within Drainage 1 that would likely qualify as a wetland under Section 404 of the Clean Water Act. Based on the proposed project footprint, approximately 0.04-acre of the wetland will be impacted from project implementation. To offset impacts to 0.04-acre of wetland habitat, the applicant proposes to mitigate offsite through the purchase of mitigation credits through the Riverpark Mitigation Bank, San Luis Rey Mitigation Bank, and/or other approved bank. With purchase of mitigation credits, the proposed project would not have substantial adverse effect on federally protected wetlands.

CEQA Threshold: *Would the proposed 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 proposed project will be confined to existing areas that have been heavily disturbed and are isolated from regional wildlife corridors and linkages. In addition, there are no useful patches of steppingstone habitat (natural areas) within or connecting the site to a recognized wildlife corridor or linkage. As such, implementation of the proposed project is not expected to impact wildlife movement opportunities. Therefore, impacts to wildlife corridors or linkages are not expected to occur.

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

Local Policies or Ordinances

Under the City of Murrieta's Municipal Code (Murrieta Municipal Code Chapter 16.42), protection is afforded to native and non-native trees based on their size and significance. Several of the trees on the project site will likely qualify under the City of Murrieta's tree ordinance. Prior to removal of the onsite trees, an arborist study shall be completed to determine which trees qualify, and tree removal permit shall be obtained from the City.

CEQA Threshold: *Would the proposed 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 MSHCP. Based on the analysis and recommendations provided in this report 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

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Appendix A Site Plan

BASED ON ROUGH LOCATION
OF MONROE AVE ALIGNMENT
0.9479 AC

NAP
CITY
OWNED

MONROE

VILLAGE
GREEN

B

A

MAIN POOL

FITNESS

LEASING

MAIL

MAINT.
BLDG.

JURISDICTIONAL SETBACK

MURRIETA HOT SPRINGS ROAD

VISTA MURRIETA ROAD

VILLAGE
GREEN

VICINITY MAP

Project Description

SITE NET AREA	31.39 acres	
SITE ADDRESS		
TOTAL UNITS	Site A = 658 units	
	Site B = 241 units	
	= 899 units	
SITE AREA	Site A = 24.55 acres	
	Site B = 7.22 acres	
DENSITY ON GROSS AREA	Site A= 26.8 DU/AC	
	Site B= 33.3 DU/AC	
BIOFILTRATION	0.38 acres	

Total Unit Mix

unit type		unit count	unit area
A1	1bed / 1bath	219	743 s.f.
A2	1bed / 1bath	116	803s.f.
A3	1bed / 1bath	24	1052 s.f.
	total	359	39%
B1	2 bed / 2 bath	264	1,054 s.f.
B2	2 bed / 2 bath	218	1,057 s.f.
	total	482	54%
C1	3 bed / 2 bath	58	1,292 s.f.
	total	58	7%
TOTAL		899 UNITS	
		864,731 NRSF	
		961.9 AVG. NRSF	

Unit Mix Site-A

BLDG (BLW)	C1	B2	B1	A3	A2	A1	TOTAL
B1	4	12	24		9	20	69
B6	12	27	32		6	28	105
B7	3	15	36		18	24	96
B8	4	15	36		18	24	97
B9		22	8		31	4	65
B10	8	24	40		9	35	116
B11	8	15	32		3	28	86
B12-14				6			6
B15-23				18			18
	39	130	208	24	94	163	
TOTAL							658

Unit Mix Site-B

BLDG (BLW)	C1	B2	B1	A3	A2	A1	TOTAL
B2	4	29	16		19	8	76
B3		21	12			20	53
B4	8	23	8			12	51
B5	7	15	20		3	16	61
	19	88	56		22	56	
TOTAL							241

Parking Requirements Site - A

Per Government Code 65915 (p)(1)

unit types	unit count	ratio	qty.
1 bedroom units	281	1	281
2 bedroom units	338	1.5	507
3 bedroom units	39	1.5	59
TOTAL	658		847

Parking Provided Site - A

parking type	parking count	%
total garage	312	27%
tandem	216	19%
parallel	22	2%
open stall	585	52%
TOTAL	1,135	1.72 spaces/du

Parking Requirements Site - B

Per Government Code 65915 (p)(1)

unit types	unit count	ratio	qty.
1 bedroom units	78	1	78
2 bedroom units	144	1.5	216
3 bedroom units	19	1.5	29
TOTAL	241		323

Parking Provided Site - B

parking type	parking count	%
garage	86	23%
tandem	86	23%
parallel	14	4%
open stall	193	50%
TOTAL	379	1.57 spaces/du

NORTH

A1.4

PRELIMINARY PROJECT MASTER PLAN

SCALE : 1"=60'

DATE: 04-28-22

JOB NO.: 2021-230

The Terraces at Murrieta

SPARKMAN CT. & WALSH CENTER DR., MURRIETA, CA.(AP# 910-031-001 thru -005; 007; thru -010; -015; -017; -018; 910-031-021 thru -026; 910-190-012 thru -019)

GREYSTAR
444 So. Cedros Ave., STE-172, Solana Beach, Ca 92075
(858) 245-1937

AO ARCHITECTS
144 NORTH ORANGE ST., ORANGE, CA 92866
(714) 639-9860

Architecture.
Design.
Relationships.

Appendix B Site Photographs

Photograph 1: From the northwest portion of the site, on the small ridgeline looking south at the middle of the site that has been subject to routine disturbances and off-road vehicle activities.

Photograph 2: View of the northwest corner of the project site.

Photograph 3: Existing residential foundations on the northern portion of the site.

Photograph 4: View of the disturbed middle area on the project site.

Photograph 5: View looking south at the disturbed areas onsite.

Photograph 6: Looking west at the disturbed middle portion of the site.

Photograph 7: Looking at a patch of the buckwheat scrub plant community on a slope on the southern half of the project site.

Photograph 8: Disturbed are on the eastern boundary of the project site.

Photograph 9: Eucalyptus stand on the southeast corner of the site.

Photograph 10: Southern willow scrub/eucalyptus stand on the southeast corner of the project site associated with Drainage 1.

Photograph 11: Buckwheat scrub on the bank of Drainage 1.

Photograph 12: View looking south from the northern finger of Drainage 2.

Photograph 13: Looking at the location where the northern finger of Drainage 2 crosses an access road.

Photograph 14: Looking south at the area where the northern finger of Drainage 2 connects with the main drainage at the topographic low spot onsite.

Photograph 15: Looking west from the eastern boundary of Drainage 2. A small fire recently burned the vegetation in this portion of the drainage.

Photograph 16: View of the western portion of Drainage 2.

Photograph 17: 36-inch culvert that Drainage 2 flows into on the western boundary of the site.

Photograph 18: Looking at the culvert that receives water flows from Drainage 2 and conveys water under Interstate 15.

Photograph 19: Main culvert that conveys flows into Drainage 1 on the southeast corner of the site.

Photograph 20: From the eastern boundary of Drainage 1, looking at the area that is subject to urban runoff.

Photograph 21: One of the culverts that conveys flows into Drainage 1 on the southeast corner of the site.

Photograph 22: Looking at the western portion of Drainage 2.

Photograph 23: Looking at the middle portion of Drainage 2.

Photograph 24: View of the western portion of Drainage 1.

Photograph 25: From the western boundary of Drainage 1 looking east.

Photograph 26: Looking at the culvert at the western end of Drainage 1 that receives water flows from Drainage 1 and conveys under Murrieta Hot Springs Road.

Photograph 27: From the northwest corner of the project site looking north along Monroe Avenue where street improvements will occur.

Photograph 28: Looking at the low water crossing associated with Monroe Avenue.

Photograph 29: From the low water crossing within Monroe Avenue, looking west at the drainage feature.

Photograph 29: From the low water crossing within Monroe Avenue, looking eastt at the drainage feature.

Photograph 31: Looking north along Monroe Avenue where street improvements will occur, north of the low water crossing.

Photograph 32: Looking at the intersection of Monroe Avenue and Los Alamos Road.

Appendix C Potentially Occurring Special-Status Biological Resources

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

Scientific Name Common Name	**Status**	**Habitat**	**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.	No	**Moderate**. There is suitable foraging and nesting habitat on-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.	No	**Moderate.** There is suitable foraging habitat, but no suitable nesting habitat on-site. This species is adapted to urban environments and occurs commonly. Does not nest in this region.
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 [*Schoenoplectus* sp.]), and either flooded or thorny or spiny vegetation and suitable foraging space providing adequate insect prey.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
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.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Anaxyrus californicus arroyo toad	Fed: **END** CA: SSC	Occurs in washes and intermittent streams with a mixture of gravel and sandy substrate. Requires a moderate cover of willows, cottonwoods, mulefat, and sycamore to provide shade over the water, and oaks in the upland area to forage for ants.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is 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	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Arizona elegans occidentalis California glossy snake	Fed: None CA: SSC	Inhabits arid scrub, rocky washes, grasslands, and chaparral habitats.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Artemisiospiza belli belli Bell's sage 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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Asio flammeus short-eared owl	Fed: None CA: SSC	Suitable habitats include salt- and freshwater marshes, irrigated alfalfa or grain fields, and ungrazed grasslands and old pastures. Tule marsh or tall grasslands with cover 30 to 50 cm in height can support nesting pairs.	No	**Presumed absent.** No suitable habitat is 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.	No	**Low.** Even though heavily disturbed and isolated from undisturbed native habitats, the buckwheat scrub plant community provides minimal habitat.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Aspidoscelis tigris stejnegeri coastal whiptail	Fed: None CA: SSC	Found in a variety of ecosystems, primarily hot and dry open areas with sparse foliage - chaparral, woodland, and riparian areas.	No	**Low.** Even though heavily disturbed and isolated from undisturbed native habitats, the buckwheat scrub plant community provides minimal habitat.
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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Baeolophus inornatus oak titmouse	Fed: None CA: None	Common resident in a variety of habitats, but primarily associated with oaks. Occurs in montane hardwood-conifer, montane hardwood, blue, valley, and coastal oak woodlands, and montane and valley foothill riparian habitats in cismontane California, from the Mexican border to Humboldt Co. Range encircles San Joaquin Valley, extending east from the coast through Kern Co. onto the western slope of the Sierra Nevada north to Shasta Co.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Bombus crotchii Crotch bumble bee	Fed: None CA: CE	Exclusive to coastal California east towards the Sierra-Cascade Crest; less common in western Nevada.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
Branchinecta sandiegonensis San Diego fairy shrimp	Fed: **END** CA: None	Occurs only in small, shallow vernal pools which range in depth from 2-12 inches and water temperature from 50-68 ˚F.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
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	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Chaetodipus californicus femoralis Dulzura pocket mouse	Fed: None CA: SSC	Found most often in grass-chaparral edges, but may also be found in coastal scrub or other habitats, primarily in San Diego County.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
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.	No	**Presumed absent.** No suitable habitat is 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.	No	**Presumed absent.** No suitable habitat is 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	**Presumed absent.** No suitable habitat is present on-site.
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.	No	**Presumed absent.** No suitable habitat is present on-site.
Dipodomys simulans Dulzura kangaroo rat	Fed: None CA: None	Relatively common in chaparral, coastal sage scrub, Riversidean alluvial fan sage scrub, and peninsular juniper woodland habitats.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Dipodomys stephensi Stephens' kangaroo rat	Fed: **END** 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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
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.	No	**Presumed absent.** No suitable habitat is present within or adjacent to the project site.
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	**Presumed absent.** No suitable habitat is 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).	No	**Presumed absent.** No suitable habitat is present on-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.	No	**Moderate.** Minimal foraging and nesting habitat is present within undeveloped portions of the 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	**Low.** The project site does not provide suitable roosting habitat (i.e., buildings, bridges, miens, or caves). The project site provides minimal foraging habitat and the eucalyptus trees provide day resting opportunities.
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.	No	**Presumed absent.** No suitable habitat is present on-site.
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.	No	**Presumed absent.** No suitable habitat is present on-site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
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.	No	**Presumed absent.** No suitable habitat is present on-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.	No	**Presumed absent.** No suitable habitat is present on-site.
Gila orcuttii arroyo chub	Fed: None CA: SSC	Warm streams of the Los Angeles Plain, which are typically muddy torrents during the winter, and clear quiet brooks in the summer, possibly drying up in places. They are found both in slow-moving and fast-moving sections, but generally deeper than 40 cm.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent.** No suitable habitat is present on-site.
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.	No	**Presumed absent.** No suitable habitat is present on-site.
Lepus californicus bennettii San Diego black-tailed jackrabbit	Fed: None CA: SSC	Occurs in diverse habitats, but primarily is found in arid regions supporting shortgrass habitats. Openness of open scrub habitat is preferred over dense chaparral.	No	**Presumed absent.** No suitable habitat is present on-site.
Linderiella occidentalis Californica linderiella	Fed: None CA: None	Found in large, fairly clear vernal pools and lakes. Found in a variety of natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities.	No	**Presumed absent**. No suitable habitat is present.
Linderiella santarosae Santa Rosa Plateau fairy shrimp	Fed: None CA: None	Restricted to the Santa Rosa Plateau in Southern Interior Basalt Vernal Pools with cool clear to milky waters that are moderately predictable and remain filled for extended periods of time.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent.** No suitable habitat is present on-site.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
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.	No	**Presumed absent.** No suitable habitat is present on-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.	No	**Presumed absent.** No suitable habitat is present on-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.	No	**Presumed absent.** No suitable habitat is present on-site.
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.	No	**Presumed absent.** No suitable habitat is present on-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 partures and croplands. Nests in dense, fresh emergent wetland.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent.** No suitable habitat is present on-site.
Rana draytonii California red-legged frog	Fed: **THR** CA: SSC	Found mainly near ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover. Most common in lowlands or foothills. Frequently found in woods adjacent to streams. Occurs along the coast ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges.	No	**Presumed absent**. No suitable habitat is present.

Scientific Name Common Name	**Status**	**Habitat**	**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	**Presumed absent.** No suitable habitat is present on-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.	No	**Low.** Even though heavily disturbed and isolated from undisturbed native habitats, the project site was determined to provide minimal habitat. The project site is subject to routine anthropogenic disturbances, and beside the nuisance flows with Drainage 1, no surface soil cracks or ponded areas were observed onsite that would provide suitable habitat for these species.
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	**Presumed absent.** No suitable habitat is present on-site.
Streptocephalus woottoni Riverside fairy shrimp	Fed: **END** CA: None	Freshwater crustacean that is found in vernal pools in the coastal California area.	No	**Presumed absent**. No suitable habitat is present.
Taricha torosa Coast Range newt	Fed: None CA: SSC	Resides in coastal areas. Found near small ponds, creeks, and seeps in woodlands and chaparral.	No	**Presumed absent**. No suitable habitat is present.
Thamnophis hammondii two-striped garter snake	Fed: None CA: SSC	Generally found around pools, creeks, cattle tanks, and other water sources, often in rocky areas, in oak woodland, chaparral, brushland, and coniferous forest.	No	**Presumed absent**. No suitable habitat is present.

Scientific Name Common Name	**Status**	**Habitat**	**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.	No	**Presumed absent**. No suitable habitat is present. The southern willow scrub habitat onsite is dominated by eucalyptus with minimal vegetation in its understory. This plant community does not support a dense riparian plant community typically associated with this species.
Xanthocephalus xanthocephalus yellow-headed blackbird	Fed: None CA: SSC	Occurs in freshwater emergent wetlands, and moist, open areas along croplands and mud flats of lacustrine habitats. Prefers to nest in dense wetland vegetation characterized by tules, cattails, or other similar plant species along the border of lakes and ponds.	No	**Presumed absent**. No suitable habitat is present.
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 ranges from January to September.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent**. No suitable habitat is present.
Almutaster pauciflorus alkali marsh aster	Fed: None CA: None CNPS: 2B.2	Occurs in wet alkaline and saline soils on shorelines, streambanks, marshes, and seeps with open exposure. Found in elevations from 343 to 2,594 feet. Blooming period ranges from June to October.	No	**Presumed absent**. No suitable habitat is present.
Amsinckia douglasiana Douglas' fiddleneck	Fed: None CA: None CNPS: 4.2	Occurs in rocky, dry soils in cismontane woodlands and valley and foothill grasslands. Found at elevations ranging from 492 to 5,249 feet. Blooming period ranges from March to May.	No	**Presumed absent**. No suitable habitat is present.
Arctostaphylos rainbowensis rainbow manzanita	Fed: None CA: None CNPS: 1B.1	Habitats include vernally mesic areas, sandy coastal bluff scrub, coastal dunes, and mesic coastal prairie. Found at elevations ranging from 3 to 164 feet. Blooming period is from March to May.	No	**Presumed absent**. No suitable habitat is present. The project site occurs outside of the known elevation range for this species.
Ayenia compacta California ayenia	Fed: None CA: None CNPS: 2B.3	Occurs in rocky soils within Mojavean desert scrub and Sonoran desert scrub. Found at elevations ranging from 500 to 3,600 feet. blooming period is from March to April.	No	**Presumed absent**. No suitable habitat is present.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
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.	No	**Presumed absent**. No suitable habitat is present.
Brodiaea orcuttii Orcutt's bridiaea	Fed: None CA: None CNPS: 1B.1	Occurs mostly on mesic, clay habitats and sometimes in serpentine soils. Usually found in vernal pools, valley and foothill grassland, closed-cone coniferous forest, cismontane woodland, chaparral, meadows and seeps, and other small drainages. Found at elevations ranging from 98 to 5,561 feet. Blooming period ranges from May to July.	No	**Presumed absent**. No suitable habitat is present.
Brodiaea santarosae Santa Rosa basalt brodiaea	Fed: None CA: None CNPS: 1B.2	Occurs primarily in soils derived from the Santa Rosa Basalt rock formation; open areas, grasslands, vernal pool edges. Grows in elevations ranging from 1,854 to 3,428 feet. Blooming period is from May to June.	No	**Presumed absent**. No suitable habitat is present. The project site occurs outside of the known elevation range for this species.
Calochortus catalinae Catalina mariposa-lily	Fed: None CA: None CNPS: 4.2	Grows in chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland habitats. Found at elevations ranging from 49 to 2,297 feet. Blooming period is from March to June.	No	**Presumed absent**. No suitable habitat is present.
Calochortus weedii* var. *intermedius intermediate mariposa-lily	Fed: None CA: None CNPS: 1B.2	Prefers rocky, calcareous soils in chaparral, valley and foothill grassland, and coastal sage scrub habitats. From 360 to 2,265 feet in elevation. Blooming period is from May to July.	No	**Presumed absent**. No suitable habitat is present.
Centromadia pungens* ssp. *laevis smooth tarplant	Fed: None CA: None CNPS: 1B.1	Occurs in alkaline soils within chenopod scrub, meadows and seeps, playas, riparian woodland, and valley and foothill grassland habitats. Grows in elevation from 0 to 2,100 feet. Blooming period ranges from April to September.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent**. No suitable habitat is present.
Clinopodium chandleri San Miguel savory	Fed: None CA: None CNPS: 1B.2	Grows in chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland, usually in rocky, gabbroic, or metavolcanic substrate. Found at elevations ranging from 394 to 3,527 feet. Blooming period is from March to July.	No	**Presumed absent**. No suitable habitat is present.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Convolvulus simulans small-flowered morning-glory	Fed: None CA: None CNPS: 4.2	Found in clay and serpentinite seeps within chaparral (openings), coastal scrub, valley and foothill grassland. Found at elevations ranging from 98 to 2,297 feet. Blooming period is from March to July.	No	**Presumed absent**. No suitable habitat is present.
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	**Presumed absent**. No suitable habitat is present.
Eryngium aristulatum* var. *parishii San Diego button-celery	Fed: **END** CA: **END** CNPS: 1B.1	Occurs in mesic soils in costal scrub and valley and foothill grasslands, and around vernal pools. Found at elevations ranging from 66 to 2,034 feet. Blooming period is from April to June.	No	**Presumed absent**. No suitable habitat is present.
Erythranthe diffusa Palomar monkeyflower	Fed: None CA: None CNPS: 4.3	Occurs in sandy soils in chaparral and lower montane coniferous forests. Found at elevations ranging from 4,002 to 6,004 feet. Blooming period is from April to June.	No	**Presumed absent**. No suitable habitat is present. The project site occurs outside of the known elevation range for this species.
Geothallus tuberosus Campbell's liverwort	Fed: None CA: None CNPS: 1B.1	Grows in mesic soils in coastal scrub and vernal pool habitats. Found at elevations ranging from 30 to 2,000 feet. This species does not bloom.	No	**Presumed absent**. No suitable habitat is present.
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 habitats. Grows in elevation from 66 to 3,133 feet. Blooming period ranges from March to May.	No	**Presumed absent**. No suitable habitat is present.
Hesperocyparis forbesii Tecate cypress	Fed None CA: None CNPS: 1B.1	Grows in clay, gabbroic, or metavolcanic soils within closed-cone coniferous forest and chaparral habitats. Found at elevations ranging from 260 to 4,920 feet.	No	**Presumed absent**. No suitable habitat is present.
Holocarpha virgata* ssp. *elongata curving tarplant	Fed: None CA: None CNPS: 4.2	Found in chaparral, coastal scrub, valley and foothill grassland, and cismontane woodland. Found at elevations from 197 to 3,609 feet. Blooming period is from May to November.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent**. No suitable habitat is present.
Juglans californica southern California black walnut	Fed: None CA: None CNPS: 4.2	Found in chaparral, cismontane woodland, coastal scrub, and riparian woodland habitats. Found at elevations ranging from 164 to 2,953 feet. Blooming period is from March to August.	No	**Presumed absent**. No suitable habitat is present.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Juncus acutus* ssp. *leopoldii southwestern spiny rush	Fed: None CA: None CNPS: 4.2	Found in coastal dunes (mesic), meadows and seeps (alkaline seeps), and marshes and swamps (coastal salt). Found at elevations ranging from 0 to 3,115 feet. Blooming period is from May to July.	No	**Presumed absent**. No suitable habitat is present.
Juncus luciensis Santa Lucia dwarf rush	Fed: None CA: None CNPS: 1B.2	Occurs in wet soils in vernal pools, seeps, streambanks, and meadows. Found at elevations randing from 984 to 6,233 feet. Blooming period is from April to July.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent**. No suitable habitat is present.
Lathyrus splendens pride-of-California	Fed: None CA: None CNPS: 4.3	Occurs in highly vegetated chaparral. Found at elevations to 3,444 feet. Blooming period is from March to June.	No	**Presumed absent**. No suitable habitat is present.
Lepidium virginicum var. robinsonii Robinson's pepper-grass	Fed: None CA: None CNPS: 4.3	Dry soils on chaparral and coastal sage scrub from 66 to 4,396 feet in elevation. Blooming period ranges from January to July.	No	**Presumed absent**. No suitable habitat is present.
Lilium parryi lemon lily	Fed: None CA: None CNPS: 1B.2	Prefers lower montane coniferous forest, riparian forests, upper montane coniferous forests, meadows and seeps. Found at elevations ranging from 4,003 to 9,006 feet. Blooming period is from July to August.	No	**Presumed absent**. No suitable habitat is present. The project site occurs outside of the known elevation range for this species.
Limnanthes alba* ssp. *parishii Parish's meadowfoam	Fed: None CA: **END** CNPS: 1B.2	Grows in vernally mesic soils within lower montane coniferous forest, meadow and seep, and vernal pool habitats. Found at elevations ranging from 1,970 to 6,560 feet. Blooming period is from April to June.	No	**Presumed absent**. No suitable habitat is present.
Microseris douglasii* ssp. *platycarpha small-flowered microseris	Fed: None CA: None CNPS: 4.2	Occurs in clay soils in cismontane woodland, coastal scrub, valley and foothill grasslands, and around vernal pools. Found at elevations ranging from 49 to 3,510 feet. Blooming period is from March to May.	No	**Presumed absent**. No suitable habitat is present.
Monardella hypoleuca* ssp. *intermedia intermediate monardella	Fed: None CA: None CNPS 1B.3	Grows in understories within chaparral, cismontane woodland, and occasionally lower montane coniferous forest habitats. Found at elevations ranging from 1,300 to 4,100 feet. blooming period is from April to September.	No	**Presumed absent**. No suitable habitat is present.
Myosurus minimus* ssp. *Apus little mousetail	Fed: None CA: None CNPS: 3.1	Occurs in areas that have semi-regular inundation in association with vernal pools, alkali vernal pools, and alkali grassland. The species is primarily restricted to clay or alkali soils on alkali vernal floodplains. Found at elevations ranging from 66 to 2,100 feet above msl. Blooming period is from March to June.	No	**Presumed absent**. No suitable habitat is present.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
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.	No	**Presumed absent**. No suitable habitat is present.
Navarretia prostrata prostrate vernal pool navarretia	Fed: None CA: None CNPS: 1B.2	Coastal scrub, valley and foothill grasslands, and vernal pools. Grows in elevation from 49 to 2,297 feet in elevation. Blooming period ranges from April to July.	No	**Presumed absent**. No suitable habitat is present.
Orcuttia californica California Orcutt grass	Fed: **END** CA: **END** CNPS: 1B.1	Primarily restricted to the southern basaltic claypan vernal pools at the Santa Rosa Plateau, and alkali vernal pools at Skunk Hollow, and at Salt Creek. Grows in elevations ranging from 45 to 2,165 feet above msl. Blooming period is from April to August.	No	**Presumed absent**. No suitable habitat is present.
Polygala cornuta* var. *fishiae Fish's milkwort	Fed: None CA: None CNPS: 4.3	Occurs in chaparral, cismontane woodland, and riparian woodland. Found at elevations ranging from 328 to 3,281 feet. Blooming period is from May to August.	No	**Presumed absent**. No suitable habitat is present.
Pseudognaphalium leucocephalum white rabbit-tobacco	Fed: None CA: None CNPS: 2B.2	Chaparral, cismontane woodland, coastal scrub, riparian woodlands in sandy gravelly soils. Grows in elevation from 3 to 6,890 feet in elevation. Blooming period ranges from July to December.	No	**Presumed absent**. No suitable habitat is present.
Quercus engelmannii Engelmann oak	Fed: None CA: None CNPS: 4.2	Occurs in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland. Found at elevations ranging from 164 to 4,265 feet. Blooming period is from March to June.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Presumed absent**. No suitable habitat is present.
Scutellaria bolanderi ssp. austromontana southern mountains skullcap	Fed: None CA: None CNPS: 1B.2	Typically grows on the moist embankments of montane creeks. Found at elevations ranging from 1,936 to 7,841 feet above msl. Blooming period is from June to August.	No	**Presumed absent**. No suitable habitat is present. The project site occurs outside of the known elevation range for this species.
Sibaropsis hammittii Hammitt's clay-cress	Fed: None CA: None CNPS: 1B.2	Grows in clay soils within openings of chaparral habitat and valley and foothill grassland habitats. Found at elevations ranging from 2,360 to 3,500 feet. Blooming period is from March to April.	No	**Presumed absent**. No suitable habitat is present. The project site occurs outside of the known elevation range for this species.
Sphaerocarpos drewei bottle liverwort	Fed: None CA: None CNPS: 1B.2	Grows in openings within chaparral and coastal scrub habitats. Found at elevations ranging from 200 to 1,970 feet. This species does not bloom.	No	**Low.** The RSS on the foothills of the Santa Rosa Mountains have the potential to provide suitable habitat.

Scientific Name Common Name	**Status**	**Habitat**	**Observed On-site**	**Potential to Occur**
Symphyotrichum defoliatum San Bernardino aster	Fed: None CA: None CNPS: 1B.2	Coastal scrub, valley and foothill grasslands, and vernal pools. Grows in elevation from 49 to 2,297 feet in elevation. Blooming period ranges from April to July.	No	**Presumed absent**. No suitable habitat is present.
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.	No	**Absent**
Southern Interior Basalt Flow Vernal Pool	CDFW Sensitive Habitat	Found only on the Santa Rosa Plateau in Western Riverside County, dominated by native annual plants, with low to moderate levels of perennial herbaceous cover. Concentric rings of flora species often present as the pool evaporates.	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.	No	**Absent**
Valley Needlegrass Grassland	CDFW Sensitive Habitat	Occur as patches of native grasslands within valleys. Dominated by perennial bunch grasses with herbaceous annuals intermixed. Supports early successional sub-shrub and suffrutescent species.	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

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

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the filling of "waters of the U.S.," including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under 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." In order to further define the scope of waters protected under the CWA, the Corps and EPA published the Clean Water Rule on June 29, 2015. Pursuant to the Clean Water Rule, the term "*waters of the United States*" is defined as follows:

(i) All waters which are 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) All interstate waters, including interstate wetlands[1].

(iii) The territorial seas.

(iv) All impoundments of waters otherwise defined as waters of the United States under the definition.

(v) All tributaries[2] of waters identified in paragraphs (i) through (iii) mentioned above.

(vi) All waters adjacent[3] to a water identified in paragraphs (i) through (v) mentioned above, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

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1 The term *wetlands* means those areas that are inundated or saturated by surface or groundwater 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.

2 The terms *tributary* and *tributaries* each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (iv) mentioned above), to a water identified in paragraphs (i) through (iii) mentioned above, that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark.

3 The term *adjacent* means bordering, contiguous, or neighboring a water identified in paragraphs (i) through (v) mentioned above, including waters separated by constructed dikes or barriers, natural river berms, beach dunes, and the like.

(vii) All prairie potholes, Carolina bays and Delmarva bays, Pocosins, western vernals pools, Texas coastal prairie wetlands, where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (i) through (iii) meantioned above.

(viii) All waters located within the 100-year floodplain of a water identified in paragraphs (i) through (iii) mentioned above and all waters located within 4,000 feet of the high tide line or ordinary high water mark of a water identified in paragraphs (i) through (v) mentioned above, where they are determined on a case-specific basis to have a significant nexus to a waters identified in paragraphs (i) through (iii) mentioned above.

The following features are not defined as "waters of the United States" even when they meet the terms of paragraphs (iv) through (viii) mentioned above:

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

(ii) Prior converted cropland.

(iii) The following ditches:

- (A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
- (B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
- (C) Ditches that do not flow, either directly or through another water, into a water of the United States as identified in paragraphs (i) through (iii) of the previous section.

(iv) The following features:

- (A) Artificially irrigated areas that would revert to dry land should application of water to that area cease;
- (B) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;
- (C) Artificial reflecting pools or swimming pools created in dry land;
- (D) Small ornamental waters created in dry land;
- (E) Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;
- (F) Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of a tributary, non-wetland swales, and lawfully constructed grassed waterways; and
- (G) Puddles.

(v) Groundwater, including groundwater drained through subsurface drainage systems.

(vi) Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

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

THE TERRACES

CITY OF MURRIETA, RIVERSIDE COUNTY, CALIFORNIA

DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Prepared For:

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August 2022

THE TERRACES

CITY OF MURRIETA, 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

August 2022

Executive Summary

ELMT Consulting (ELMT) has prepared this updated Delineation of State and Federal Jurisdictional report for The Terraces Project (project) located in the City of Murrieta, 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]

Three (3) unnamed drainage features (Drainages 1, 2and 3) were observed within the boundaries of the project site. Drainage 1 generally flows in an east to west direction on the southeast corner of the project site, and only conveys large surface flows in direct response to precipitation and urban runoff. Within Drainage 1, a small wetland was observed at the easternmost portion of the drainage that is subject to a continual water source from urban runoff. Drainage 2 is an ephemeral feature that generally flows in an east to west direction in the middle of the northern portion of the project site and only conveys flows in direct response to precipitation. Drainage 3 flows in an east to west direction across Monroe Avenue via a low water crossing within the offsite improvement area. These drainage features eventually discharge into Murrieta Creek, which exhibits a surface hydrologic connection to the Santa Margarita River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water). Therefore, Drainages 1, 2, and 3 will likely qualify as waters of the United States and falls under the regulatory authority of the Corps, waters of the State under the regulatory authority of the Regional Board, and jurisdictional streambed under the regulatory authority of CDFW. Placement of fill and/or alteration within these jurisdictional area is subject to Corps, Regional Board, and CDFW jurisdiction and approval. Table ES-1 identifies the on-site jurisdictional including the total acreage of jurisdiction and anticipated impacts for each regulatory agency within the boundaries of the project site.

Area Intentionally Left Blank

[1] The field surveys for this jurisdictional delineation were conducted on August 18, 2021 and June 14, 2022 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).

Table ES-1: Jurisdictional Area and Impact Analysis

Jurisdictional Feature	Corps/Regional Board Jurisdiction		CDFW Jurisdictional Streambed/Riparian Habitat	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	0.27 (570)	0.05 (73)	0.73 (570)	0.17 (88)
Wetland 1 (part of Drainage 1)	0.05	0.04	0.05	0.04
Drainage 2	0.06 (795)	0.06 (795)	0.06 (795)	0.06 (795)
Drainage 3	0.03 (50)	0.03 (50)	0.03 (50)	0.03 (50)
TOTAL	**0.41 (1,415)**	**0.18 (918)**	**0.87 (1,415)**	**0.3 (933)**

The project applicant will likely be required to obtain the following regulatory approvals prior to impacts occurring within the identified jurisdictional areas: Corps CWA Section 404 Permit; Regional Board CWA Section 401 Water Quality Certification; and CDFW Section 1602 Streambed Alteration Agreement (SAA). 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 Terraces 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 18, 2021.

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 east of Interstate 15, west of Interstate 215, and south of State Route 74 in the City of Murrieta, Riverside County, California (refer to Exhibit 1, *Regional Vicinity*). The site is depicted on the Murrieta quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map within an unsectioned portion of Township 7 South, Range 3 West (refer to Exhibit 2, *Site Vicinity*). Specifically, the project site is bordered by Murrieta Hot Springs Road to the south, Vista Murrieta to the north, Interstate 15 to the west, and Sparkman Court (Exhibit 3, *Project Site*). Additionally, offsite road improvements will occur along Monroe Avenue from Los Alamos Road to the project site.

1.2 PROJECT DESCRIPTION

The proposed Project would construct 899 apartment units on a 38.7 gross (31.39 net) acre Site located north of Murrieta Hot Springs Road, west of Interstate 15, east of the existing Sparkman Court corridor and south of Vista Murrieta Road in the City of Murrieta, California (APNs 910-031-001, -002, -003, -004, -005, -007, -008, -009, -010, -015, -017, -018, -021, -022, -023, -024, -025 and -026; 949-190-012, -013, -014, -015, -016 -017, -018 and -019). The Site is bordered to the south by Murrieta Hot Springs Road and undeveloped land, to the west by the Interstate 15 corridor, to the north by Vista Murrieta Road and single-family residences, and to the east by Sparkman Court and office research park uses.

The Project consists of 11, four-story apartment buildings and 12 two-story carriage unit buildings in two phases. Phase I consists of buildings B1 and B6-B11 containing 634 one-, two- and three-bedroom units ranging in size from 743 square feet to 1,292 square feet. A total of 24 two-story, one-bedroom/one-bathroom (1,052 square feet) carriage units will also be constructed in Phase I. A total of 1,135 parking spaces (312 garage spaces, 216 tandem spaces, 22 parallel and 585 open stall) will be provided. A leasing center, clubhouse, swimming pool and various walking paths and green space areas will be provided throughout the Project. A dog park and other outdoor open space area will be provided at the northeast corner of the Site. Phase 2 consists of 241 one- and two-bedroom units in Buildings B2-B5 and 379 parking spaces (86 garage, 86 tandem, 14 parallel and 193 open stalls). In total, the Project will provide 359 one-

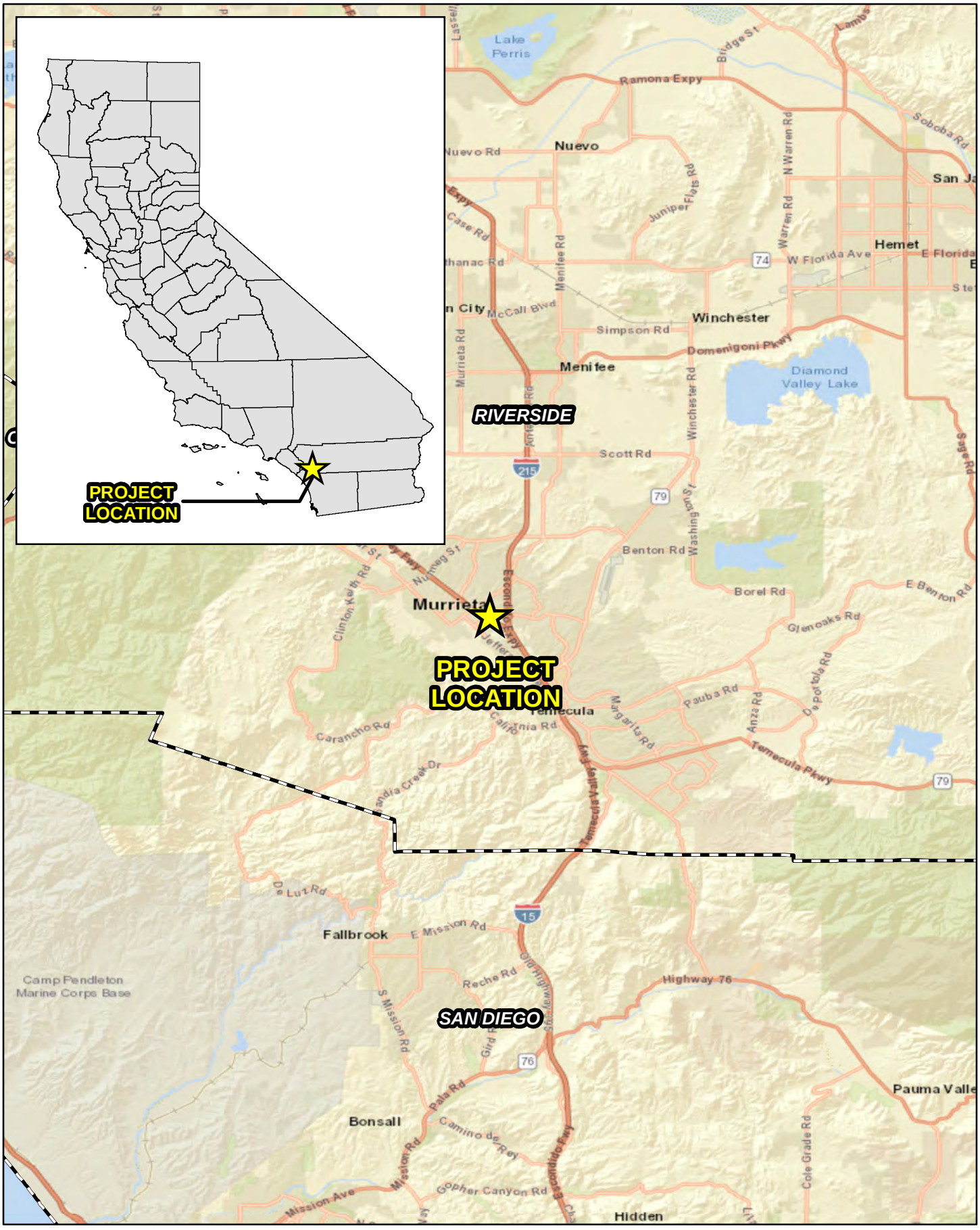
bedroom/one-bathroom units, 482 two-bedroom/two-bathroom units and 58 three-bedroom/two-bathroom units.

The main Project entrance will be on Monroe Avenue north of Murrieta Hot Springs Road. Secondary access will be provided from Vista Murrieta Road along the northern Site boundary. A 28-foot wide, paved and gated emergency vehicle access will be constructed along the southern Site boundary between Sparkman Court and the Interstate 15 northbound on-ramp. The Project will be required to construct a full width segment of Monroe Avenue in the Sparkman Court corridor from Walsh Center Drive southeast to the existing Eastern Municipal Water District (EMWD) wastewater lift station and then half width improvements will be required from that point south. These improvements will terminate just north of the intersection with Murrieta Hot Springs Road. The Project will be required to pay a fair share of costs to install a new traffic signal at the intersection of Sparkman Court (Monroe Avenue) and Murrieta Hot Springs Road. Further, half width frontage improvements (i.e., paving the road and adding curb/gutter/sidewalk) along Vista Murrieta Road between old Monroe Avenue northwest of the Site to the new Monroe Avenue alignment at the northeast corner of the Site will be required.

Eastern Municipal Water District (EMWD) will provide water and sewer service to the Site. The Project will extend existing sewer lines to the Site from an existing mainline located north of Sparkman Court/Monroe Avenue lift station. A new 18" water main will be installed in the old Monroe Avenue alignment from the northwest corner of the Site at the Vista Murrieta Road intersection north to Los Alamos Road. Construction will utilize an open trench on either side of an existing at-grade jurisdictional crossing. Directional drilling will be used to install the waterline under the jurisdictional feature to avoid directly impacting this resource. Wet and dry utility improvements will occur while road improvements are being installed to minimize the need for road closure and overall construction-related impacts to neighboring residents.

Offsite runoff will be treated with modular wetland systems. Onsite Project runoff will be treated with a combination of modular wetland systems and biofiltration basins. Both off- and on-site stormwater will be mitigated for hydromodification with underground basins. The total area dedicated to an on-site stormwater management system will be approximately 0.38 acres.

Project construction is scheduled to begin in late 2023 with Phase I completed in early 2026. Build out of Phase II is expected by 2028.



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

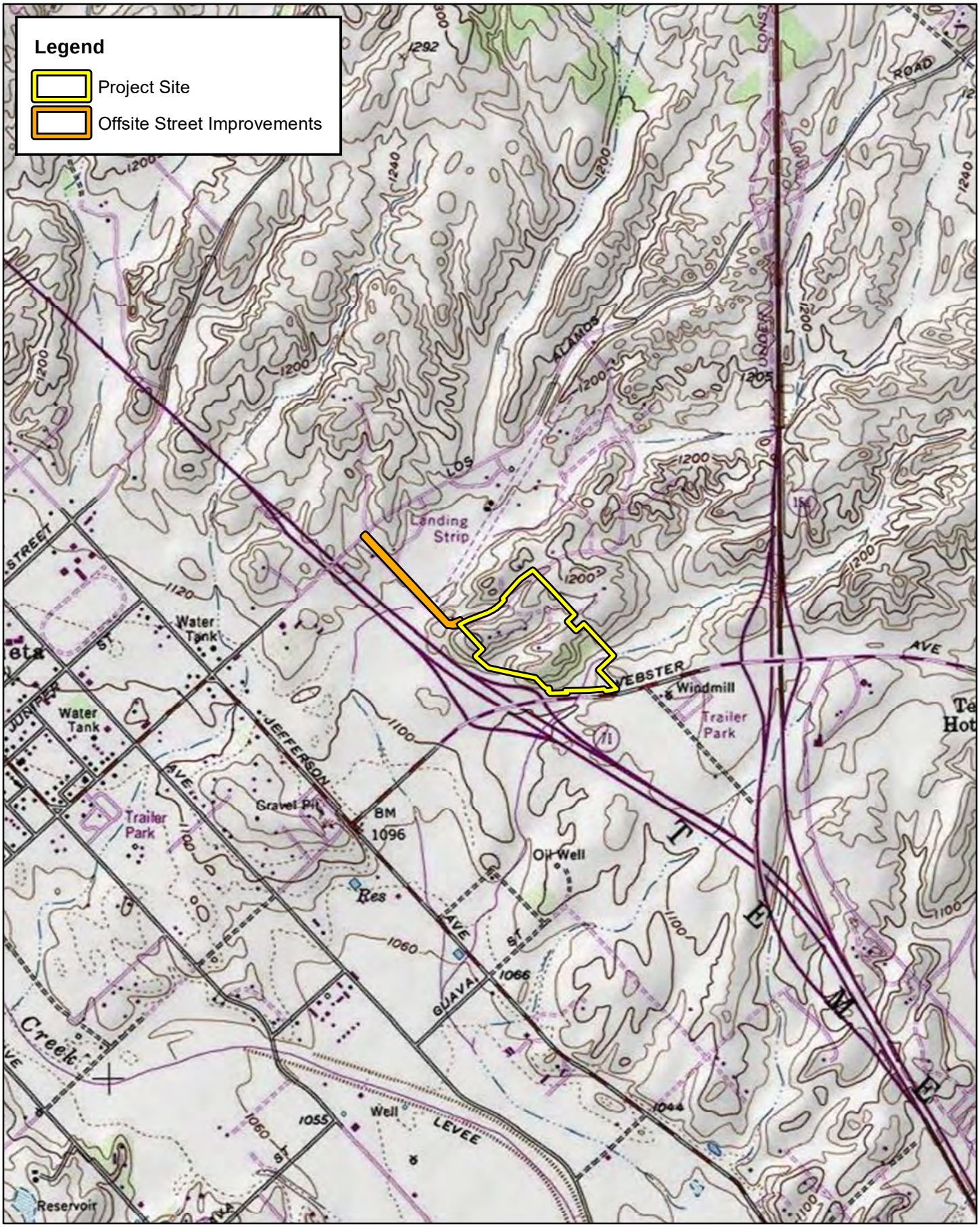
Regional Vicinity

ELMT CONSULTING

0 1.25 2.5 5 Miles

Source: World Street Map, Riverside County

Exhibit 1



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

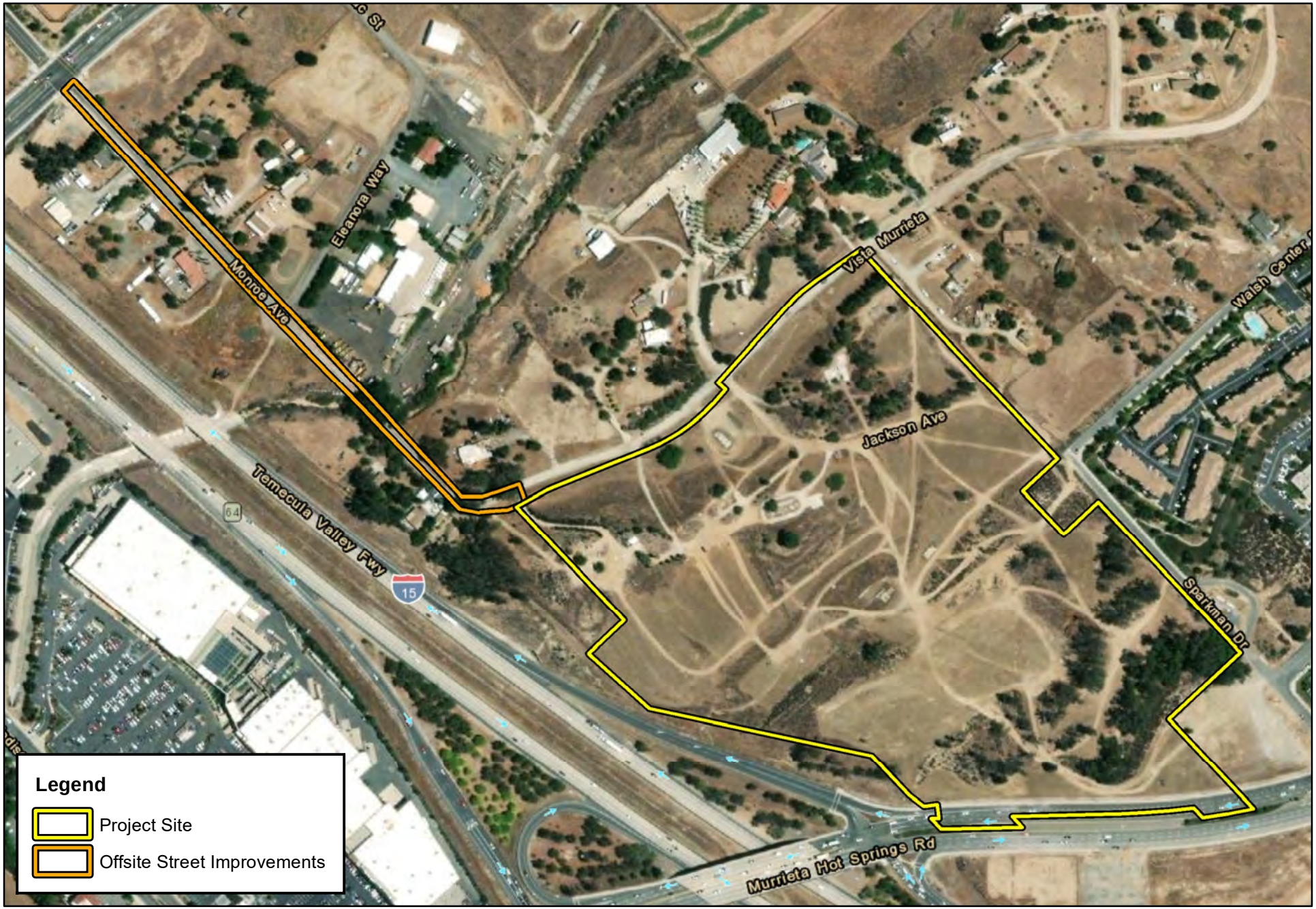
ELMT CONSULTING

0 1,000 2,000 4,000 Feet

Source: USA Topographic Map, Riverside County

Site Vicinity

Exhibit 2



ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Project Site

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 insure 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 Sate 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 field surveys and verification of site conditions conducted on August 18, 2021. 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.

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).

[4] CWA regulations 33 CFR §328.3(e).

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 A. 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 Murrieta Creek Subwatershed, which is a subset of the larger Santa Margarita Watershed (HUC 18070302). Murrieta Creek flows approximately 10.7 miles southeast of the project site. The size of this river is approximately 11.8 miles long. This reach of the river is considered impaired with copper, iron, manganese, nitrogen, phosphorous, and chlorpyrifos.

The Santa Margarita Watershed encompasses approximately 750 square miles in northern San Diego and southwestern Riverside counties. The watershed is bounded by several mountain ranges, including the Santa Ana and Santa Margarita mountains to the north and the Palomar Mountains to the south. Several tributaries originate on the Santa Rosa Plateau, a region known for its biological diversity and its abundant wetland resources. Currently, this watershed is primarily undeveloped, containing about 20% of urban development and agricultural land use. The upper watershed basin is one of the fastest growing areas in California.

The Santa Margarita Watershed consists of a single major drainage, the Santa Margarita River, which is comprised of several smaller tributaries. The mainstem begins at the confluence of Murrieta and Temecula Creeks. South flowing tributaries include Roblar, Deluz, and Sandia Creeks. Tributaries that flow north into the mainstem include Pechanga and Rainbow Creeks. The Santa Margarita River is approximately 27 miles long and is one of the last undammed rivers in Southern California, making it considered a valuable ecological resource. The mainstem enters the Santa Margarita estuary, which is connected to the Pacific Ocean.

4.2 LOCAL CLIMATE

Riverside County 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 frost and with chilly to cold morning temperatures common. Climatological data obtained from nearby weather stations indicates the annual precipitation averages 11.2 inches per year. Almost all of the precipitation in the form of rain occurs in the months between December and March, with hardly any occurring between the months of April and November. The wettest month is February, with a monthly average total precipitation of 3.31 inches, 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 82.6 and 46.5 degrees Fahrenheit (° F) respectively with July and August (monthly average high 100° F) being the hottest months and December (monthly average low 34° F) being the coldest.

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 Murrieta quadrangle of the United States Geological Survey's (USGS) 7.5-minute topographic map series within an unsectioned portion of Township 7 South, Range 3 West. The project site is ranges in elevation from 1,120 to 1,190 feet above mean sea level. On-site topography consists of rolling hills and valleys, with small ridgelines that historically supported residential developments.

4.4 AERIAL PHOTOGRAPH

Prior to conducting the field delineation, ELMT reviewed current and historical aerial photographs (1985-2021) of the project 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 is located in an area that consist of a mosaic of residential, commercial, institutional, and transportation related developments. At present, the site is bordered by rural residential developments to the north, multifamily homes and rural residential developments to the east, Murrieta Hot Springs Road and undeveloped land to the south, and Interstate 15 and commercial developments to the west. There are existing residential foundations on the northern boundary of the project site, undeveloped land that has been routinely disked/mowed and subject to off-road vehicle activities, and large stands of eucalyptus trees and ornamental trees onsite. There is an earthen storm drain on the southeast corner of the site that receives flows via three storm drain outlets that all flow into a concrete headwall that was constructed to convey storm flows from the site and under Murrieta Hot Springs Road.

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 NRCS USDA Web Soil Survey, the project site is underlain by Arlington and Greenfield fine sandy loam (8 to 15 percent slopes), Greenfield sandy loam, eroded (2 to 8 percent slopes), Hanford coarse sandy loam (2 to 8 percent slopes), and Ramona and Buren sandy loam (15 to 25 percent slopes) (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, none of the onsite soils have been listed as hydric in Western Riverside County.

4.7 NATIONAL WETLANDS INVENTORY

The USFWS NWI and the USGS National Hydrography Dataset were reviewed to determine if any blueline streams or riverine resources have been documented within or immediate surrounding the project site. Based on this review, one (1) riverine feature was documented on the southeast corner of the project site. No other features were identified as occurring within the boundary of the project. Refer to Appendix A, *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. 06065C2715G and 06065C2720G that project site is located within Zone X – areas determined to be outside the 0.2% annual chance floodplain, minimal risk of flooding. Refer to Appendix A, *Documentation*.

[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.

THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Soils

ELMT CONSULTING

0 125 250 500 Feet

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

Exhibit 4

Section 5 Site Conditions

ELMT biologist Travis J. McGill conducted a field delineation on August 18, 2021 and June 14, 2022 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.

Drainage 1

Drainage 1 is an unnamed drainage, that has been mapped as a blueline stream that flows in an east to west direction on the southeast corner of the project site for approximately 570 linear feet. Drainage 1 receives flows via three storm drain outlets on the southeast corner of the site and flows through an earthen channel to a culvert with a concrete headwall in the middle of the southern boundary of the site. This drainage was constructed to convey storm flows from the surrounding area and under Murrieta Hot Springs Road. The upper reach of Drainage 1 (easternmost end) can be considered an intermittent stream since it is subject to a continual water source from urban runoff/nuisance flows, and ponds in the eastern end of the drainage. The remainder to the drainage is ephemeral an only receives flows during large storm events. Approximately 1-3 inches of water was observed ponding on the eastern end of Drainage 1 during the survey. Evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM ranged from approximately 4-50 feet in width throughout the length of the drainage. Drainage 1 supports a southern willow scrub/eucalyptus stand plant community. This plant community is heavily mixed with native riparian plant species (mainly willows) and eucalyptus trees. Common plant species within this plant community include arroyo willow (*Salix lasiolepis*, FACW), black willow (*Salix gooddingii*, FACW), golden leaf willow (*Salix lucida*, NI), eucalyptus (*Eucalyptus sp*, FAC). fig (*Ficus carica*, FACU), Mexican fan palm (*Washingtonia robusta*, FACW), salt cedar (*Tamarix ramosissima*, NI), cottonwood (*Populus fremontii*, NI). This plant community is heavily degraded by the invasion of eucalyptus.

Drainage 2

Drainage 2 is an unnamed ephemeral drainage that flows in an east to west direction across the middle of the northern half of the project site for approximately 795 linear feet. Drainage 2 begins in the middle of the northern half of the project site in the topographic low spot on the property at the bottom of the rolling hills and only conveys water flows immediately following and during storm events. Drainage 2 exists the project site on the western boundary via a 36-inch culvert and eventually flows into another offsite culvert

under Interstate 15. No surface water was present within Drainage 2 during the site visit; however, evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM ranged from approximately 1-4 feet in width throughout the length of the drainage. The in-channel vegetation consisted of mostly non-native plant species including wild oat (*Avena fatua*, UPL), rigpgut (*Bromus diandrus*, NI), and short-podded mustard (*Hirschfeldia incana*, NI).

Drainage 3

Drainage 3 is an unnamed drainage, that has been mapped as a blueline stream east and west of Monroe Avenue. Drainage 3 flows in an east to west direction across Monroe Avenue within the offsite street improvement area via a low water crossing for approximately 50 linear feet before flowing offsite and into a concrete lined trapezoidal channel west of the project site at Interstate 15. Monroe Avenue, at the low water crossing, is paved with asphalt. Drainage 3 is ephemeral an only receives flows during large storm events. No surface water was present within Drainage 3 during the site visit; however, evidence of an OHWM was observed via scour, changes in substrate, shelving, and lack of vegetation. The OHWM was approximately 26 linear feet. The in-channel vegetation, outside of the existing paved road, consisted of eucalyptus trees. Common plant species within this plant community include eucalyptus, cottonwood. This plant community is heavily degraded by the invasion of eucalyptus.

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.

Drainage 1

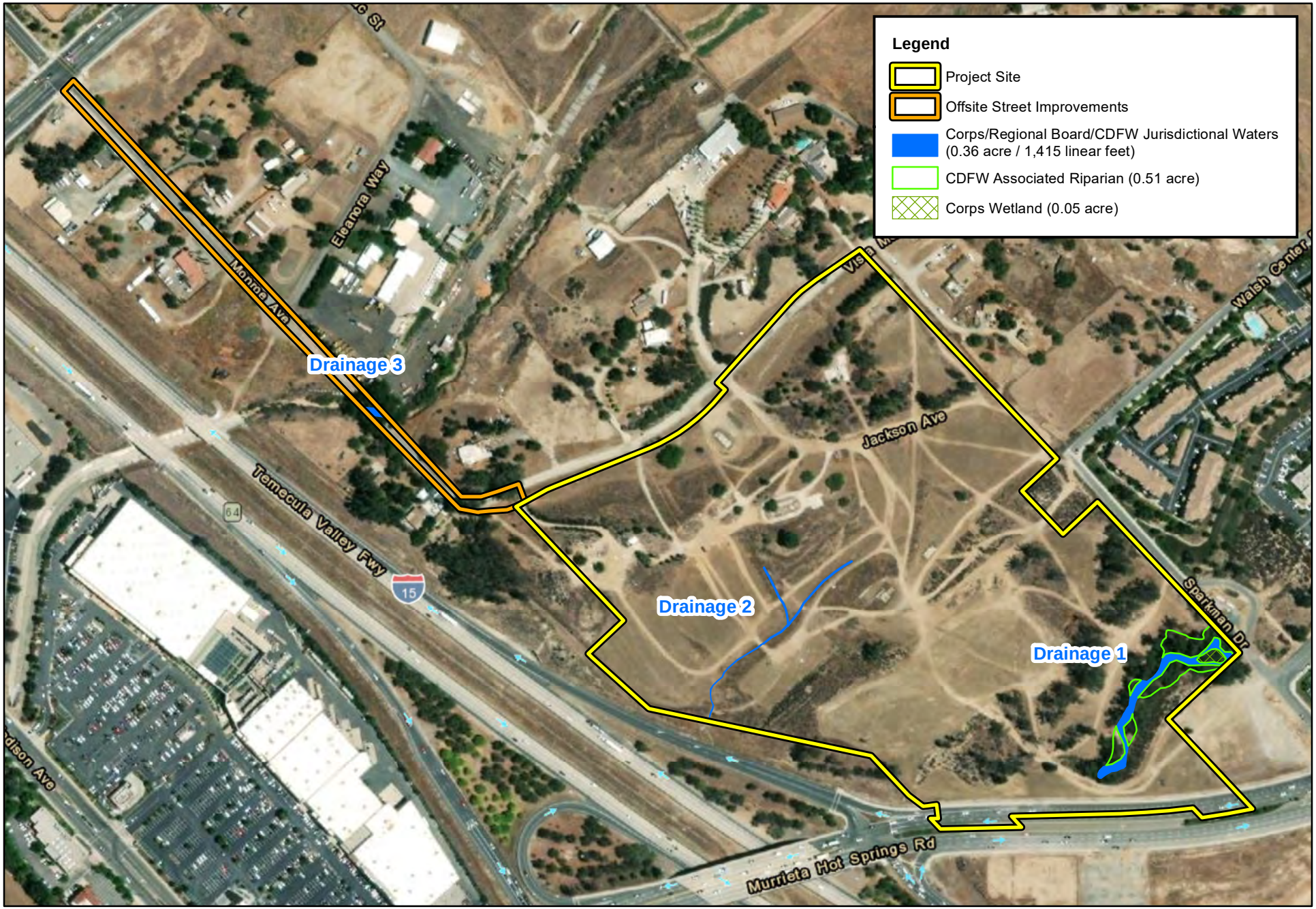
The area on the easternmost end of Drainage 1, that is subject to a continual water source from urban runoff, and ponding, would be considered a wetland. This portion of the drainage supports a dominance of willow plant species and holds water for a long enough period of time (from urban runoff) to create anaerobic conditions. No soil pits were dug due to the number of roots that were in the soils, and a soil sample was not able to be obtained. However, this portion of the drainage is always subject to urban runoff and continually has water. Refer to Appendix D, *Wetland Data Sheets*.

Drainage 2

No riparian vegetation or wetland obligate plant species were observed within Drainage 2. Further, Drainage 2 only conveys flows during and after storm events and does not hold water for long enough to create anaerobic condition, ultimately forming hydric soils. Therefore, Drainage 2 does not meet wetland requirements.

Drainage 3

No wetland obligate plant species were observed within Drainage 3. Further, Drainage 3 only conveys flows during and after storm events and does not hold water for long enough to create anaerobic condition, ultimately forming hydric soils. Therefore, Drainage 3 does not meet wetland requirements.



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Jurisdictional Areas

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

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

Drainage1, 2 and 3ultimately discharge into Murrieta Creek, which exhibits a surface hydrologic connection to the Santa Margarita River (Relatively Permanent Water) and ultimately the Pacific Ocean (Traditional Navigable Water). Therefore, Drainages 1, 2 and 3 will likely qualify as waters of the United States and falls under the regulatory authority of the Corps.

Approximately 0.41 acre (1,415 linear feet) of Corps jurisdiction is located within the boundaries of the project site. Based on the proposed project footprint, approximately 0.18 acre (918 linear feet) of Corps waters of the United State will be impacted from project implementation. Refer to Table 1 for a summary of on-site jurisdictional areas, and Exhibit 6, *Jurisdictional Impacts*, for an illustration of on-site Corps jurisdictional areas and anticipated impacts.

Table 1: Corps Jurisdictional Waters

Jurisdictional Feature	Corps Jurisdiction	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	0.27 (570)	0.05 (73)
Wetland 1 (part of Drainage 1)	0.05	0.04
Drainage 2	0.06 (795)	0.06 (795)
Drainage 3	0.03 (50)	0.03 (50)
TOTAL	**0.41 (1,415)**	**0.18 (918)**

6.1.2 WETLAND DETERMINATION

As previously noted, a small portion of Drainage 1 would qualify as a wetland. No wetlands were observed within Drainage 2 or 3.

6.2 REGIONAL WATER QUALITY CONTROL BOARD

No isolated conditions were observed within the boundaries of the Project site. Therefore, the Regional Board jurisdictional limit follows that of the Corps. Approximately 0.41 acre (1,415 linear feet) of Regional Board jurisdiction is located within the boundaries of the project site. Based on the proposed project footprint, approximately 0.18 acre (918 linear feet) of Regional Board waters of the State will be impacted from project implementation. Refer to Table 2 for a summary of on-site jurisdictional areas, and Exhibit 6,

Jurisdictional Impacts, for an illustration of on-site Regional Board jurisdictional areas and anticipated impacts.

Table 2: Regional Board Jurisdictional Waters

Jurisdictional Feature	Regional Board Jurisdiction	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1	0.27 (570)	0.05 (73)
Wetland 1 (part of Drainage 1)	0.05	0.04
Drainage 2	0.06 (795)	0.06 (795)
Drainage 3	0.03 (50)	0.03 (50)
TOTAL	**0.41 (1,415)**	**0.18 (918)**

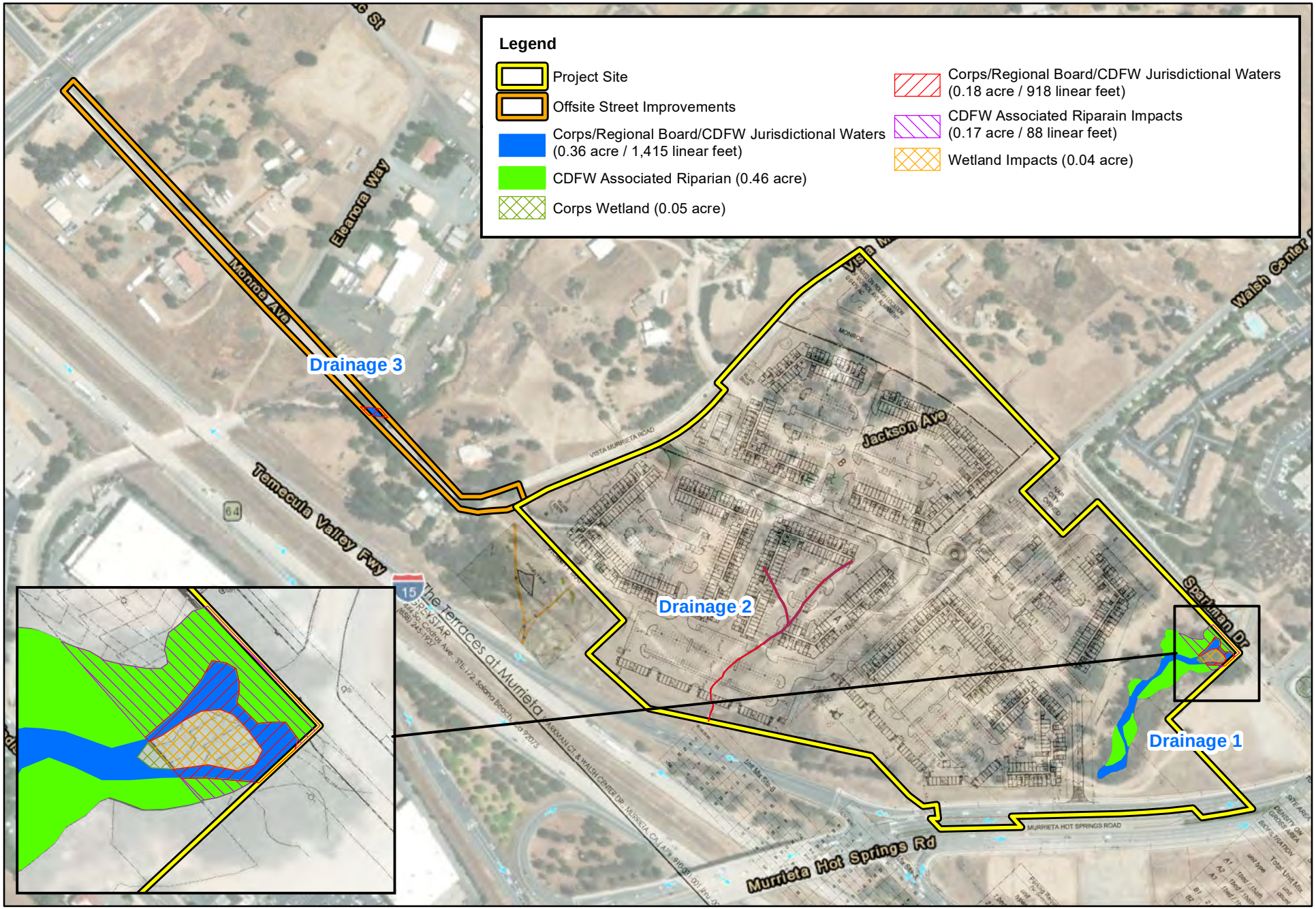
6.3 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

Drainages 1, 2 and 3 exhibit characteristics consistent with CDFW's methodology and would likely be considered CDFW streambed/riparian. Approximately 0.87 acre (1,415 linear feet) of CDFW jurisdictional areas, consisting of 0.36 acre of jurisdictional streambed, 0.05 acre of wetland, and 0.46 acre of associated riparian vegetation occur within boundaries of the project site. CDFW jurisdiction within Drainage 1 extends beyond the OHWM or streambed to the outer canopy of the riparian vegetation (southern willow scrub habitat). CDFW jurisdiction within Drainage 2 and 3 are synonymous with the Corps jurisdiction due to the lack of riparian vegetation.

Based on the proposed project footprint, approximately 0.3 acre (933 linear feet) of CDFW jurisdictional streambed/riparian habitat will be impacted from project implementation. Refer to Table 3 for a summary of on-site jurisdictional areas, and Exhibit 6, *Jurisdictional Impacts*, for an illustration of on-site CDFW jurisdictional areas and anticipated impacts.

Table 3: CDFW Jurisdictional Streambed

Jurisdictional Feature	CDFW Jurisdictional Streambed/Riparian Habitat	
	On-Site Jurisdiction Acreage (Linear Feet)	Jurisdictional Impacts Acreage (Linear Feet)
Drainage 1		
• Streambed	0.27 (570)	0.05 (88)
• Associated Riparian	0.46	0.12
• Wetland 1	0.05	0.04
Drainage 2	0.06 (795)	0.06 (795)
Drainage 3	0.03 (50)	0.03 (50)
TOTAL	**0.87 (1,415)**	**0.3 (933)**



THE TERRACES
DELINEATION OF STATE AND FEDERAL JURISDICTIONAL WATERS

Jurisdictional Impacts

ELMT CONSULTING

0 125 250 500 Feet

Source: ESRI Aerial Imagery, Riverside County

Exhibit 6

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, including wetlands, pursuant to Section 404 of the CWA. Therefore, any impacts to on-site jurisdictional areas will require a CWA Section 404 permit prior to project implementation.

In order to qualify for the Corps Nationwide Permit (NWP) program, project impacts to "waters of the United States" typically need to be under a designated acre threshold (typically 0.5 acre). If project impacts exceed the acreage threshold then a Standard Individual Permit (IP) with the Corps would need to be processed. The NWPs are a streamlined process that already have supporting National Environmental Protection Agency (NEPA) compliance completed. If a project does not meet the requirements of the NWPs then IP will need to be processed, which requires its own NEPA compliance document.

It should also be noted, in accordance with the Corps Los Angeles District Regional Conditions for the 2021 NWPs, the following conditions apply to projects within the Murrieta Creek Watershed:

> *Within the Murrieta Creek and Temecula Creek Watersheds in Riverside County the use of NWPs 29, 39, 42 and 43, and NWP 14 combined with any of those NWPs shall be restricted. The permanent impact or loss of stream bed plus any other losses of jurisdictional wetlands and non-wetland waters of the U.S. caused by the NWP activity cannot exceed 0.25 acre. The definition of "loss" for this regional condition is the same as the definition of "loss of waters of the United States" used for the Nationwide Permit Program.*

The proposed project is anticipated to impact 0.18 acre of Crops waters of the United States, which is less than the 0.25 acre threshold. As a result, impacts to Corps jurisdictional areas can be authorized via the NWP Program. It is anticipated that the project can be authorized via Nationwide Permit (NWP) No. 29: *Residential Developments* and/or NWP No. 39: *Commercial and Institutional Developments*. It should be noted that NWP No. 29 and 39 have a linear foot impact threshold of 300 linear feet for all intermittent and ephemeral streams. However, the Corps can waive this threshold upon request through the submission of a Section 404 pre-construction notification.

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 CWA Section 401 Water Quality Certification prior to project implementation. Therefore, it will be necessary for the applicant to acquire a CWA Section 401 Water Quality 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. Therefore, any impacts to the on-site jurisdictional areas will require a Section 1602 Streambed Alteration Agreement from the CDFW prior to project implementation. The notification will require a processing fee which is based on the term and cost of the proposed Project. It should also be noted that the CDFW requires that the payment of the process fee be paid and CEQA compliance be obtained prior to the issuance of the final Section 1602 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.

Section 8 References

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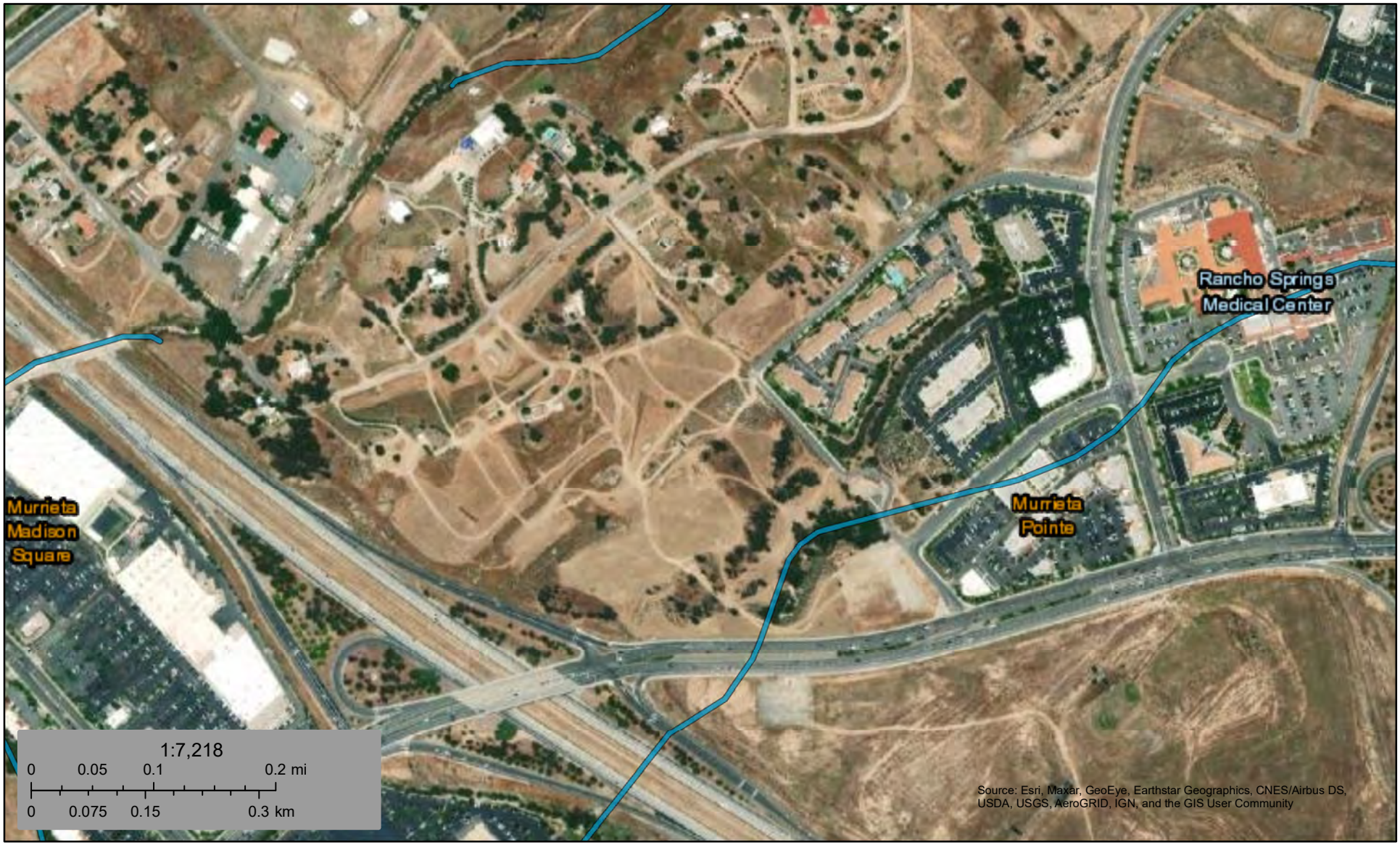
Appendix A Documentation

U.S. Fish and Wildlife Service
National Wetlands Inventory

The Terraces



October 7, 2021

Wetlands

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

NOTES TO USERS

p is for use in administering the National Flood Insurance Program. It r necessarily identify all areas subject to flooding, particularly from local sources of small size. The **community map repository** should be t for possible updates or additional flood hazard information.

n more detailed information in areas where **Base Flood Elevations** and/or **floodways** have been determined, users are encouraged to consult d Profiles and Floodway Data and/or Summary of Stillwater Elevations ntained within the Flood Insurance Study (FIS) report that accompanies M. Users should be aware that BFEs shown on the FIRM represent whole-foot elevations. These BFEs are intended for flood insurance urposes only and should not be used as the sole source of flood n information. Accordingly, flood elevation data presented in the FIS hould be utilized in conjunction with the FIRM for purposes of tion and/or floodplain management.

l Base Flood Elevations shown on this map apply only landward of h American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should e that coastal flood elevations are also provided in the Summary of r Elevations tables in the Flood Insurance Study report for this jurisdiction. s shown in the Summary of Stillwater Elevations tables should be used for tion and/or floodplain management purposes when they are higher than ations shown on this FIRM.

les of the **floodways** were computed at cross sections and interpolated cross sections. The floodways were based on hydraulic considerations ard to requirements of the National Flood Insurance Program. Floodway nd other pertinent floodway data are provided in the Flood Insurance port for this jurisdiction.

areas not in Special Flood Hazard Areas may be protected by **flood structures**. Refer to Section 2.4 "Flood Protection Measures" of the surance Study report for information on flood control structures for this on.

jection used in the preparation of this map was Universal Transverse (UTM) zone 11. The **horizontal datum** was NAD 83, GRS80 spheroid. ces in datum, spheroid, projection or UTM zones used in the production of or adjacent jurisdictions may result in slight positional differences in map across jurisdiction boundaries. These differences do not affect the y of this FIRM.

evations on this map are referenced to the North American Vertical Datum. These flood elevations must be compared to structure and ground s referenced to the same **vertical datum**. For information regarding ion between the National Geodetic Vertical Datum of 1929 and the merican Vertical Datum of 1988, visit the National Geodetic Survey at http://www.ngs.noaa.gov or contact the National Geodetic Survey at wing address:

rmation Services
eNGS12
Geodetic Survey
, #9202
al-West Highway
ring, Maryland 20910-3282
3-3242

n current elevation, description, and/or location information for **bench** shown on this map, please contact the Information Services Branch National Geodetic Survey at **(301) 713-3242**, or visit its website at w.ngs.noaa.gov.

ap information shown on this FIRM was derived from U.S. Geological Digital Orthophoto Quadrangles produced at a scale of 1:12,000 from phy dated 1994 or later.

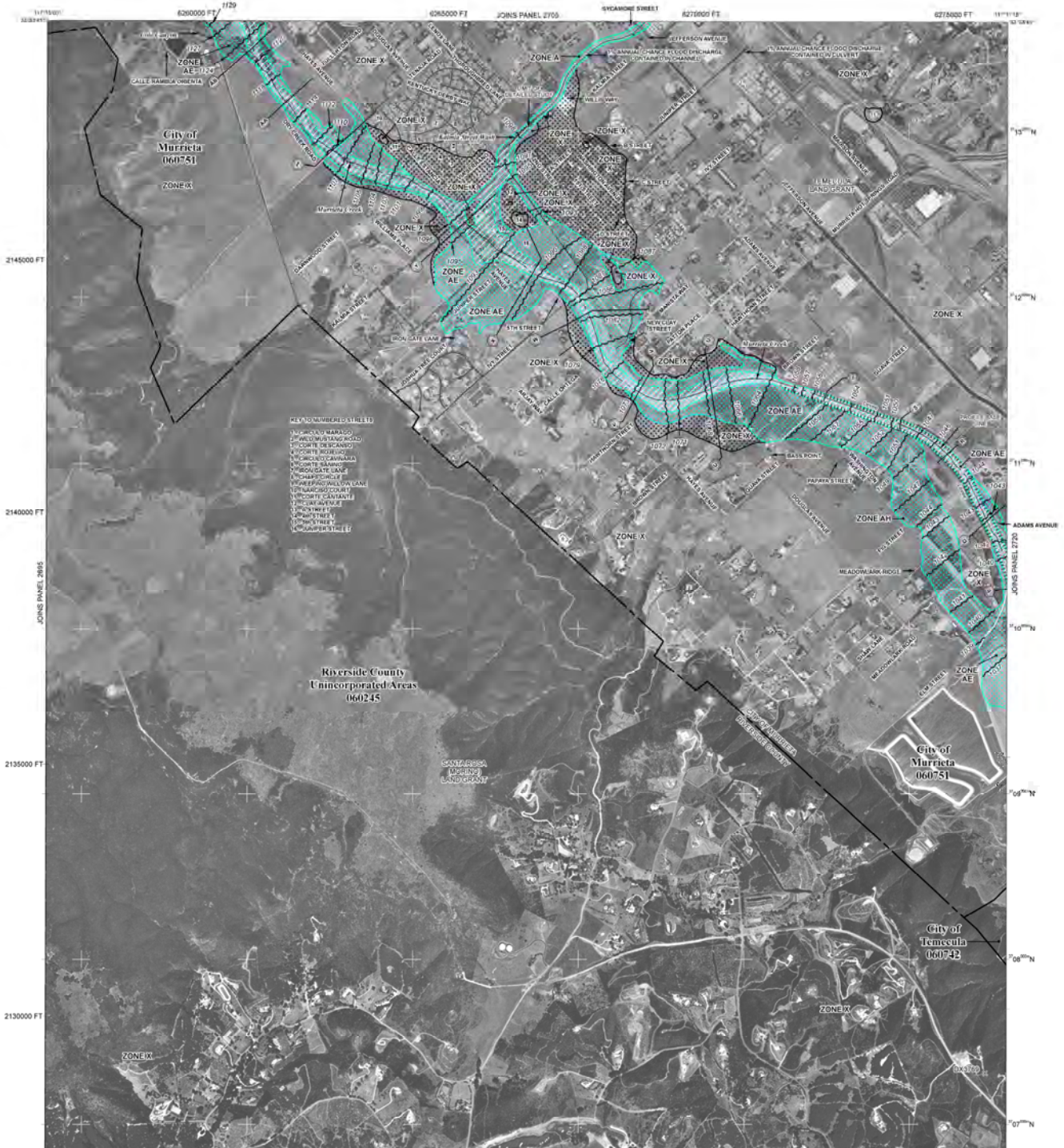
ap may reflect more detailed and up-to-date **stream channel rations** than those shown on the previous FIRM for this jurisdiction. The ns and floodways that were transferred from the previous FIRM may have usted to conform to these new stream channel configurations. As a result, d Profiles and Floodway Data in the Flood Insurance Study Report (which authoritative hydraulic data) may reflect stream channel distances that m what is shown on this map.

te limits shown on this map are based on the best data available at the ublication. Because changes due to annexations or de-annexations may urred after this map was published, map users should contact appropriate ity officials to verify current corporate limit locations.

refer to the separately printed **Map Index** for an overview map of the showing the layout of map panels; community map repository addresses; sting of Communities table containing National Flood Insurance Program r each community as well as a listing of the panels on which each ity is located.

the **FEMA Map Service Center** at 1-800-358-9616 for information on products associated with this FIRM. Available products may include ly issued Letters of Map Change, a Flood Insurance Study report, and/or rsions of this map. The FEMA Map Service Center may also be reached t 1-800-358-9620 and its website at http://msc.fema.gov.

ve questions about this map or questions concerning the National Flood e Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or FEMA website at http://www.fema.gov.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A	No Base Flood Elevations determined.
ZONE AE	Base Flood Elevations determined.
ZONE AH	Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
ZONE AO	Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
ZONE AR	Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.
ZONE A99	Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no Base Flood Elevations determined.
ZONE V	Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
ZONE VE	Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X	Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood

OTHER AREAS

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.

513 — Base Flood Elevation line and value; elevation in feet*

(EL. 987) — Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

Cross section line

Transect line

87°07'45", 32°22'30" — Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

3756000 mN — 1000-meter Universal Transverse Mercator grid values, zone 11N

600000 FT — 5000-foot grid ticks: California State Plane coordinate system, zone VI (FIPSZONE 0406), Lambert Conformal Conic projection

DX5510 — Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 — River Mile

MAP REPOSITORY
Refer to listing of Map Repositories on Map Index

EFFECTIVE DATE OF COUNTYWIDE FLOOD INSURANCE RATE MAP
August 28, 2008

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'
500 0 1000 2000 FEET
300 0 300 600 METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 2715G

FIRM

FLOOD INSURANCE RATE

RIVERSIDE COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 2715 OF 3805
(SEE MAP INDEX FOR FIRM PANEL LA

CONTAINS

COMMUNITY	NUMBER	PANEL
MURRIETA, CITY OF	060751	2715
RIVERSIDE COUNTY	060245	2715
TEMECULA, CITY OF	060742	2715

Notice to User: The **Map Number** shown below used when placing map orders; the **Community** shown above should be used on insurance applica subject community.

MAP NU
06065C

EFFECTIVE
AUGUST 2

Federal Emergency Management

Appendix B Site Photographs

Photograph 1: Southern willow scrub/eucalyptus stand on the southeast corner of the project site associated with Drainage 1.

Photograph 2: Buckwheat scrub on the bank of Drainage 1.

Photograph 3: View looking south from the northern finger of Drainage 2.

Photograph 4: Looking at the location where the northern finger of Drainage 2 crosses an access road.

Photograph 5: Looking south at the area where the northern finger of Drainage 2 connects with the main drainage at the topographic low spot onsite.

Photograph 6: Looking west from the eastern boundary of Drainage 2. A small fire recently burned the vegetation in this portion of the drainage.

Photograph 7: View of the western portion of Drainage 2.

Photograph 8: 36-inch culvert that Drainage 2 flows into on the western boundary of the site.

Photograph 9: Looking at the culvert that receives water flows from Drainage 2 and conveys water under Interstate 15.

Photograph 11: Main culvert that conveys flows into Drainage 1 on the southeast corner of the site.

Photograph 11: From the eastern boundary of Drainage 1, looking at the area that is subject to urban runoff.

Photograph 12: One of the culverts that conveys flows into Drainage 1 on the southeast corner of the site.

Photograph 13: Looking at the western portion of Drainage 2.

Photograph 14: Looking at the middle portion of Drainage 2.

Photograph 15: View of the western portion of Drainage 1.

Photograph 16: From the western boundary of Drainage 1 looking east.

Photograph 17: Looking at the culvert at the western end of Drainage 1 that receives water flows from Drainage 1 and conveys under Murrieta Hot Springs Road.

Photograph 18: Looking at the low water crossing associated with Monroe Avenue.

Photograph 19: From the low water crossing within Monroe Avenue, looking west at the drainage feature.

Photograph 20: From the low water crossing within Monroe Avenue, looking east at the drainage feature.

Appendix C Methodology

WATERS OF THE UNITED STATES

Section 404 of the Clean Water Act

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the filling of "waters of the U.S.," including wetlands, pursuant to Section 404 of the Clean Water Act (CWA). The Corps has regulatory authority over the discharge of dredged or fill material into the waters of the United States under 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." In order to further define the scope of waters protected under the CWA, the Corps and EPA published the Clean Water Rule on June 29, 2015. Pursuant to the Clean Water Rule, the term "*waters of the United States*" is defined as follows:

(i) All waters which are 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) All interstate waters, including interstate wetlands[1].

(iii) The territorial seas.

(iv) All impoundments of waters otherwise defined as waters of the United States under the definition.

(v) All tributaries[2] of waters identified in paragraphs (i) through (iii) mentioned above.

(vi) All waters adjacent[3] to a water identified in paragraphs (i) through (v) mentioned above, including wetlands, ponds, lakes, oxbows, impoundments, and similar waters.

(vii) All prairie potholes, Carolina bays and Delmarva bays, Pocosins, western vernals pools, Texas coastal prairie wetlands, where they are determined, on a case-specific basis, to have a significant nexus to a water identified in paragraphs (i) through (iii) meantioned above.

(viii) All waters located within the 100-year floodplain of a water identified in paragraphs (i) through (iii) mentioned above and all waters located within 4,000 feet of the high tide line or ordinary

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1 The term *wetlands* means those areas that are inundated or saturated by surface or groundwater 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.

2 The terms *tributary* and *tributaries* each mean a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (iv) mentioned above), to a water identified in paragraphs (i) through (iii) mentioned above, that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark.

3 The term *adjacent* means bordering, contiguous, or neighboring a water identified in paragraphs (i) through (v) mentioned above, including waters separated by constructed dikes or barriers, natural river berms, beach dunes, and the like.

high water mark of a water identified in paragraphs (i) through (v) mentioned above, where they are determined on a case-specific basis to have a significant nexus to a waters identified in paragraphs (i) through (iii) mentioned above.

The following features are not defined as "waters of the United States" even when they meet the terms of paragraphs (iv) through (viii) mentioned above:

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

(ii) Prior converted cropland.

(iii) The following ditches:

- (A) Ditches with ephemeral flow that are not a relocated tributary or excavated in a tributary.
- (B) Ditches with intermittent flow that are not a relocated tributary, excavated in a tributary, or drain wetlands.
- (C) Ditches that do not flow, either directly or through another water, into a water of the United States as identified in paragraphs (i) through (iii) of the previous section.

(iv) The following features:

- (A) Artificially irrigated areas that would revert to dry land should application of water to that area cease;
- (B) Artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds;
- (C) Artificial reflecting pools or swimming pools created in dry land;
- (D) Small ornamental waters created in dry land;
- (E) Water-filled depressions created in dry land incidental to mining or construction activity, including pits excavated for obtaining fill, sand, or gravel that fill with water;
- (F) Erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of a tributary, non-wetland swales, and lawfully constructed grassed waterways; and
- (G) Puddles.

(v) Groundwater, including groundwater drained through subsurface drainage systems.

(vi) Stormwater control features constructed to convey, treat, or store stormwater that are created in dry land.

(vii) Wastewater recycling structures constructed in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling.

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.[4] Hydrophytic vegetation is present if any of the indicators are satisfied.

[4] 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.

Indicator 1 – Dominance Test

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.
- No Indicator (*NI):* Plant not listed on the Corps Wetland Plant List for the Arid West.

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.[5] 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.

[5] 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.

Appendix D Wetland Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Terraces City/County: Murrieta / Riverside Sampling Date: 8/18/21

Applicant/Owner: Greystar State: CA Sampling Point: 1

Investigator(s): Travis J. McGill Section, Township, Range: Unsectioned, 7 South, 3 West

Landform (hillslope, terrace, etc.): slight slope, drainage Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): C-Mediterranean California Lat: 33.56480 Long: -117.188069 Datum: NAD 83

Soil Map Unit Name: Ramona adn Buren loams, 5 to 15% slopes NWI classification: Riverine

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	20	Y	FACW
2. Salix goodingii	10	N	FACW
3. Eucalyptus	5	N	FAC
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	_____ = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata: 1 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	2	x 2 =	4
FAC species	1	x 3 =	3
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	3 (A)		7 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

Numerous roots within soils. A clean soil sample was not able to be obtained. Water persist within the upper 12 inches for at least 14 consecutive days throughout the year.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): 6

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

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

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

The upper reach of Drainage 1 (easternmost end) can be considered an intermittent stream since it is subject to a continual water source from urban runoff/nuisance flows, and ponds in the eastern end of the drainage.