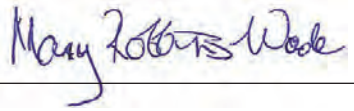
Tentative Tract Map 38123 Residential Project

Cultural Resources Survey Report

October 2021 | 00239.00028.001 (DRH-28)

Prepared for:

The City of Moreno Valley
Planning Division
14177 Frederick Street
P.O. Box 88005
Moreno Valley, CA 92552



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National Archaeological Database Information

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Client/Project:	D.R. Horton / Tentative Tract Map 38123 Residential Project
Report Date:	October 2021
Report Title:	Cultural Resources Survey Report for the Proposed Tentative Tract Map 38123 Residential Project, City of Moreno Valley, Riverside County, California
Type of Study:	Cultural Resources Survey
New Sites:	None
Updated Sites:	P-33-003249 (CA-RIV-3249H), P-33-016788
USGS Quad:	Sunnymead 7.5' Quadrangle
Acreage:	Approximately 36 acres
Key Words:	Riverside County; Moreno Valley; City of Moreno Valley; Alessandro Boulevard; prehistoric bedrock milling feature; water cistern.

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(Confidential, Bound Separately)

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ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
AMSL	above mean sea level
APN	Assessor's Parcel Number
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
EGA	EGA Consultants, LLC
EIC	Eastern Information Center
F	Fahrenheit
GeoTek	GeoTek, Inc.
HELIX	HELIX Environmental Planning, Inc.
I	Interstate
km	kilometers
Leighton	Leighton and Associates
MLD	most likely descendant
NAHC	Native American Heritage Commission
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
PA	Project Architect
PI	principal investigator
PRC	Public Resources Code
Project	Tentative Tract Map 38123 Residential Project
Santa Fe	Atchison, Topeka and Santa Fe Railway
SHPO	State Historic Preservation Officer
SLR	San Luis Rey
TCR	Tribal Cultural Resources
USGS	U.S. Geological Survey

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EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by D.R. Horton to conduct a cultural resources study for the proposed "Tentative Tract Map 38123" Residential Project (Project). The Project is located within the City of Moreno Valley, in western Riverside County. The proposed Project intends to develop a residential tract within two adjacent parcels. The site development includes the grading and construction of 177 single-family residential lots, two water quality basins, open space areas, underground utilities, and street improvements. The Project site consists of two adjacent properties, including the approximately 17.6-acre "Skylar Place" property (Assessor's Parcel Number [APN] 487-470-025) on the west and the approximately 17.9-acre "Windsong" property (APN 487-470-028) on the east.

A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a field survey was conducted by HELIX in 2021. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA).

The records search conducted at the Eastern Information Center indicated that 23 previous cultural resources studies have been conducted within a half-mile of the Project, two of which, RI-00182 (Weaver 1975) and RI-00742 (Wilke 1979), occurred within the Project site. Additionally, the records search identified 12 previously recorded cultural resources within a half-mile radius of the Project site. Of these, two resources (P-33-003249 and P-33-016788) are located within the Project site. The remaining 10 resources are located outside of the development footprint within a half-mile of the Project site. However, three resources (P-33-000857, P-33-003159, and P-33-003342) are located adjacent to the Project site, south of Alessandro Boulevard. The resources within the search area pertain to both the prehistoric and historic eras. The prehistoric resources include sites comprised of lithic scatters, bedrock milling features, cairns/rock features, and rock shelters. The historic resources consist of historic archaeological sites containing structural pads or foundations, privies or historic trash scatters, wells/cisterns, and historic (single-family) properties.

A pedestrian survey of the Project site was conducted on February 26, 2021, by HELIX archaeologists Julie Roy and Dominique Diaz de Leon and a Native American monitor from the Soboba Band of Luiseño Indians (Soboba), Victoria Banda. P-33-003249 could not be observed during the survey; it appears to have been destroyed sometime between 2004 and 2005. P-33-016788 is located along the northeastern boundary of the western (Skylar Place) parcel. However, the "mortars" do not appear to be prehistoric in nature. The "mortars" pictured on the original site record appear to be mechanically drilled holes in the rock, rather than bedrock milling features. Only mechanically drilled holes were observed during the survey, no actual mortars. The "feature" remains heavily disturbed and out of context, consistent with the observations made in 2007 when it was originally recorded.

Based upon the findings of the survey, the Project is expected to have no impacts to significant cultural resources; however, the general vicinity of the Project has been occupied/used by the Luiseño, Cahuilla, and other native people for thousands of years, and there are numerous previously recorded cultural resources within the Project vicinity. In addition, the Project site falls within the Traditional Use Area of several local tribes and may be sensitive for cultural resources. Based on these factors, an archaeological and Native American monitoring program is recommended, as described in the mitigation measures presented in this report.

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1.0 INTRODUCTION

1.1 PROJECT LOCATION

HELIX Environmental Planning, Inc. (HELIX) was contracted by D.R. Horton to conduct a cultural resources study for the proposed "Tentative Tract Map 38123" Residential Project (Project). The Project is located within the City of Moreno Valley, in western Riverside County (Figure 1, *Regional Location*), within Section 9 of Township 3 South, Range 3 West, on the U.S. Geological Survey (USGS) 7.5' Sunnymead quadrangle (Figure 2, *USGS Topography*). The Project site consists of two adjacent properties, including the approximately 17.6-acre "Skylar Place" property (APN 487-470-025) on the west and the approximately 17.9-acre "Windsong" property (APN 487-470-028) on the east (Figure 3, *Project Location)*. Both properties are currently vacant but have been graded and/or previously disturbed by past activities. The cultural resources study area for the Project consisted of the two adjacent properties and a half-mile buffer.

In addition to the primary development area that is intended for a residential development, the project site includes off-site areas intended for half-width improvements, infrastructural improvements, and a 50-foot buffer to account for over excavations along Lasselle Street, Bay Avenue, Darwin Drive, and Alessandro Boulevard. The off-site area also includes a portion of Lasselle Street, located south of Alessandro Boulevard, for a new storm drain connection. All activities within the off-site locations will occur within the public right-of-way. The southwest corner of the development area, located at the intersection of Alessandro Boulevard and Lasselle Street, was included in the cultural resources study, but will be omitted from the residential development; this section is slated for future commercial development that will be assessed in the future and excluded from the current residential project (Figure 3).

1.2 PROJECT DESCRIPTION

The Project intends to develop a residential tract within the two adjacent parcels. The site development includes the grading and construction of 177 single-family residential lots, two water quality basins, open space areas, underground utilities, and street improvements. Within the Skylar Place (western) portion of the site, cuts and fills up to 18 and 15 feet, respectively, are anticipated to be required to reach design grades, while cut and fill slopes up to about seven feet in height and at 2:1 (horizontal to vertical [h:v]) maximum gradients, as well as retaining walls, are expected. Skylar Place will be developed into 75 residential lots. Similarly, cuts and fills up to 20 and nine feet, respectively, are anticipated to be required to reach design grades within the Windsong (eastern) portion of the site. The Windsong parcel will be developed into 102 residential lots. Cut and fill slopes up to about five to ten feet in height, respectively, at 2:1 (h:v) maximum gradients, as well as retaining walls, are also expected to be necessary within the Windsong property. Vehicular access to the Project site would be provided by seven driveways, including one from Alessandro Boulevard to the south, two from Lasselle Street to the west, one from Bay Avenue to the north, and three from Darwin Drive to the east.

1.3 REGULATORY FRAMEWORK

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and/or scientific importance. The California Environmental Quality Act (CEQA), Public Resources Code (PRC) 21084.1, and CEQA Guidelines,

California Code of Regulations (CCR) Title 14 Section 15064.5, discuss significant cultural resources as "historical resources," and define them as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the California Register of Historical Resources (CRHR) (14 CCR Section 15064.5[a][1])

- resource(s) either listed in the NRHP [National Register of Historic Places] or in a "local register of historical resources" or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless "the preponderance of evidence demonstrates that it is not historically or culturally significant" (14 CCR Section 15064.5[a][2])

- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

A. It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;

B. It is associated with the lives of persons important to local, California, or national history;

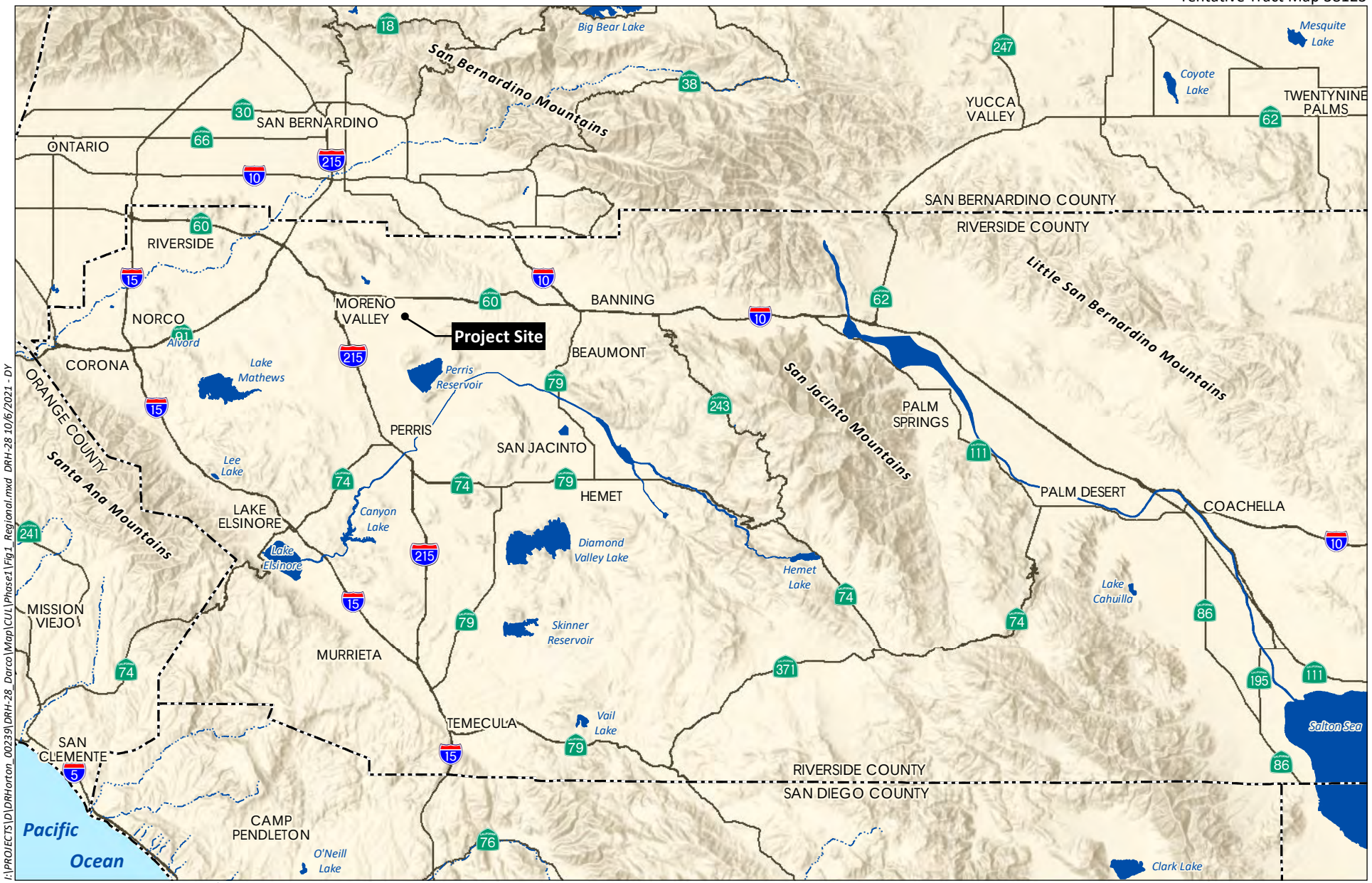
C. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; and/or

D. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a "historical resource" for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the CRHR must have integrity, which is the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Resources, therefore, must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination.

California State Assembly Bill 52 (AB 52) revised PRC Section 21074 to include Tribal Cultural Resources (TCRs) as an area of CEQA environmental impact analysis. Further, per new PRC Section 21080.3, a CEQA lead agency must consult with any California Native American tribe that requests consultation and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies.



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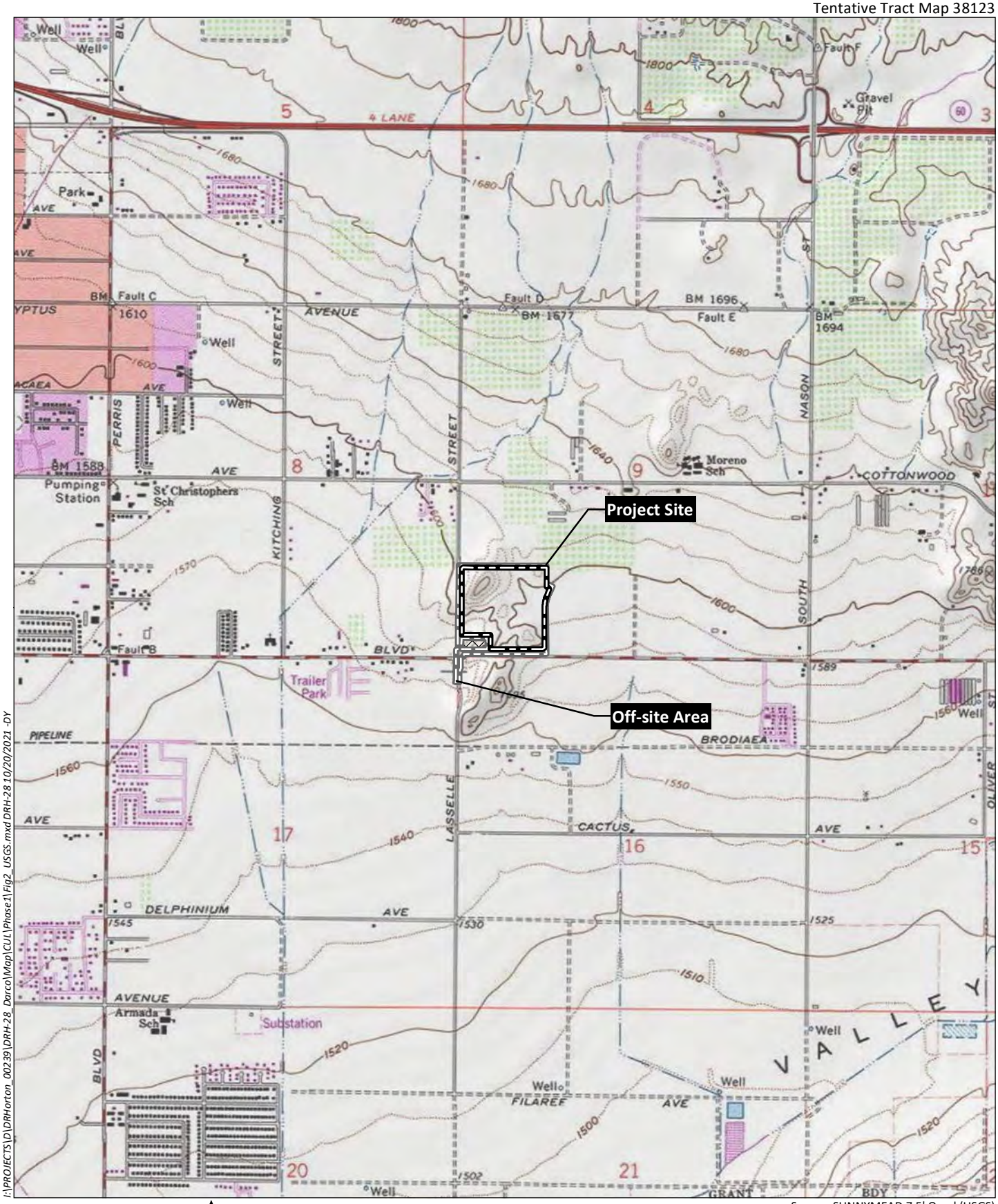
Source: Base Map Layers (ESRI, 2013)

HELIX Environmental Planning

Regional Location

Figure 1



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Source: SUNNYMEAD 7.5' Quad (USGS)

HELIX Environmental Planning

USGS Topography

Figure 2

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Source: Aerial (RCIT, 2019)

HELIX Environmental Planning

Aerial Photograph

Figure 3

2.0 PROJECT SETTING

2.1 NATURAL SETTING

The Project area is in the Moreno Valley within the foothills of northwestern Riverside County. The Badlands mountains lie to the northeast, the Bernasconi Hills lie to the southeast, and the Box Spring Mountains are to the northwest. The climate of western Riverside County is characterized as a semi-arid environment with low humidity and rainfall. Almost all rainfall occurs in the winter, but the region can also experience rare, intense summer thunderstorms. Wind is also a strong feature of this climatic regime, with dry winds in excess of 25 miles per hour in the late winter and early spring (National Oceanic and Atmospheric Administration [NOAA] 2014). Average monthly temperatures range from a December low of 53.6 degrees Fahrenheit (°F) to an August high of 79.0°F, and the average yearly rainfall is 9.97 inches (Weather Currents 2017). The project area is flat with an elevation of approximately 1,540 to 1,600 feet above mean sea level (AMSL) across the Project site.

Geologically, the Project area is mostly underlain by granitic bedrock of quartz diorite to granodiorite (LaMont et al. 2020; Dibblee and Minch 2003). The regional geologic maps noted the general trend of foliations in the bedrock had a northwest-southeast orientation and a 50-degree inclination to the northeast. Locally, one trend of foliations in the bedrock had a northeast-southwest orientation with no defined inclination. Tonalite, undifferentiated, dating to the Cretaceous, is found east of Alessandro Boulevard and Lasselle Street and west of South Nason Street (Morton and Matti 2001). The Badlands to the north are of undivided Pliocene non-marine formations (Morton and Matti 2001).

The subsurface soil conditions were reported on by three geotechnical investigations carried out by EGA Consultants, LLC. (EGA), Leighton and Associates (Leighton), and GeoTek, Inc. (GeoTek). EGA mapped the subsurface soil conditions within the western (Skylar Place) parcel. The EGA study (Worthington 2006, 2007) included hollow-stem auger borings and a seismic refraction rippability assessment. EGA excavated twenty borings to a maximum depth of 36 feet below the existing ground surface, and their seismic refraction survey consisted of three 156-foot-long seismic traverses. EGA described the subsurface soil conditions at the proposed Project site as being fill and/or topsoil underlain by igneous bedrock. The fill/topsoil was encountered in the majority of the borings to average depths of 2 to 3 feet with the exception of the northeast portion of the site, where the fill extended to 13 feet below grade. The fill soils generally consisted of light brown and gray, dry, loose silty sands. Underlying the fill/topsoil materials was igneous bedrock in all test borings by EGA. The bedrock was described as Cretaceous-age bedrock consisting primarily of very coarse-grained crystalline tonalite, that is well-foliated and massive. The expansion index of the fill and the granitic bedrock was determined to be “very low” according to EGA.

Leighton (Hertzberg et al. 2005) conducted four hollow-stem auger borings, ten backhoe test pits, four D9R bulldozer test pits, and a seismic refraction rippability study within the eastern (Windsong) parcel of the Project site. Leighton excavated borings to a depth of 20 feet below grade and excavated backhoe test pits to a maximum depth of 10 feet. Their seismic refraction survey consisted of five seismic refraction lines about 250-foot long each. Leighton described the subsurface conditions within the Windsong parcel as granitic bedrock overlain by a thin veneer of alluvial and colluvial soils. The lower-lying areas, particularly in the central portions of the site, have thicker accumulations of alluvial soils. The alluvial soils encountered were generally two to three feet thick and consisted of loose to very dense gravelly sand to silty sand. Also encountered was medium stiff to very stiff sandy silt. Locally

deeper alluvium encountered in the central portion of the site ranged from approximately four to 10 feet thick. Granitic bedrock of tonalite composition was encountered below the alluvium and at the ground surface at some areas throughout the site. The alluvial soils in the upper five to 10 feet were described as slightly compressible with a low collapse potential. Leighton recommended partial removal and recompaction of these soils.

GeoTek conducted a second geotechnical analysis on the western (Skylar Place) site consisting of exploratory trenches and borings excavated to log the subsurface materials and examine the rippability and/or hardness of localized areas throughout the site (LaMont et al. 2020). GeoTek excavated eleven trenches to depths ranging from two to 18 feet and drilled five exploratory borings to approximately 18 to 20 feet below grade. The GeoTek investigation described the subsurface soil profile in concurrence with the 2006 EGA study.

Although the soils are mostly disturbed due to the development within the Project site, these soil series would support vegetation consisting of annual grasses and forbs (National Cooperative Soil Survey 2017). Native grassland species would have been used by native populations for food, medicine, ceremonial, and other uses (Bean and Shipek 1978; Hedges and Beresford 1986). The granitic rocks found within the Project region would have provided native populations surfaces for milling and processing of plant resources. Many of the animal species living within this habitat (such as rabbits, deer, small mammals, and birds) would have been used by native inhabitants as well.

2.2 CULTURAL SETTING

2.2.1 Prehistoric Period

2.2.1.1 Introduction

The study area is located in the Moreno Valley area of northwestern Riverside County, California. Moratto (1984) has previously defined eight archaeological regions and 16 subregions for California. The location of the study area places it within the boundary of the San Diego subregion of the Southern Coast Region, but it is also located adjacent to the boundary with the Colorado River subregion of the Desert Region (Moratto 1984: 148, Figure 4.13). The following culture history outlines and briefly describes the known prehistoric cultural Traditions and chronology of archaeological sites in the vicinity of the study area. The approximately 10,000 years of documented prehistory of the region has often been divided into three periods: Early Prehistoric Period (San Dieguito Tradition [Warren 1968]), Fluted-Point Tradition [Moratto 1984], Archaic Period (Milling Stone Horizon [Wallace 1955], Encinitas Tradition [Warren 1968]), and Late Prehistoric Period.

Prior to 1984, when Moratto defined the San Diego subregion, little archaeological investigation had occurred in the western Riverside and San Bernardino counties portion of this subregion. This paucity of archaeological information limited the ability of early researchers to assess the cultural and temporal associations for the archaeological resources in this part of the subregion. One of the few early studies to occur in this area prior to 1984 was conducted near Temecula in the early 1950s at a site identified as the ethnohistoric village of Temeku (McCown 1955). The investigation produced a substantial, primarily Late Prehistoric Period, artifact assemblage, but with some possible Late Archaic materials as well. Another study, conducted in the 1970s, for the construction of the Perris Reservoir, located approximately four miles to the south of the project area (O'Connell et al. 1974, eds.), consisted of investigations at several sites and was, perhaps, the most extensive study conducted in the area prior to

1984. The results, which included several radiocarbon dates, indicated a predominance of occupation at the sites during the Late Prehistoric Period, after A.D. 1500, but with some limited evidence for occupation as early 380 B.C. (Bettinger 1974:159-162). During the last approximately 35 years since 1984, several archaeological studies have occurred in western Riverside County and have served to substantially augment the archaeological record for the area (e.g., Applied Earth Works, Inc. 2001; Grenda 1997; Horne and McDougall 2008; Keller and McCarthy 1989; McCarthy 1986, 1987). Based on the information provided by these and other subsequent studies in the area, Sutton and Gardner (2010) and others have recently begun to define the early prehistory of this area of the San Diego subregion and how it fits in with the previously better-known areas of the subregion. The three chronological periods defined for the prehistory of the San Diego subregion are described below.

2.2.1.2 Early Prehistoric Period

The Early Prehistoric Period represents the time of the entrance of the first known human inhabitants into California. In some areas of California, it is referred to as the Paleo-Indian period and it is associated with the Big-Game-Hunting activities of the peoples of the last Ice Age occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene (beginning circa 10,000 years ago) (Erlandson 1994, 1997; Erlandson et al. 2007). In the western United States, the most substantial evidence for the Paleo-Indian or Big-Game-Hunting peoples derives from finds of large, fluted spear and projectile points (Fluted-Point Tradition) at sites in places such as Clovis and Folsom in the Great Basin and the Desert southwest (Moratto 1984:79–88). In California, most of the evidence for the Fluted-Point Tradition derives principally from areas along the western margins of the Great Basin including the eastern Sierras and the Mojave Desert, and in the southern Central Valley (Dillon 2002; Rondeau et al. 2007). Elsewhere in California, with the exception of a site in the north coast ranges in northwestern California, CA-LAK-36, only isolated occurrences of fluted spear points have occurred, scattered around the state (Dillon 2002; Rondeau et al. 2007). These isolated occurrences have, however, included two fluted points or fluted point fragments recently discovered in the mountains of northern San Diego County approximately 54 miles to the south of the Project area (Kline and Kline 2007) and another along the coast approximately 43 miles to the west of the Project area in adjacent Orange County (Fitzgerald and Rondeau 2012). Two examples have also been discovered to the south in Baja California (Des Lauriers 2008; Hyland and Gutierrez 1995). Despite these isolated occurrences of fluted points elsewhere in the San Diego subregion and Baja California, none have been found, to date, in the western areas of Riverside or San Bernardino counties (Dillon 2002; Rondeau et al. 2007).

The earliest sites in the San Diego subregion, documented to be nearly 10,000 years old, belong to the San Dieguito Tradition (Warren et al 1998; Warren and Ore 2011). The San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted Point Tradition, has been documented mostly in the coastal and near coastal areas in San Diego County (Warren and True 1961; Rogers 1966; Warren 1966; True and Bouey 1990; Carrico et al. 1993) as well as in the southeastern California deserts (Rogers 1939, 1966; Warren 1967). The content of the earliest component of the C.W. Harris Site (CA-SDI-149), located along the San Dieguito River and approximately 68 miles to the south of the Project, formed the basis upon which Warren and others (Rogers 1966; Warren and True 1961; Warren 1966, 1967) identified the "San Dieguito complex," which Warren later reclassified as the San Dieguito Tradition (1968). This Tradition is characterized by an artifact inventory consisting almost entirely of flaked stone biface and scraping tools, but lacking the fluted points associated with the Fluted-Point Tradition. Diagnostic artifact types and categories associated with the San Dieguito Tradition include elongated bifacial knives; scraping tools; crescentics; and Silver Lake, Lake Mojave, and leaf-shaped projectile points (Knell and Becker 2017; Rogers 1939, 1966; Vaughan 1982; Warren 1966, 1967; Warren and True 1961). Some

researchers interpret the San Dieguito Tradition/complex as having a primarily, but not exclusively, hunting subsistence orientation, but sufficiently hunting oriented as to be distinct from the more gathering-oriented complexes of traits that were to follow in the Archaic Period (Warren 1968; Warren et al. 1998). Other researchers see the San Dieguito subsistence system as less focused on hunting, and more diversified, and, therefore, possibly ancestral to, or a developmental stage for, the subsequent, predominantly gathering oriented, Encinitas Tradition, denoted in the San Diego area as the "La Jolla/Pauma complex" (True 1958, 1980) during the Archaic Period (cf. Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991. While little definite evidence for the San Dieguito Tradition has been discovered in other coastal and near-coastal areas of southern California outside of San Diego County, some evidence has recently been attributed to it in the eastern Mountains of San Diego County (Pigniolo 2005), and possibly in a coastal area approximately 70 miles to the west in Los Angeles County (Sutton and Grenda 2012).

2.2.1.3 Archaic Period

During the subsequent Archaic Period, artifact assemblages of the Milling Stone Horizon/Encinitas Tradition occur at a range of coastal and adjacent inland sites, and, in contrast to those of the previous Early Prehistoric Period, are relatively common in the study area region. These assemblages appear to indicate that a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of southern California for many millennia. Warren proposed that during the Archaic Period in the south coastal region, the Encinitas Tradition began circa 8,500 years ago and extended essentially unchanged until circa 1,500 years ago (Warren 1968; Warren et al. 1998). More recently, however, several sites in the western Riverside County area have produced Milling Stone Horizon/Encinitas Tradition assemblages with radiocarbon dating in excess of 9,000 years ago (Horne and McDougall 2008; McDougall 2001). Consequently, the earliest extent of the Archaic Period in the area is still in the process of being determined.

Subsequent to the Early Archaic, beginning circa 4,800 years ago and continuing to as late as 1,300 years ago, a cultural assemblage, variously described as the Intermediate Horizon (Wallace 1955) or Campbell Tradition (Warren 1968), has been delineated and distinguished, following the Milling Stone Horizon/Encinitas Tradition. This assemblage, initially occurring somewhere north of San Diego and extending to Santa Barbara, is distinguished from earlier Archaic assemblages by the presence of large projectile points and milling tools such as the mortar and pestle. While still a matter of some debate, Warren, and others (1998) have subsequently termed the time period encompassing the extent of the Intermediate/Campbell cultural assemblage in the southernmost coastal region as the Final Archaic Period.

In the western Riverside and San Bernardino counties area, Sutton and Gardner have identified early Archaic Period assemblages at sites near Yucaipa, Fontana, and in the Prado Basin area (2010:26). Site CA-SBR-5096 located along the Santa Ana River in the Prado Basin area has produced "manos and metates, a pinto point and an unknown number of cogged stones and discoidals" (Sutton and Gardner 2010:26). In the vicinity of the project area, site CA-SBR-1000 in the Yucaipa area contained an early Archaic component consisting of many manos and metates but no mortars or pestles, numerous projectile points (including Pinto points), a few discoidals and cogged stones, and a flexed inhumation (Kowta 1969; Sutton and Gardner 2010:26). Archaeological studies conducted at several sites in Perris Valley for the Perris Reservoir project, approximately four miles to the south of the study area, produced a single radiocarbon date within the Late Archaic Period of circa 2200 years before present (B.P.) as well as a few diagnostic artifacts as the only evidence for a late Archaic Period occupation at the sites

(Bettinger 1974:159-162). Investigations at another site, CA-RIV-1806, in the mountains northwest of Temecula, also produced a radiocarbon date for the Late Archaic Period of circa 2775 B.P. (McCarthy 1986:73). More recently, large-scale archaeological investigations that were conducted in western Riverside County for the Eastside Reservoir (since renamed Diamond Valley Lake) Project, located approximately 18 miles south of the study area, have elucidated the regional chronology. This project involved reservoir construction within the adjacent Domenigoni and Diamond valleys (Robinson 2001; Goldberg 2001). Based on the results from this project, the researchers developed a local chronology specific to the Domenigoni and Diamond valleys based on projectile point style changes and associated radiocarbon dates (Robinson 2001). The terminology in this chronology resembles that already presented above by Warren et al. (1998) with the period from 9,500 to 7,000 years ago designated as the Early Archaic period, the period from 7,000 to 4,000 years ago as the Middle Archaic, and the period from 4,000 to 1,500 years ago as the Late Archaic. Only two components could be firmly dated to the Early Archaic at the reservoir sites, but sparse evidence of Early Archaic activity was noted in six other localities. One site (CA-RIV-5086) did, however, produce two radiocarbon dates of 9190±50 and 9310±60 B.P. (McDougall 2001). For the Middle Archaic, firm evidence was documented in 14 locations, with other traces at four other sites. During the Late Archaic, a profusion of activity and occupation was evident, with 23 firmly dated site components and sparse evidence at eight other localities (Goldberg 2001:524).

Two other archaeological investigations conducted in the western Riverside County area have also produced evidence, based on radiocarbon dating, for prehistoric occupation during the earliest part of the Archaic Period. One of these investigations was conducted at archaeological site CA-RIV-2798, located approximately 19 miles to the southwest of the study area along the old shoreline of Lake Elsinore, a natural lake situated in a fault-created basin, whose principal source of water in prehistoric times was the San Jacinto River (Grenda 1997:3). The investigations produced results, including radiocarbon dating, that indicated occupation of the site as early as 8,500 years ago (Grenda 1997). Another investigation located inland, along the San Jacinto River, approximately 14 miles southeast of the study area, produced results, including radiocarbon dating, indicating an early Archaic Period occupation, dating to circa 9,400 years ago (Horne and McDougall 2008). The early assemblages at these sites appeared to be consistent with Milling Stone Horizon/Encinitas Tradition content with milling and primarily (but not exclusively) gathering tools present. Thus, prehistoric occupation during the Archaic Period, in areas of western Riverside County and in the study area vicinity, is now documented to have occurred, beginning, possibly as early as 9,400 years ago, and remained present to the end of the period, approximately 1,500 years ago.

This new evidence has prompted Sutton and Gardner (2010), to recently propose a reconceptualization of Warren's Archaic Period Encinitas Tradition, including proposing a new pattern for the western Riverside and San Bernardino counties area, coexistent with the coastal Topanga complex/pattern in the Los Angeles Basin area and La Jolla complex/pattern in the San Diego area. The authors termed this pattern the Greven Knoll pattern, based on a site with that name, CA-SBR-1000, containing an Archaic Period assemblage (2010:26). This site was originally labeled as the Greven Knoll Site by Kowta (1969), and Kowta indicated that this term could also be used to represent the early inland Milling Stone Horizon in the area (Kowta 1969: Figure 5). The authors, therefore, chose to apply this designation for all of the inland Milling Stone Horizon/Encinitas Tradition patterns in the area, but divided it into three phases labelled Greven Knoll I (early), Greven Knoll II, and Greven Knoll III. While this chronologic terminology essentially corresponds to the Early, Middle, and Late Archaic Period chronology defined by Robinson (2001), Sutton and Gardner have incorporated additional site data from a broader range of inland sites in the western Riverside and San Bernardino counties area, and have integrated the results

into Warren's original (1968), more coastal based, Encinitas Tradition concept of a relatively stable, sedentary, predominantly gathering complex, possibly associated with one people.

2.2.1.4 Late Prehistoric Period

The beginning of the Late Prehistoric Period, circa 1,500 years ago, is seen as time-marked by a number of rather abrupt changes. The magnitude of these changes and the short period of time within which they took place are reflected in significant alteration of previous subsistence practices and the adoption of significant new technologies. As discussed further below, some of this change may have been as a result of significant variations in the climatic conditions. Subsistence and technological changes that occurred include a shift from hunting using atlatl and dart to the bow and arrow; a de-emphasizing of shellfish gathering along some areas of the coast (possibly due to silting-in of the coastal lagoons); and an increase in the storage of crops, such as acorns and pinyon nuts, by both Takic and Yuman speaking peoples. Other new traits introduced during the Late Prehistoric Period include the production of pottery and cremation of the dead, and, locally, in the western Riverside County area, a shift in settlement pattern is apparent (cf. Wilke 1974).

This shift in settlement is first noted during the early part of the period from 1,500 to 750 years ago and is evidenced, locally, in the results from the Eastside Reservoir (Diamond Lake) Project by a rather sudden decline in occupation in the local area during the initial part of the period. This 750-year period was termed by the Eastside Reservoir researchers as the Saratoga Springs Period, following Warren's (1984) desert terminology. This period can also be seen to partially coincide with a warm and arid period known as the Medieval Warm Period, documented to have occurred between approximately 1,100 and 600 years ago (Jones et al. 1999; Kennett and Kennett 2000; Stine 1994). During this period, at least two episodes of severe drought have also been demonstrated, the first between 1060 and 840 cal B.P. and the second between 740 and 650 cal B.P. (Goldberg 2001; Stine 1994). While sites dating to this period are not absent in western Riverside County (e.g., McCarthy 1987:34; Keller and McCarthy 1989), Goldberg (2001) hypothesized that the Medieval Warm Period could account for the decline in sites occurring in the Eastside Reservoir Project area during the Saratoga Springs Period (1500 to 750 B.P.), claiming that desert and inland areas of western Riverside County, such as where the Eastside Reservoir Project and the current study area are located, would no longer be suitable to support residential bases. Goldberg (2001) further hypothesized that settlements would possibly be clustered at more suitable water sources during this time, such as at the coast, Lake Cahuilla, or Lake Elsinore (cf. Wilke 1974; 1978). While a decline was noted during the initial part of the Saratoga Springs Period, subsequently, during the latter Medieval Warm Period, a reoccupation began to occur (Goldberg 2001:578). According to Goldberg "When components dating to the Medieval Warm segment of the Saratoga Springs Period are segregated and combined with Medieval Warm components from the Late Prehistoric Period, it shows that the frequency of refuse deposits and artifact and toolstone caches during the Medieval Warm is slightly higher than during the Late Archaic and much higher than during the later portion of the Late Prehistoric Period..." (2001:578).

In the Eastside Reservoir Project, the Late Prehistoric Period was defined as extending from the end of the Saratoga Springs Period (750 B.P.) to 410 B.P. A subsequent Protohistoric Period was also defined as extending from 410 to 150 B.P. The Late Prehistoric (750 to 410 B.P.) was characterized by the presence of Cottonwood points, although research indicated that Cottonwood points had actually begun to appear in the Eastside Reservoir Project study area as early as 950 B.P. Ceramics and abundant obsidian begin to appear around the time of the Cabrillo exploration in A.D. 1542 and so this date (i.e., circa 410 B.P.), until the establishment of the mission system in the late 1700s, was defined as the Protohistoric

Period (Robinson 2001). It should also be noted that the end of the Saratoga Springs Period and the beginning of the Late Prehistoric Period, 750 B.P., also coincides with the onset of the Little Ice Age, generally dated from 750 to 150 B.P. (Goldberg 2001; Sutton et al. 2007). During this period, the climate was cooler and moister, and the sites identified within the Eastside Reservoir Project study area reflected a substantial increase in number and diversity, longer occupation periods, and more sedentary land use. Similar intensification of land use also occurred during this time in the neighboring San Gorgonio Pass (Bean et al. 1991) and Perris Valley (Wilke 1974).

Differing from the terminology used in the Eastside Reservoir study, the Late Prehistoric Period has been more commonly described, archaeologically, in the northern San Diego County and the western portion of Riverside County, as the San Luis Rey (SLR) complex. As originally defined by Meighan (1954), the SLR complex is associated with the ethnographic Luiseño who were present in the area at the time of first contact with Europeans. Meighan saw the complex as occurring in two phases: SLR I and SLR II, with the principal archaeological element distinguishing the two phases being the absence of pottery in SLR I sites and its presence in SLR II assemblages. The introduction of pottery was seen as having disseminated to the prehistoric Luiseño from their neighbors, the Kumeyaay, to the south (Rogers 1936; Meighan 1954:221). Elements of the SLR I phase include small, triangular, pressure-flaked projectile points (generally Cottonwood series with Desert Side-notched series points rarely occurring); milling implements, including mortars and pestles, manos and metates, and bedrock milling features; bone awls; Olivella shell beads; other stone and shell ornaments; and cremations (Meighan 1954; Moratto 1984; True et al. 1974; Pigniolo 2004). In addition to pottery, the later SLR II assemblages include several other elements not found in SLR I assemblages: "cremation urns, red and black pictographs, and such nonaboriginal items as metal knives and glass beads" (Meighan 1954:223). SLR I was originally thought by Meighan to date from A.D. 1400 to A.D. 1750, with SLR II dating between A.D. 1750 and A.D. 1850 (Meighan 1954:223). This chronology was subsequently revised, however, by True and others, who suggested that, while "some pottery probably filtered across from Diegueño [Kumeyaay] territory perhaps as early as A.D. 1200-1300 under some circumstances, ...the introduction of pottery as a regular and important element in the San Luis Rey lifeway probably did not take place until a century or two before the arrival of the Spanish (perhaps A.D. 1500-1600)" (True et al. 1974:97). It is of interest to note in regard to the origin of pottery with the Cahuilla, that rather than them having acquired it from either the Kumeyaay or their Takic neighbors the Luiseño, Bean and Lawton (1992:5) have stated that "Cahuilla pottery was probably borrowed from the Colorado River Indians to the east at a relatively late date". In regard to the Serrano, Johnston (1980:7) states that they were "prolific" pottery makers and indicates that some Serrano wares (e.g., black-on-buff ware) occurred in Serrano territory more commonly in proximity to Cahuilla territory, probably indicating "intermingling of technique and design because it is also found among Cahuilla ware" suggesting an exchange of the ceramic technology between the groups.

2.2.2 Ethnohistory

The study area location is marginal to the territories of three Native American tribal peoples, the Luiseño, Cahuilla, and Serrano, all of the Takic family of the Uto-Aztecan language stock (Shipley 1978; Miller 1984). These Takic-speaking groups are thought to represent migration into the area occurring approximately 1,500 B.P. (Schaefer 2006:21). At the time of European contact, the Luiseño territory extended from the southern Orange County area, south into northern San Diego County, and east into western Riverside and San Bernardino counties. Due to a lack of data, the boundaries of Serrano territory are not well-defined (Bean and Smith 1978), but based on what is known, they occupied the San Bernardino Mountains east of the Cajon Pass, north to Victorville, east to Twentynine Palms, and

south to the Yucaipa Valley (Bean and Smith 1978:570). The Cahuilla territory included a portion of the eastern San Bernardino Valley, the southern San Bernardino Mountains as well as the San Jacinto and Santa Rosa Mountains, and extended into the desert and the Coachella Valley in the northern part of the Salton Basin. The name for the coastal Luiseño is based on their association, post-European contact, with the Mission San Luis Rey. The terms for the exclusively inland Cahuilla and Serrano, while not related to the missions, are also of likely Spanish origin. "Serrano" in Spanish equates to "mountaineer" or "highlander" (Kroeber 1925; Bean and Smith 1978:570). According to Strong (1929:36), "The derivation of the term Cahuilla is obscure, and it is regarded by the Indians to be of Spanish origin." It has been suggested that it possibly derives from their own word *Káwiya*, which translates as 'master or boss' (Bean 1978:575; Kroeber 1925:693).

Based on Kroeber (1925:Plate 57), the location of the study area lies within the northernmost extent of the territory of the Luiseño, while Bean (1978:576) using the Santa Ana River as a boundary, places it within the territory of the Cahuilla. Kroeber, and other researchers, also show the westernmost extent of the territory of the Serrano into the San Bernardino Valley to be in close proximity to the Project location (Bean 1978; Bean and Smith 1978; Bean and Shipek 1978; Kroeber 1925:Plate 57). Territorial boundaries between native groups, however, have long been difficult for early ethnographers to definitely delineate. It has been noted that the territorial boundaries between the Luiseño, Cahuilla, and their neighbor, the Kumeyaay to the south, were apparently somewhat fluid at the time of European contact (Schaefer 2006). Schaefer (2006), for example, observed in regard to the territorial boundary between the Cahuilla and their neighbor the Kumeyaay, that, as both groups "consider the cultural resources of the general area as part of their cultural and historical legacy," tribal boundaries likely shifted through time (2006:21). Similarly, Bean and Smith noted for the Serrano that "It is nearly impossible to assign definitive boundaries for the Serrano territory due, both to Serrano sociopolitical organizational features, and to a lack of reliable data" (Bean and Smith 1978:570). As the Project area represents a likely transitional region between the ethnographic territories of the Cahuilla, Luiseño, and Serrano, all of these groups are reviewed here.

2.2.2.1 Luiseño

The earliest substantial Spanish contact with the Luiseño was with the Portola expedition in 1769 (Bean and Shipek 1978:557), the land expedition along the coastline from San Diego to San Francisco (Treutlein 1968). The impact of the establishment of the Spanish mission system and colonization along the coast, beginning during the end of the eighteenth century and the beginning of the nineteenth century, while not as substantial as to the Gabrielino, was still also immediate and profound to the Luiseño. The rapid spread of deadly European diseases and their early absorption into the mission system greatly reduced their population and disrupted their social organization and religious practices. Kroeber estimates that the Luiseño population was approximately 4,000 at the beginning of the Mission era (1770), but only about 500 by 1910 (1925:883). Unlike the Gabrielino, however, several early ethnographers were able to record their native culture (e.g., Sparkman 1908).

Prior to contact, the Luiseño subsisted by hunting and gathering practices making use of resources available in the natural environment. In addition to terrestrial resources, their access to the coast allowed them to expand their resource base to include marine resources as well. (Sparkman 1908; White 1963). Luiseño territory was subdivided and occupied by different families or bands. Family groups were known as *tunglam* or *kamalum*. Chiefs acted as religious leaders of clans and directed religious ceremonies. This position was hereditary (Sparkman 1908). The Luiseño subsisted on seeds, acorns, fruits, and berries, as well as meat caught by hunting and fishing (Kroeber 1925; Sparkman

1908). The Luiseño followed a seasonal gathering cycle, with bands occupying a series of campsites within their territory (Bean and Shipek 1978; White 1963). One band could have multiple areas depending on the season such as in the mountains or valley areas (Sparkman 1908). Each band was typically restricted to their territory for hunting and resource gathering. The resources used depended on the seasons, as the Luiseño moved through the coastal, foothill, or mountain zones (Lightfoot and Parrish 2009).

The Luiseño lived in semi-sedentary villages usually located along major drainages, in valley bottoms, and also on the coastal strand, with each family controlling gathering areas (Sparkman 1908; White 1963; Bean and Shipek 1978). True (1990) indicated that the predominant determining factor for placement of villages and campsites was locations where water was readily and consistently available. Studies of the Luiseño indicate that within their territory, the village territorial units were fairly small, on the order of 30 square miles (78 square kilometers [km^2]) according to White (1963). Based on the distribution of known villages along the San Luis Rey River in northern San Diego County, however, Oxendine (1983) suggests that rancheria (village) territories may have been as small as 4 square miles (10 km^2) but notes that lineages or bands may have held gathering tracts in discontinuous areas. Prehistorically, the distribution of such village units generally correlated with available water sources such as drainages and springs (Koerper et al 2002:64; True 1990).

2.2.2.2 Cahuilla

The earliest Spanish contact with the Cahuilla may have been with the Anza expedition trips in 1774 and 1777. The route followed San Felipe Creek west through Borrego Springs, up into the San Jacinto Mountains (Pourade 1962:164; Schaefer 2006:23). The impact of the Spanish mission system and colonization along the coast was much less immediate and profound within the isolated desert and mountain groups. It was not until 1819, after the establishment of the San Bernardino estancia and cattle ranch at San Gorgonio, that a more direct Spanish influence was felt.

The diversity of Cahuilla territory reflected the range of environmental habitats in inland Southern California. Topographically, their territory ranged from the summit of the southern San Bernardino Mountains, in excess of 11,000 feet, to the Coachella Valley and Salton Sink, well below sea level. Ecological habitats included the full range of mountains, valleys, passes, foothills, and desert areas. Villages were typically situated in canyons or on alluvial fans near water and food resources, and a village's lineage owned the immediately surrounding land (Bean 1978). Well-developed trails were used for hunting and traveling to other villages. Village houses ranged from brush shelters to large huts 15 to 20 feet long. Important plant foods exploited from the Cahuilla's diverse habitat included mesquite and screw beans, piñon nuts, and various cacti. Other important plant foods included acorns (six oak varieties), various seeds, wild fruits and berries, tubers, roots, and greens (Barrows 1900; Bean and Saubel 1972). Women were instrumental in the collection and preparation of vegetal foods. The material culture of the Cahuilla included implements such as baskets and pottery, bow and arrows, awls, arrow shaft straighteners, bags and storage pouches, stone pipes, musical instruments, nets, and costumes were made of plant fibers, stone materials, wood, bone, and shell (Bean 1978).

The Cahuilla recognized two nonpolitical and nonterritorial moieties: The wildcats (*túktem*) and coyotes (*ʔístam*) (Bean 1978:580); *tukut* and *isil* (Gifford 1918:186). The moieties were exogamous - marriage took place to a person of the opposite moiety and patrilocal with patrilinear lines of descent, with women relocating to live with their husband while remaining a member of the moiety into which she was born. The moieties were divided into numerous localized political-religious clans (often referred to

as localized groups, kins, bands, or sibs), with the name of the clans frequently translated as "living at 'such a place'" (Bean 1972; Gifford 1918). Clans were autonomous from one another and commonly owned well-defined territories.

When Lake Cahuilla was present, it undoubtedly affected the settlement and subsistence patterns, with the desert area becoming a more productive resource area. Schaefer (2006:22) states that "Cahuilla mythology and oral tradition also indicate that when Lake Cahuilla dried up, it was the mountain people who resettled the desert floor. The time of Lake Cahuilla is also best documented in the oral traditions of the Cahuilla, both with regard to settlement patterns, song cycles, and the effects of Lake Cahuilla on patrilineal clan segmentation."

During the Spanish period and into the Mexican period, political leadership became more centralized as Juan Antonio from the Mountain Cahuilla and Chief Cabazon in the desert emerged as central figures (Strong 1929). Juan Antonio's group played a significant role during the Mexican-American War, siding with the Mexicans against the Luiseño who supported the American invasion (Phillips 1975). Along with the rise of powerful chiefs and political restructuring, Mexican language, clothing, and food were incorporated into traditional culture during this era.

With the 1848 signing of the Treaty of Guadalupe Hidalgo, the American government promised to preserve the liberty and property of the inhabitants of California, and in 1852, a treaty was drafted to settle land rights issues for the Cahuilla (as well as Serrano and Luiseño). The treaty was never ratified by Congress and the best farming and grazing lands were claimed by Euro-American settlers. In addition, Cahuilla land was substantially reduced during the 1860s and 1870s, primarily as a result of two Executive Orders establishing reservations. The result of this was a checkerboard of 48 sections of reservation lands spread across the eastern edge of the Santa Rosa and San Jacinto mountains and the Coachella Valley (CSRI 1983). Although various modifications have occurred over time, this has remained the permanent home of the Cahuilla to date.

2.2.2.3 Serrano

Because the San Bernardino Mountains were the central home of the Serrano, villages were primarily located in the forest; however, many were located in the foothills and a few on the desert floor (Strong 1929; Bean and Smith 1978). The primary factor for village choice was proximity to a year-round water source (Bean and Smith 1978). Like their neighbors, the Serrano subsisted by hunting and gathering practices making use of resources available in the natural environment. As with the Cahuilla, the Serrano had access to several diverse resource areas including montane, foothill, and desert habitats. Foothill areas and desert locales provided vegetal resources such as mesquite and screw beans, piñon nuts, yucca, and various cacti. Other important plant foods included acorns; various seeds, particularly chia (*Salvia columbariae*); wild fruits and berries; tubers, roots; and greens. Women were instrumental in the collection and preparation of vegetal foods, while men were responsible for the hunting of game. Principal game animals included deer, mountain sheep, antelope, rabbits, rodents, and quail. Larger game were obtained using bow and arrow, with traps, snares, throwing sticks, and deadfalls were used to procure smaller game and birds (Bean and Smith 1978:571). According to Bean and Smith, the material culture of the Serrano was similar to their neighboring tribes, in particular, that of the Cahuilla, and included implements such as baskets and pottery, bow and arrows, awls, arrow shaft straighteners, bags and storage pouches, stone pipes, musical instruments, nets, and costumes were made of plant fibers, stone materials, wood, bone, and shell (1978).

The Serrano social organization and cosmology were largely the same as their neighbors the Cahuilla, with the social organization consisting of exogamous moieties, patrilineal clans, ceremonial exchange parties. As with the Cahuilla, the Serrano recognized two nonpolitical and nonterritorial moieties: The wildcats (*tukʷutam*) and coyotes (*wahiʔiam*) (Bean and Smith 1978:572); *tukum* and *wahilyam* (Gifford 1918:178). The moieties were exogamous—marriage took place to a person of the opposite moiety—and patrilocal with patrilineal lines of descent, with the woman going to live with the husband but remaining a member of the moiety into which she was born. The moieties were divided into numerous localized political-religious clans (often referred to as localized groups, kins, bands, or sibs), with the name of the clans being associated with a particular location or place. Clans were autonomous from one another and commonly owned well-defined territories (Bean 1972; Bean et al. 1991; Gifford 1918).

2.2.3 Historical Background

Southern California's historic period began in September 1542 when Juan Rodriguez Cabrillo landed on Santa Catalina Island as part of his exploration expedition up the coast north of "New Spain." Although the impact of this initial contact did not usher in instant changes in the region, it marks the opening of the area to new contact, colonialism, and cultural shifts.

2.2.3.1 Spanish Period

During the mid-eighteenth century, Spain escalated its involvement in California from exploration to colonization (Weber 1992). In 1769, a Spanish expedition headed by Gaspar de Portolá and Junípero Serra traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California. The Presidio of San Diego and the Mission San Diego de Alcalá were established in 1769 followed by the Presidio of Monterey and Mission San Carlos Borromeo de Carmelo in 1770 in northern California. The missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor, demographics, settlement, and economies to the area. Agriculture and animal husbandry were the main pursuits of the Missions.

The first documented Spanish contact in what is now Riverside County was by Spanish military captain Juan Bautista de Anza, who led expeditions in 1774 and 1775 from Sonora to Monterey (Bolton 1930). Anza embarked on the initial expedition to explore a land route northward through California from Sonora, with the second expedition bringing settlers across the land route to strengthen the colonization of San Francisco (Rolle 1963). Anza's route led from the San Jacinto Mountains northwest through the San Jacinto Valley, which was named "San José" by Anza. Little documentation exists of Anza's route being used after the two expeditions, although it was likely used to bring Spanish supplies into the newly colonized Alta California (Lech 2004). In 1781, the Spanish government closed the route due to uprisings by the Yuman Indians. However, by that time, the missions were established and self-sufficient; thus, the need for Spanish supplies from Sonora had begun to diminish.

Although Riverside County proved to be too far inland to include any missions within its limits, Missions San Juan Capistrano and San Luis Rey de Francia, established in 1776 and 1798 respectively, claimed a large part of southwestern Riverside County. Due to the inland geographical location of the Cahuilla territory, the Spanish missions did not have as direct an effect on them as they did on the Luiseño, who lived along the coast (Bean 1978). On the coast, the Luiseño were moved into the Mission environment where living conditions and diseases promoted the decline of the Luiseño population (Bean and Shipek 1978). However, throughout the Spanish Period, the influence of the Spanish progressively spread

further from the coast and into the inland areas of southern California as Missions San Luis Rey and San Gabriel extended their influence into the surrounding regions and used the lands for grazing cattle and other animals.

In the 1810s, ranchos and mission outposts, called *asistencias*, were established near the Project area, increasing the amount of Spanish contact in the region. An asistencia was established in Pala in 1818 and another in San Bernardino in 1819. Additionally, Rancho San Jacinto was established for cattle grazing in the San Jacinto Valley (Bean and Vane 1980; Brigandi 1999). In 1820, Father Payeras, a senior mission official, promoted the idea that the San Bernardino and Pala *asistencias* be developed into full missions in order to establish an inland mission system (Lech 2004). However, Mexico won its independence from Spain in 1821, bringing an end to the Spanish Period in California.

2.2.3.2 Mexican Period

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past, and laws governing the distribution of land were also retained in the 1820s. Following the secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities.

In order to obtain a rancho, an applicant submitted a petition containing personal information and a land description and map (*diseño*). In 1835, Jose Antonio Estudillo of San Diego submitted a petition for the San Jacinto Rancho. Although Estudillo's petition was for four square leagues (approximately 30,000 acres), in 1842 he was granted close to the maximum size allowed of 11 square leagues (Lech 2004; State Lands Commission 1982). In 1845, Estudillo's son-in-law, Miguel de Pedrorena filed a petition for half of the San Jacinto Viejo Rancho and a small additional portion of land two miles to the northeast in the hills east of Lamb Canyon (Lech 2004). This portion, the northern half of the San Jacinto Viejo Rancho, became known as the San Jacinto Nuevo y Potrero Rancho.

During the Mexican period, the Cahuilla were increasingly influenced by Mexican culture. Some of the Cahuilla acquired Spanish names, learned Spanish, and adopted forms of Spanish subsistence, such as raising cattle, agriculture, and wage labor (Ward 1967; Bean 1978). Many Cahuilla worked seasonally for the Mexicans, traveling to and from their villages (Bean 1978).

2.2.3.3 American Period

American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the Mexican–American War. California's acquisition by the United States substantially increased the growth of the population in California. The California gold rush, the end of the Civil War, and the passage of the Homestead Act implementing the United States' "manifest destiny" to occupy and exploit the North American continent brought many people to California after 1848. While the American system required that the newly acquired land be surveyed prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government (Lech 2004). The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued from 1876 to 1893. The San Jacinto Nuevo y Potrero Rancho

land grant was patented in 1883 to Miguel Pedrorena, Maria Antonia Estudillo Pedrorena, Isabel Pedrorena, and Helena Pedrorena.

Initially, southern California was divided into only two counties: Los Angeles and San Diego. In 1853, San Bernardino County was added, placing what is now Riverside County primarily within San Diego County and partially within San Bernardino County.

Southern California was developed by Americans and other immigrants who migrated to the western frontier in pursuit of gold and other mining, agriculture, trade, and land speculation (Lech 2004). This population growth of southern California during the early years of the American Period brought a need for mail and freight travel. In 1857, John Butterfield was awarded a six-year contract to transport mail twice a week between St. Louis, Missouri, and San Francisco, California (Helmich 2008). The Butterfield Stage Route used the same trail as the Sonora (or Southern Emigrant) Trail from Yuma through Warner Springs and Temecula, and then up through Temescal Valley to Chino, and then to Los Angeles. By the mid-nineteenth century, the Southern Emigrant Trail ran through western Riverside County in a similar alignment to the current Interstate (I-)15 freeway. The Butterfield Overland Stage route went through a major stop called "Alamos," the Spanish word for cottonwoods, in Murrieta. Another branch of the Southern Emigrant Trail veered northward from Temecula to Box Springs near present-day Moreno Valley, roughly following the present-day route of I-215 (Lech 2004).

Local mail routes within southern California were also developed beginning in the 1850s, such as the line established in 1852 by Phineas Banning between Los Angeles and San Diego (Stott 1968). In 1868, Tomlinson & Co. briefly operated a daily mail route from Tucson, Arizona to Los Angeles via San Diego and San Bernardino (Stott 1968), although, after only four months, the company had lost $12,000 and discontinued service (Mills 1957). In 1867, the U.S. Mail Company sent weekly stages that ran between San Diego and San Bernardino.

While stagecoaches were successful at transporting gold, people, and mail, the need for a railroad to California was imperative. In the 1850s, surveys were initiated by the federal government to determine a railroad route to the Pacific coast (Lech 2004). Although the first transcontinental railroad was completed in 1869 to northern California, in the 1870s the Southern Pacific Railroad Company, incorporated in 1865 and consolidated in 1870, began to construct a southern route that would traverse the state (Fickewirth 1992). In the early 1880s, the California Southern Railway, a subsidiary of the Atchison, Topeka and Santa Fe Railway (Santa Fe), was completed and allowed for travel through the Cajon Pass to Barstow to a junction of the Atlantic and Pacific Railroad and down to San Diego through western Riverside County. In 1887, Santa Fe officials consolidated their family of railroads in southern California, forming the California Central Railway. Although the California Southern Railway remained an individual subsidiary at that time, it consolidated with the California Central Railway and the Redondo Beach Railway two years later in 1889. The resulting corporation was the Southern California Railway Company, wholly owned by Santa Fe (Price 1988). Later, in 1906, all lines of Southern California Railway Company were deeded to the Atchison, Topeka and Santa Fe Railway Company.

The Project area and surrounding region developed along with the railroad. The trains were used to transport settlers into the area, creating a period of agricultural and land development, ultimately resulting in the establishment of Riverside County in 1893, formed from portions of San Bernardino and San Diego counties. Moreno Valley, which consisted of small, unincorporated communities, got its name from Frank E. Brown ("Moreno" in Spanish), who formed the Bear Valley Land and Water Company in 1883. Brown built a dam at Bear Valley and provided water to the Perris and Moreno communities until

1899, when he lost a legal suit, and thereby the water rights, to the City of Redlands. This litigation and a period of natural drought devastated the local farming communities, forcing families to either move or abandon their homes in favor of better irrigated areas. The few who remained turned to "the dry farming of hay, grain, and grapes" (City of Moreno Valley, n.d.).

The community was revived in 1918, with the construction of March Field in anticipation of America's entry into World War I. It began as a temporary base for training fighter pilots but was established as a permanent base and flight training school in the late 1920s. This led to a population boom in the Moreno Valley, with the Base supporting up to 85,000 troops at a time. The establishment of the Riverside International Raceway in 1958 and the Lake Perris Recreation Area in 1973 led to further population increases. The unincorporated communities of Moreno, Edgemont, and Sunnymead were combined into the City of Moreno Valley in 1984 (City of Moreno Valley, n.d.).

3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM

3.1 RECORDS SEARCH

HELIX requested a record search of the California Historical Resources Information System (CHRIS) at the Eastern Information Center (EIC) on February 23, 2021. Due to the COVID-19 pandemic, the EIC has significantly reduced staff and temporarily revised record search policies to limit the breadth of study areas. To accommodate these revised policies, HELIX requested a records search that consisted of the Project site and a half-mile search radius around the Project site. The record search includes the bibliographic information relating to the resources and reports intersecting the records search area (Appendix A, *Record Search Results*), copies of the resource records intersecting the records search area, copies of the reports intersecting the Project site, and the location maps extracted from reports identified within the overall search area but outside the Project site. The EIC is not providing a map detailing the results of the record search at this time.

3.1.1 Previous Surveys

The records search results identified 23 previous cultural resource studies (Table 1, *Previous Studies Within a Half-mile of the Project Site*) within the record search study area. Two studies, RI-00182 (Weaver 1975) and RI-00742 (Wilke 1979) studied the Project site in the mid to late 1970s. RI-00182 investigated the Project site and the surrounding area to support a water systems addition along Brodiaea Avenue; this study did not identify cultural resources within the Project site, but one resource (33-000857, discussed below) was identified adjacent to the Project site. RI-00742 also studied the Project site in support of a potential planning zone change, but no resources were identified within the Project site.

The record search identified 21 studies previously undertaken within a half mile radius of the Project site. Of these, six studies (RI-06269, RI-07335, RI-07645, RI-08944, RI-09510, and RI-10150) are located within a quarter-mile of the Project site; these six investigations studied the immediate areas adjacent to the Project site resulting in the identification of six resources (33-000857 (update), 33-015454, 33-000857, 33-003159, 33-003341, and 33-003342) located outside of the Project site, but in close proximity to the Project. The remaining 15 studies investigated areas exceeding a quarter mile but are located within a half-mile of the Project site. All the investigations identified within the record search area consisted of cultural resource assessments.

Table 1
PREVIOUS STUDIES WITHIN A HALF-MILE OF THE PROJECT SITE

Report Number (RI-)	Report Title	Author, Date
00182*	Environmental Impact Evaluation: Archaeology of Brodiaea Avenue, Pl 984, Water Systems Addition, Riverside County, California	Weaver, 1975
00742*	Environmental Impact Evaluation: An Archaeological Assessment of 17.64 Acres Considered for Change of Zone (CZ 2707), Southeast of Sunnymead, Riverside County, California	Wilke, 1979
01665	Devers-Serrano-Villa Park Transmission System Supplement to the Cultural Resources Technical Report - Public Review Document and Confidential Appendices	Wirth Associates, 1983
01786	Cultural Resource Report on Tracts 12608, 12606-2 and 11410 Located in the Sunnymead Area, Riverside County, California	Scientific Resource Surveys, 1983
02171	Cultural Resources Inventory for the City of Moreno Valley, Riverside County, California	McCarthy, 1987
04397	Archaeological Survey of Parcel Map 29700, Moreno Valley, Riverside County, California.	McCarthy, 2000
06269	An Historical Resources Identification of Alessandro Pointe Project, Tract 34681, 25817 Alessandro Boulevard, City of Moreno Valley, Riverside County, California	Alexandrowicz, 2006
06886	An Archaeological Survey of Approximately 20 Acres (AP 477-180-012 and -013) for the Tentative Tract 34397 Moreno Valley Project Located Southeast of Cottonwood Avenue and Nason Street, Moreno Valley, Riverside County, California 92555	Tetra Tech, Inc., 2006
07333	Letter Report: Cultural Resource Records Search and Site Visit Results for T-Mobile Candidate IE 24092C, (14375 Nason Street) 14375 Nason Street, Moreno Valley, Riverside County, California.	Bonner and Aislin-Kay, 2006
07335	An Archaeological Survey of 10-Acres (APN 486-280-001) Southeast of the Intersection of Alessandro Boulevard and Lasselle Street, Moreno Valley, Riverside County, California 92555	Tetra Tech, Inc., 2007
07645	An Archaeological Survey for the Alessandro Plaza Project, City of Moreno Valley, County of Riverside, California	Rosenberg and Smith, 2005
08154	Letter Report: Cultural Resource Records Search and Site Visit Results for Royal Street Communications Candidate	Bonner and Aislin-Kay, 2008
08266	Negative Survey of Approximately 25 Acres for the Riverside County Regional Medical Center Expansion Project, City of Moreno Valley, County of Riverside, California	Bray, 2009
08358	Identification and Evaluation of Historic Properties: Moreno Valley Medical Village Project, Assessor's Parcel Nos. 486-290-001 and -002, City of Moreno Valley, Riverside County, California.	Encarnacion and Ballester, 2010
08688	Letter Report: Cultural resources Records Search and Site Visit Results for T-Mobile USA Candidate IE24226-A	Bonner, 2011
08802	Phase I Archaeological Assessment: Moreno Master Drainage Plan Revision	Hogan, Encarnacion, and Ballester, 2012
08944	Historical/Archeological Resources Survey Report, Assessor's Parcel No. 486-280-043, City of Moreno Valley, Riverside County, California	Tang and Hogan, 2013
08945	Historical/Archaeological Resources Survey Report, Desilting Basin Site, Boulder Ridge Family Apartments Project, City of Moreno Valley, Riverside County, California	Hogan, 2013

Report Number (RI-)	Report Title	Author, Date
09209	Cultural Resources Survey: I CARE/ CLV5965, 14315 Nason Street, Moreno Valley, Riverside County, California 92557	Greenberg, 2014
09308	Cultural Resources Assessment of the Dracaea Project, Moreno Valley, Riverside County, California (BCR Consulting Project No. TRF1401)	Brunzell, 2014
09510	Update to Historical/Archaeological Resources Survey Assessor's Parcel No. 486-280-043 (Rocas Grandes Project) City of Moreno Valley, Riverside County, California CRM TECH Contract No. 2980	Tang, 2015
09901	Phase I Cultural Resources Survey for the TTM 37060 Project, City of Moreno Valley, County of Riverside	Stropes and Smith, 2016
10150	Cultural Resources Assessment the Alessandro Apartments Project City of Moreno Valley, Riverside County, California	Brunzell, 2016

* Studies located within the Project site.

3.1.2 Previously Recorded Sites

The EIC identified 16 previously recorded cultural resources near the Project site. However, four of these sites (P-33-003133, P-33-007277, P-33-007282, and P-33-015027) were recorded outside of the half mile search radius. As such, the EIC has a record of 12 previously recorded cultural resources within a half-mile radius of the Project site (Table 2, *Previously Recorded Resources Within a Half-mile of the Project Site*). Nine of these resources are prehistoric, and the remaining three resources relate to the historic era. The prehistoric resources include sites comprised of lithic scatters, bedrock milling features, cairns/rock features, and rock shelters. The historic resources consist of historic archaeological sites containing structural pads or foundations, privies or historic trash scatters, wells/cisterns, and historic (single-family) properties.

Of the 12 resources identified by the EIC, two resources (P-33-003249 and P-33-016788) are recorded within the Project site. P-33-003249 (Swope 1987) consists of a red brick and concrete water cistern and associated constructions identified in 1987 within the southeast corner of the eastern (Windsong) parcel. P-33-016788 (Sanka 2007) was recorded in 2007 along the northeastern boundary of the western (Skylar Place) parcel and consists of two granitic boulders with a total of four small mortars. However, the recorders suspected that the feature was relocated from its original location into the Project site.

Table 2
PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE PROJECT SITE

Resource Number (P-33-#)	Resource Number (CA-RIV-#)	Description	Recorder, Date
000857	000857	Prehistoric site. Fourteen bedrock milling slicks, one mortar, and one basalt flake.	Weaver, 1975; Conroy, 1987; Ballester and Perez, 2013
003133	3133	Prehistoric site. Bedrock milling features.	Weaver, 1975; Prior et al., 1987; Ballester and Perez, 2013;

Resource Number (P-33-#)	Resource Number (CA-RIV-#)	Description	Recorder, Date
003134	3134	Prehistoric site. Bedrock milling features.	McCarthy, 1986
003135	3135	Prehistoric site. Bedrock milling features.	McCarthy, 1986
003159	3159	Prehistoric site. Bedrock milling features.	Prior et al., 1987; Ballester and Perez, 2013; Ballester, 2015
003223	3223	Prehistoric site. Bedrock milling feature.	Pinto, 1987
003224	3224	Prehistoric site. Bedrock milling feature	Pinto, 1987
003249*	3249-H	Historic Site. Red brick and concrete water cistern and associated constructions.	Swope, 1987
003341	3341	Prehistoric site. Bedrock milling features.	Prior and Conroy, 1987; Ballester and Perez, 2013
003342	3342	Prehistoric site. Bedrock milling feature.	Neiditch, 1987; Ballester and Perez, 2013
007276		Historic structure. Single family property	Warner, 1983
007277		Historic structure. Single family property.	Warner, 1983
007282		Historic structure. Single family property.	Warner, 1983
015027	7991	Historic site. Water conveyance system.	Goodwin, 2004
015454	008149	Historic site. Foundations/structure pad, privies/dumps/trash scatters, wells/cisterns.	Alexandrowicz, 2006
016788*		Prehistoric site. Bedrock milling features.	Sanka, 2007

* Resources located within the Project site.

The EIC identified seven resources located outside of the Project site but within a quarter-mile. Of these seven resources, three resources (P-33-000857, P-33-003159, and P-33-003342) are located adjacent to the Project site (Table 2), south of Alessandro Boulevard. These three resources consist of boulder outcrops containing several bedrock milling slicks located on the hill immediately south of the Project. An additional site (P-33-003341) containing three bedrock milling slicks is located on the south side of the hill. The remaining three resources are located north of the Project site along Cottonwood Avenue (P-33-003223) and along Alessandro Boulevard (P-33-007276 and P-33-015454).

The EIC identified three resources (Table 2) located outside the Project site (but within a half-mile). These resources consist of three prehistoric sites containing bedrock milling features and three historic sites containing historic structures. P-33-003134 and P-33-003135 are comprised of bedrock milling features, located northeast of the Project along Cottonwood Avenue. P-33-003224 is located along Alessandro Boulevard and is comprised of a bedrock milling slick.

Additional site descriptions are provided below for the resources identified within the Project site and the immediate surrounding area.

P-33-000857 (CA-RIV-857)

P-33-000857 is a prehistoric site located south of the Project site on the south side of Alessandro Boulevard. The site, originally recorded in 1975, consisted of 14 bedrock milling slicks, one mortar, and

one basalt flake. The site was revisited in 1987, but only five slicks located on two boulders were observed at the time. The boundaries of the site changed between the 1975 and 1987 site records. The site, as recorded in the 1975 site record, was originally delineated to encompass the entire hill that it is situated on. The current configuration of the site, as shown on the EIC's map, resulted from the 1987 site record update and only includes the eastern portion of the hillside that contained the two boulders. These two boulders were revisited in 2013; both of the boulders were reidentified, and a total of seven slicks were observed.

P-33-003159 (CA-RIV-3159)

Site 33-003159 is a prehistoric site located south of the Project site, south of Alessandro Boulevard. The site was first recorded in 1987 as three slicks located on two boulders. The site was revisited in 2013, but the slicks could not be found. However, the surface visibility was compromised because most of the boulders in the area were covered with graffiti or paint used for graffiti abatement. The site was revisited in 2015; the surface of the boulders had better visibility because some of the paint had worn off. The 2015 site visit observed three slicks on top of a small hill covered with granitic bedrock outcrops.

P-33-003223 (CA-RIV-3223)

P-33-003223 is a prehistoric site located north of the Project site, south of Cottonwood Avenue. The site was first recorded in 1987 as a single boulder containing two milling slicks. The site was evaluated in 1990 prior to a local development. P-33-003223 was found to be ineligible for inclusion on the NRHP, and the State Historic Preservation Officer (SHPO) agreed with these findings. The site has not been updated since its original recordation. As such, the EIC does not have documentation regarding the site's condition or integrity after the 1990 development.

P-33-003249 (CA-RIV-3249-H)

P-33-003249 was recorded as a red brick and concrete water cistern and associated constructions identified in 1987 within the southeast corner of the eastern (Windsong) parcel. The cistern was described as a red fired brick and mortar constructions, plastered with concrete. The cistern depth was approximated to extend eight feet below ground surface and 18 inches above ground. The above-ground portion of the cistern was described as a series of bricks laid in a stairstep fashion to constrict the diameter of the structure. Concrete mortar was used to fill in the gaps created by the stairsteps to create a smooth exterior. The inside of the brick walls is plastered with concrete. The exterior of the cistern was once covered with concrete plaster that has since fallen off or been removed. An eight-inch diameter concrete-covered steel pipe extends through the wall of the cistern and continues below the ground surface. At the time of recordation, a boulder was observed to the north-northeast; the boulder contained patches of plaster and concrete, but the function of the feature was undetermined. The recorder posited that perhaps another pipe extended from the cistern and was anchored to the boulder. No additional site update or evaluation has been conducted since the cistern's original recordation.

P-33-003341 (CA-RIV-3341)

Site 33-003341 is a prehistoric site located south of the Project site, south of Alessandro Boulevard, and east of Lasselle Street. The site was first recorded in 1987 as three slicks located on two boulders. The

site was noted as compromised by vandalism; most of the boulders had extensive graffiti. The site was revisited in 2013, but no notable changes were observed in the site condition or description.

P-33-003342 (CA-RIV-3342)

P-33-003342 is a prehistoric site located south of the Project site, south of Alessandro Boulevard. The site was first recorded in 1987 as an isolated boulder containing one milling slick situated between boulder outcrops to the south and northeast. In 1987, the site had evidence of vandalism, littering, and graffiti. The site was revisited in 2013, but the boulder containing the slick could not be found. The 2013 investigation used satellite imagery to approximate that the boulder was removed between March 9, 2011 and June 7, 2012.

P-33-007276

P-33-007276 is a historic structure located west of the Project site. This historic structure is a vernacular ranch house. The construction date is unknown; however, it was estimated to have been constructed in approximately 1920. The building was described as L-shaped in plan with a composition gable roof, redwood siding, a bay window, and tall trees that shade it. The structure has no historic name, and both the architect and builder of the structure are unknown. Although the structure has not been evaluated, the resource was documented as a good example of a vernacular ranch house in the Sunnymead area. As such, the house was documented as a resource that appeared eligible for the NRHP or CRHR during the 1983 survey.

P-33-015454 (CA-RIV-8149)

P-33-015454 is a historic-era site containing remnants of two early to mid-twentieth century residences. The site was documented in 2006 and is located west of the Project site along Alessandro Boulevard. The site contains historic foundations or structural components, historic refuse, and a septic tank. In 2006, the site showed evidence of compromised integrity caused by mechanical discing for weed abatement. No additional evaluations or site updates have been completed since its original recordation in 2006.

P-33-016788

P-33-016788 was recorded in 2007 along the northeastern boundary of the western (Skylar Place) parcel. P-33-016788 was documented as an isolated prehistoric resource consisting of two granitic boulders with a total of four small mortars. The first boulder (Feature 001) exhibits one mortar (or mortar-start), measuring approximately 8 cm in diameter and 5 cm in depth. The second boulder (Feature 002) is located 1.5 meters east of Feature 001 and contains three mortars (or mortar-starts). Each mortar measures approximately 7 cm in diameter and 2 cm in depth. Both boulders were observed out of context within a large push-pile of soil containing modern concrete structural remains and fragmented granitic boulders. These resources were recorded as isolated resources because they were observed out of context and the original site location is unknown.

3.1.3 Other Archival Research

Various additional archival sources were also consulted, including historic topographic maps and aerial imagery. The purpose of this research was to identify historic structures and land use in the area.

Historical aerials from 1966, 1967, and 1978 (NETR Online 2017), and the 1901 (1: 125,000) Elsinore, 1942 (1: 62,500) Perris, and 1953 and 1967 (1: 24,000) Sunnymead USGS topographic maps were reviewed.

The town of Moreno was established in 1891 at the junction of Alessandro and Redlands Boulevards, located to the east of the Project. The 1901 topographic map shows Box Springs and Alessandro are located along the Southern California Railway (Atchison, Topeka and Santa Fe Railroad) to the northwest and west, respectively. The valley is labeled as Alessandro Valley. Many of the roads seen on the 1901 map no longer appear on the 1942 topographic map; however, several additional structures are depicted along Alessandro Boulevard, labeled and shown as a secondary, two-lane, hard surface, all-weather road. Midland School is illustrated and labeled along Alessandro Boulevard at Kitching Street. Several areas within the valley, now labeled as Moreno Valley, are shown as agricultural crops. The 1953 and 1967 topographic maps are essentially the same as the 1942 topographic map.

The 1966, 1967, and 1978 aerial photographs reflect essentially the same information as the 1953 and 1967 topographic maps. While a few blocks begin to show denser development and the beginnings of housing tracts and mobile home parks, especially within the western region of the Project vicinity, much of the area surrounding the Project is characterized by rural residences and agricultural crops, particularly in the eastern region of the Project area, with development increasing each decade. Residential communities surrounding the Project site to the east and north were in place by the late 1990s. The residential community directly to the east was developed in phases between 2005 and 2016.

3.2 NATIVE AMERICAN CONTACT PROGRAM

HELIX contacted the Native American Heritage Commission (NAHC) on February 23, 2021, for a Sacred Lands File search and a list of Native American contacts for the Project site and vicinity. The NAHC completed its search and responded on March 4, 2021. The Sacred Lands File search did not identify any known sacred lands or Native American cultural resources are within the Project site or the surrounding vicinity. Letters were sent to Native American representatives and interested parties identified by the NAHC on March 11, 2021. To date, four responses have been received from the San Manuel Band of Mission Indians, Quechan Indian Tribe, Rincon Band of Luiseño Indians, and Agua Caliente Band of Cahuilla Indians (Table 3, *Native American Contact Program Responses*).

The San Manuel Band of Mission Indians submitted an email response on March 17, 2021; their response indicated that the proposed Project is located outside of Serrano ancestral territory and, as such, the San Manuel Band of Mission Indians will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates. Similarly, the Quechan Indian Tribe emailed on March 17, 2021, to indicate that the tribe does not have any additional comments and they would like to defer to the tribes more local to the Project. The Rincon Band of Luiseño Indians submitted a letter via email on March 23, 2021. In their letter, the Rincon Band of Luiseño Indians stated they have no knowledge of any specific sites within the Project site or the surrounding area. However, the Project site may contain unidentified tribal resources. As such, the Rincon Band of Luiseño Indians requests a copy of the archaeological record search. The Agua Caliente Band of Cahuilla Indians submitted a letter via email on April 12, 2021. In their letter, the Agua Caliente Band of Cahuilla Indians indicated that the Project resides within the Tribe's Traditional Use Area. As such, the Agua Caliente Band of Cahuilla Indians requests that the Project complete a cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area and a copy of the record search and any

cultural resource documentation (report and site records) generated in connection with this project be sent to the Tribe. None of the other tribes responded to HELIX's letter. If any further responses are received, they will be forwarded to the City. Native American correspondence is included as Appendix B, *Native American Correspondence* (Confidential Appendices, bound separately). The City will initiate AB 52 government-to-government consultation with registered tribal contacts, separate from this contact program.

Table 3
NATIVE AMERICAN CONTACT PROGRAM RESPONSES

Contact/Tribe		Response
Agua Caliente Band of Cahuilla Indians	Jeff Grubbe, Chairperson	Mailed a letter on March 11, 2021. No response to date.
	Patricia Garcia-Plotkin, Director	Mailed a letter on March 11, 2021. A letter received from Lacy Padilla via email on April 12, 2021. The Project site is located within the Tribe's Traditional Use Area. The Tribe requests a cultural resources inventory of the project area by a qualified archaeologist prior to any development activities in this area, a copy of the records search results, and copies of report and site records.
Augustine Band of Cahuilla Mission Indians	Amanda Vance, Chairperson	Mailed a letter on March 11, 2021. No response to date.
Cabazon Band of Mission Indians	Doug Welmas, Chairperson	Mailed a letter on March 11, 2021. No response to date.
Cahuilla Band of Indians	Daniel Salgado, Chairperson	Mailed a letter on March 11, 2021. No response to date.
Los Coyotes Band of Cahuilla and Cupeño Indians	Ray Chapparosa, Chairperson	Mailed a letter on March 11, 2021. No response to date.
Morongo Band of Mission Indians	Robert Martin, Chairperson	Mailed a letter on March 11, 2021. No response to date.
	Denisa Torres, Cultural Resources Manager	Mailed a letter on March 11, 2021. No response to date.
Pala Band of Mission Indians	Shasta Gaughen, Tribal Historic Preservation Officer	Mailed a letter on March 11, 2021. No response to date.
Pechanga Band of Luiseño Indians	Mark Macarro, Chairperson	Mailed a letter on March 11, 2021. No response to date.
	Paul Macarro, Cultural Resources Coordinator	Mailed a letter on March 11, 2021. No response to date.
Quechan Tribe of the Fort Yuma Reservation	Jill McCormick, Historic Preservation Officer	Mailed a letter on March 11, 2021. Email received on March 17, 2021- The tribe has no comments on the project. The tribe would like to defer to the more local Tribes and support their decisions on the project.

Contact/Tribe		Response
	Manfred Scott, Acting Chairman Kw'ts'an Cultural Committee	Mailed a letter on March 11, 2021. No response to date.
Ramona Band of Cahuilla	Joseph Hamilton, Chairperson	Mailed a letter on March 11, 2021. No response to date.
	John Gomez, Environmental Coordinator	Mailed a letter on March 11, 2021. No response to date.
Rincon Band of Luiseño Indians	Bo Mazzetti, Chairperson	Mailed a letter on March 11, 2021. No response to date.
	Cheryl Madrigal, Tribal Historic Preservation Officer	Mailed a letter on March 11, 2021. Letter via email received on March 23, 2021. The tribe does not have knowledge of cultural resources within the proposed project area. However, this does not mean that none exist. The tribe recommends that an archaeological record search be conducted and ask that a copy of the results be provided to the Rincon Band.
San Manuel Band of Mission Indians	Jessica Mauck, Director of Cultural Resources	Mailed a letter on March 11, 2021. Email from Ryan Nordness received on March 17, 2021- The proposed project is located outside of Serrano ancestral territory and, as such, SMBMI will not be requesting to receive consulting party status with the lead agency or to participate in the scoping, development, or review of documents created pursuant to legal and regulatory mandates.
Santa Rosa Band of Mission Indians	Lovina Redner, Tribal Chair	Mailed a letter on March 11, 2021. No response to date.
Soboba Band of Luiseño Indians	Joseph Ontiveros, Cultural Resource Department	Mailed a letter on March 11, 2021. No response to date.
	Scott Cozart, Chairperson	Mailed a letter on March 11, 2021. No response to date.
Torres-Martinez Desert Cahuilla Indians	Michael Mirelez, Cultural Resource Coordinator	Mailed a letter on March 11, 2021. No response to date.

4.0 METHODS

4.1 SURVEY METHODOLOGY

A pedestrian survey of the Project site was conducted on February 26, 2021, by HELIX archaeologists Julie Roy and Dominique Diaz de Leon and a Native American monitor from the Soboba Band of Luiseño Indians (Soboba), Victoria Banda. The Project site was surveyed in 15-meter intervals within both (east and west) parcels. As discussed above, the EIC identified two resources (P-33-003249H and P-33-016788) within the Project site. These sites were revisited during the pedestrian survey to assess their current condition and location.

5.0 RESULTS

The east parcel appears to have been disked or ripped by machinery in the past. Granitic boulders show evidence of being scraped and moved by large equipment. Soils in the east parcel are sandy decomposing granite. The west parcel appears to have been cut down approximately 10 to 20 feet below the east parcel. There appears to be almost no soil left on the surface of the ground, which consists of decomposing quartz granite and chunks of quartz. Visibility averaged 50 percent in the east parcel and up to 90 percent in the west parcel.

As noted above, two resources have been previously recorded within the Project site (Figure 4, *Cultural Resources within and Adjacent to the Project Site*; Confidential Appendix C, bound separately). These sites consist of one historic brick cistern (P-33-003249) recorded in the southeast corner in the east parcel and a disturbed prehistoric site containing two bedrock features (P-33-016788) located towards the center of the west parcel. No new cultural resources were identified within the Project study area.

P-33-003249 (CA-RIV-3249H)

This resource was a red brick and concrete water cistern recorded in 1987. The cistern was noted as being west of a dirt road and approximately 170 feet north of Alessandro Boulevard, located within the Project site. The site was not reidentified during the current survey and was possibly destroyed during road construction or residential development activities. The cistern, observable on Google Earth imagery from 2002, was likely destroyed by the development of Darwin Drive and the housing tract to the east sometime between December 2004 and October 2005. However, the top of the feature may have been taken off during disking/ripping, and portions of the cistern may be buried under soils and concrete.

P-33-016788

P-33-016788 was recorded in 2007 along the northeastern boundary of the western (Skylar Place) parcel. P-33-016788 was documented as an isolated prehistoric resource consisting of two granitic boulders with a total of four small mortars. The first boulder (Feature 001) exhibited one mortar (or mortar-start), measuring approximately 8 cm in diameter and 5 cm in depth. The second boulder (Feature 002) was located 1.5 meters east of Feature 001 and contained three mortars (or mortar-starts). Both boulders were observed out of context within a large push-pile of soil containing modern concrete structural remains and fragmented granitic boulders. These resources were recorded as isolated resources because they were observed out of context and the original site location was unknown.

P-33-016788 was reidentified during the survey (Plate 1). However, the recorded elements appear to be a modern disturbance from construction activity, consistent with their original documentation; the "mortars" do not appear to be prehistoric in nature. Most of the boulders within and surrounding the feature show signs of rock-breaking equipment and bucket teeth marks, which would have been used with an excavator to break apart and dismantle the boulders prior to being pushed/relocated along the edges of the parcel. The "mortars" pictured on the original site record appear to be mechanically drilled holes in the rock, rather than bedrock milling features. This is consistent with the current survey results – only mechanically drilled holes were observed, no actual mortars. The "feature" remains heavily disturbed and out of context, consistent with the observations made in 2007 when it was originally recorded. Although the Project site has been cleared and several non-cultural boulders have been

pushed to the edges of the Project boundary, the feature has not been moved from its documented location within the Project site.

Plate 1. Observation of P-33-016788 during HELIX's 2021 pedestrian survey.

6.0 SUMMARY AND MANAGEMENT RECOMMENDATIONS

The EIC has a record of 12 previously recorded cultural resources within a half-mile radius of the Project. Two of these resources (P-33-003249 and P-33-016788) are recorded within the Project site. P-33-003249, a historic red brick and concrete water cistern, was demolished between 2004 and 2005. As such, the cistern was not observed on-site during the pedestrian survey. P-33-016788, a bedrock milling feature consisting of two granitic boulders with a total of four small mortars, was located and observed during the pedestrian survey. However, it was determined not to be prehistoric in origin; rather, it appears to be the result of equipment used to break up the rocks and is not an archaeological resource. The resource was originally recorded in 2007 as heavily disturbed and out of context. HELIX archaeologists detected additional disturbances to the boulders during their pedestrian survey. Although these boulders were suspected of being relocated from their original local to the Project site, as recorded in 2007, they have subsequently been broken apart and dismantled. However, the feature remains in the same location within the Project site despite significant site clearing. P-33-003249 fails to meet the criteria for a significant cultural resource, as it is not archaeological in nature. No additional resources were identified during the pedestrian survey.

The EIC identified seven resources located outside of the Project site but within a quarter-mile. Of these, three resources (P-33-000857, P-33-003159, and P-33-003342) are located adjacent to the Project site, south of Alessandro Boulevard. These three resources consist of boulder outcrops containing several bedrock milling slicks located on the hill immediately south of the Project. An additional site (P-33-003341) containing three bedrock milling slicks is located on the south side of the hill, located along Brodiaea Avenue. The remaining four resources, located within a quarter-mile of the Project, are located north of the Project site along Cottonwood Avenue (P-33-003223 and P-33-003224) and Alessandro Boulevard (P-33-007276 and P-33-015454). These resources are located outside of the Project footprint. As such, these resources are not expected to be directly impacted by the Project. However, impacts to

the sites adjacent to the Project may be encountered if Project activities expand beyond the development footprint. Project-related activities, such as lay-down areas, Project-related traffic, or temporary administration modules, should avoid the outcrops located south of the Project to prevent impacts to these resources.

Based upon the findings of the cultural resources survey, the Project is expected to have no impact to significant cultural resources. However, the general vicinity of the Project has been occupied and used by the Luiseño, Cahuilla, and other native people for thousands of years. As such, there are numerous previously recorded cultural resources within the vicinity of the Project. Although no tribal cultural resources have been identified within the Project site, the Project site falls within the Traditional Use Area of several local tribes and may be sensitive for cultural resources. As discussed in this document, several sites in Perris Valley, particularly near the Perris Reservoir located approximately four miles south of the Project site, produced archaeological data that contributed to our broad understanding of prehistory and chronology. Although these sites are outside of the study area, the proximity of these sites increases the cultural sensitivity within the Project site.

In addition to prehistoric resources, the Project may have buried historic era resources, such as the remnants of P-33-003249, the historic brick cistern located within the eastern (Windsong) parcel. Although this brick cistern was demolished between 2004 and 2005, portions of the cistern may still exist beneath the surface of the site. If present, buried historic era resources present a potential Project impact. However, this potential impact may be reduced by implementing appropriate mitigation.

Based on these factors, the following measures are recommended to ensure cultural resources are not impacted by project development. By developing and implementing an archaeological and Native American monitoring program, the Project will reduce any potential impact to cultural or tribal cultural resources to a less than significant level.

MM-CULT-1 **Cultural Resources Monitoring Agreement.** At least 30 days prior to beginning any ground-disturbing activities for the Project, the developer/applicant shall contact the Monitoring Tribe(s) to coordinate and develop a Cultural Resources Monitoring Agreement. The Agreement shall address the designation, responsibilities, and participation of the professional Native American Tribal monitor(s) during grading, excavation, and other ground-disturbing activities; Project grading and excavation schedule; and terms of compensation for the monitor(s). The Tribal monitor(s) shall be allowed to monitor all grading, excavation, and ground-disturbing activities and shall have the authority to temporarily stop or redirect grading and excavation activities in the event of a discovery.

MM-CULT-2 **Archaeological Monitoring.** Prior to earth-moving activity, the City shall retain a qualified principal investigator (PI), defined as an archaeologist who meets the Secretary of the Interior's Standards for professional archaeology, to oversee the cultural resources-related mitigation efforts. A qualified archaeological monitor (Project Archaeologist [PA]) shall work under the supervision of the PI and shall be on-site during ground-disturbing activities, including brushing/grubbing, grading, excavation, trenching, etc. in areas that retain the potential for cultural material (e.g., not in formational material). The archaeological monitor shall have the authority to temporarily stop or redirect grading and excavation activities in the event of a discovery. The duration and timing of the monitoring shall be determined by the PI in consultation

with the City. If, in consultation with the City, the PI determines that full-time monitoring is no longer warranted, he or she may recommend a reduction in the level of monitoring to periodic spot-checking or may recommend that monitoring cease entirely.

MM-CULT-3 **Cultural Resources Worker Sensitivity Training.** Prior to the start of ground-disturbing activities, the City shall hold a pre-grading meeting. The PI or PA shall attend the pre-grading meeting with the City's Project Administrator, Field Engineering Inspector, representatives from the Monitoring Tribe(s), and Project contractors to conduct a Cultural Resources Worker Sensitivity Training for construction personnel working on the proposed Project. The training shall include an overview of potential cultural resources that could be encountered during ground-disturbing activities; the requirements of the monitoring program; the protocols that apply in the event inadvertent discoveries of cultural resources are identified, including who to contact and appropriate avoidance measures until the find(s) can be properly evaluated; and other appropriate protocols.

MM-CULT-4 **Discovery of Cultural Resources.** If inadvertent discoveries of cultural resources are encountered at any time during construction, these materials and their context shall be avoided until a qualified archaeologist and representative(s) from the Monitoring Tribe(s) have consulted with the City regarding appropriate avoidance and mitigation measures for the newly discovered resources. Project personnel shall not collect or retain cultural resources. Prehistoric resources include but are not limited to: chert or obsidian flakes; projectile points; mortars and pestles; dark, friable soil containing shell and bone; dietary debris; heat-affected rock; or human burials. Historic resources include but are not limited to: stone or adobe foundations or walls; structures and structural remains; and refuse deposits (glass, metal, wood, ceramics), often found in old wells and privies. Pursuant to California PRC Section 21083.2(b), avoidance is the preferred method of preservation for archaeological resources. Cultural material recovered that is not Native American in origin shall be curated at an appropriate repository in Riverside County, such as the Western Science Center.

MM-CULT-5 **Discovery of Native American Cultural Resources.** In the event that Native American cultural resources are inadvertently discovered during the course of ground-disturbing activities for this Project, the following procedures shall be carried out for treatment and disposition of the discoveries:

Temporary Curation and Storage: During the course of construction, all discovered resources shall be temporarily curated in a secure location on-site or at the offices of the PA. The removal of artifacts from the Project site will need to be thoroughly inventoried with the Tribal Monitor oversite of the process; and

Treatment and Final Disposition: The City and Developer shall relinquish ownership of all cultural resources, including all archaeological artifacts and non-human remains as part of the required mitigation for impacts to tribal cultural resources. Human remains, sacred/ ceremonial items, and burial goods shall be addressed per State Law. On-site reburial of the discovered items may be conducted as adequate treatment and disposition of discovered resources. This shall include measures and provisions to protect the future reburial area from future impacts in perpetuity. Reburial shall not

occur until all legally required cataloging and basic recordation have been completed. No recordation of sacred items is permitted without the written consent of the Tribes.

MM-CULT-6 **Sacred Sites.** All sacred sites, should they be encountered within the Project site, shall be avoided and preserved as the preferred mitigation, if feasible.

MM-CULT-7 **Discovery of Human Remains.** In the event that human remains (or remains that may be human) are discovered at the Project site during grading or earthmoving, the construction contractors, PA, and/or designated Native American Monitor(s) shall immediately stop all activities within 100 feet of the find. The City shall then inform the Riverside County Coroner, and the coroner shall be permitted to examine the remains as required by California Health and Safety Code Section 7050.5(b). Section 7050.5 requires that excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If human remains are determined to be of Native American origin, the City shall comply with the State laws relating to the disposition of Native American burials that fall within the jurisdiction of the NAHC (PRC Section 5097). The coroner shall contact the NAHC to determine the most likely descendant(s) (MLD). The MLD shall complete his or her inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site. The disposition of the remains shall be overseen by the MLD to determine the most appropriate means of treating the human remains and associated grave artifacts.

If the NAHC is unable to identify an MLD, or the MLD identified fails to make a recommendation, or the developer/applicant or their authorized representative rejects the recommendation of the descendants and the mediation provided for in Subdivision (k) of PRC Section 5097.94, if invoked, fails to provide measures acceptable to the developer/applicant, the developer/applicant or an authorized representative shall inter the human remains and items associated with Native American human remains with appropriate dignity on the property in a location not subject to further and future subsurface disturbances.

7.0 REFERENCES

Applied Earth Works, Inc.

2001 *Metropolitan Water District of Southern California, Eastside Reservoir Project, Final Report of Archaeological Investigations*. Volumes I to V. General editor, Susan K. Goldberg. Report prepared for the Metropolitan Water District of Southern California, Los Angeles.

Barrows, David P.

1900 *The Ethnobotany of the Cahuilla Indians of Southern California.* The University of Chicago Press, Chicago, Illinois. Reprinted, 1977, Malki Museum Press, Banning, California.

Bean, Lowell John

1972 *Mukat's People: The Cahuilla Indians of Southern California*. University of California Press, Berkeley and Los Angeles.

1978 Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575-587. Handbook of North American Indians, vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Lowell, and Harry Lawton

1992 *The Cahuilla Indians of Southern California*. Malki Museum Brochure No. 1. (Originally published 1965) Malki Museum Press, Banning, California.

Bean, Lowell John, and Katherine Siva Saubel

1972 *Temalpakh: Cahuilla Indian Knowledge and Usage of Plants*. Malki Museum Press, Banning.

Bean, Lowell John, and Florence C. Shipek

1978 Luiseño. In *California*, edited by Robert F. Heizer, pp. 550-563. Handbook of North American Indians, vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Lowell John, and Charles R. Smith

1978 Serrano. In *California*, edited by Robert F. Heizer, pp. 570-574. Handbook of North American Indians, vol. 8. William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Lowell J., and Sylvia B. Vane (editors)

1980 *The Ethnography and History of the Devers to Lamb Canyon Transmission Corridor Area, Riverside County, California*. Prepared by Cultural Systems Research, Inc., Menlo Park, California, for Southern California Edison Company, Rosemead California.

Bean, Lowell J., Sylvia B. Vane, and Jackson Young

1991 *The Cahuilla Landscape: The Santa Rosa and San Jacinto Mountains.* Ballena Press, Menlo Park, CA.

Bettinger, Robert L.
1974 Dating the Perris Reservoir Assemblages. In *Perris Reservoir Archaeology,* edited by James F. O'Connell, Phillip J. Wilke, Thomas F. King, and Carol L. Mix, pp. 159–162. California Department of Parks and Recreation Reports No. 14. Sacramento.

Bolton, Herbert E.
1930 *Anza's California Expeditions, Vols. I–IV*. University of California Press, Berkeley.

Brigandi, Phil
1999 *The Outposts of Mission San Luis Rey*. Journal of San Diego History 45(2):106–112.

Bull, Charles S.
1983 Shaking the Foundations: The Evidence for San Diego Prehistory. *Casual Papers: Cultural Resource Management* 1(3):15-64. Cultural Resource Management Center, San Diego State University.

Carrico, Richard L., Theodore G. Cooley, and Joyce M. Clevenger
1993 *Archaeological Excavations at the Harris Site Complex, San Diego County, California.* Report prepared by Ogden Environmental and Energy Services, and on file at the South Coastal Information Center (SCIC), San Diego State University, San Diego.

City of Moreno Valley
n.d. *About Moreno Valley: History*. Electronic document, available at: http://www.moreno-valley.ca.us/community/about.shtml, accessed on March 28, 2016.

Cultural Systems Research, Inc. (CSRI)
1983 *Paniktum Hemki: A Study of Cahuilla Cultural Resources in Andreas and Murray Canyons.* Cultural Systems Research, Inc., Menlo Park, California.

Des Lauriers, Matthew R.
2008 A Paleoindian Fluted Point from Isla Cedros, Baja, California. *Journal of Island & Coastal Archaeology* 3:271–276.

Dibblee, T.W. and Minch, J.A.
2003 "Geologic Map and Digital Database of the Sunnymead/South ½ if Redlands Quadrangle, San Bernardino and Riverside Counties, California," U.S Geological Survey DF-110, scale 1:24,000.

Dillon, Brian D.
2002 California Paleo-Indians: Lack of Evidence, or Evidence of a Lack? In *Essays in California Archaeology: A Memorial to Franklin Fenenga*. Edited by William J. Wallace and Francis A. Riddell. Contributions of the University of California Archaeological Research Facility, No. 60. Berkeley, California.

Erlandson, Jon M.
1994 *Early Hunter-Gatherers of the California Coast*. New York, Plenum Press.

1997 The Middle Holocene along the California Coast. In Archaeology of the California Coast during the Middle Holocene, edited by Jon M. Erlandson and Michael A. Glassow. pp. 61–72. Perspectives in California Archaeology, Vol. 4, Jeanne E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.

Erlandson, Jon M., Torben C. Rick, Terry L. Jones, and Judith F. Porcasi
2007 One If by Land, Two If by Sea: Who Were the First Californians? In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 53–62. Altamira Press, Lanham, Maryland.

Ezell, Paul H.
1987 The Harris Site – An Atypical San Dieguito Site, or Am I Beating a Dead Horse? In *San Dieguito–La Jolla: Chronology and Controversy*, edited by Dennis Gallegos, pp. 15-22. San Diego County Archaeological Society Research Paper Number 1. San Diego.

Fickewirth, A.A.
1992 *California Railroads*. Golden West Books, San Marino, California.

Fitzgerald, Richard T., and Michael F. Rondeau
2012 A Fluted Projectile Point from Crystal Cove State Park, Orange County, Alta California. *California Archaeology* 4(2):247-256.

Gallegos, Dennis R.
1985 Batiquitos Lagoon Revisited*. Casual Papers Cultural Resource Management* 2(1). Department of Anthropology, San Diego State University, California.

1987 A Review and Synthesis of Environmental and Cultural Material for the Batiquitos Lagoon Region. In *San Dieguito-La Jolla: Chronology and Controversy*, edited by Dennis Gallegos, pp. 23-34. San Diego County Archaeological Society, Research Paper 1.

1991 Antiquity and Adaptation at Agua Hedionda, Carlsbad, California. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by Jon M. Erlandson and Roger H. Colten., pp. 19–42. Perspectives in California Archaeology, Vol. 1, J. E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.

Gifford, Edward W.
1918 Clans and Moieties of Southern California. *University of California Publications in American Archaeology and Ethnology* 14(2):155-219. Berkeley.

Goldberg, Susan
2001 Land Use, Mobility, and Intensification Evaluation and Refinement of the Model. In *Metropolitan Water District of Southern California, Eastside Reservoir Project, Final Report of Archaeological Investigations, Volume IV: Prehistoric Archaeology Synthesis of Findings*, edited by Susan K. Goldberg, Chapter 14. Report prepared by Applied Earthworks, Hemet, California for Metropolitan Water District of Southern California, Los Angeles.

Grenda, Donn R.
1997 *Continuity & Change: 8,500 Years of Lacustrine Adaptation on the Shores of Lake Elsinore*. Statistical Research Technical Series 59, Tucson.

Hedges, Ken, and Christina Beresford
1986 *Santa Ysabel Ethnobotany*. San Diego Museum of Man Ethnic Technology Notes No. 20.

Helmich, Mary A.
2008 *The Butterfield Overland Mail Company*. California State Parks, Interpretation and Education Division.

Hertzberg, Jason, Philip Buchiarello, and David C. Smith
2005 Geotechnical Investigation for Due-Diligence Purposes, 20-acre, 74-Lot Tentative Tract 31589 (CHEN 74), Southwest of bay Avenue and Regis Drive, City of Moreno Valley, California.

Horne, Melinda C, and Dennis P. McDougall
2008 *CA-RIV-6069: Early Archaic Settlement and Subsistence in the San Jacinto Valley. Western Riverside County, California*. Report prepared for and submitted to the Metropolitan Water District of Southern California. On file at the EIC.

Hyland, Justin R., and Maria De La Luz Gutierrez
1995 An Obsidian Fluted Point from Central Baja California. *The Journal of California and Great Basin Anthropology* 17(1): 126–128.

Johnston, Francis J.
1980 *The Serrano Indians of Southern California*. Malki Museum Brochure No. 2. (Originally published 1965) Malki Museum Press, Banning, California.

Jones, Terry L., Gary M. Brown, L. Mark Raab, Janet L. McVickar, W. Geoffrey Spaulding, Douglas J. Kennett, Andrew York, and Phillip L. Walker
1999 Environmental Imperatives Reconsidered. Demographic Crises in Western North America during the Medieval Climatic Anomaly. *Current Anthropology* 40:137–170.

Keller, Jean Salpas, and Daniel F. McCarthy
1989 Data Recovery at the Cole Canyon Site (CA-RIV-1139), Riverside County, California. *Pacific Coast Archaeological Society Quarterly* 25(1):1-89.

Kennett, Douglas J., and James P. Kennett
2000 Competitive and Cooperative Responses to Climatic Instability in Coastal Southern California. *American Antiquity* 65:379–395.

Kline, George E., and Victoria L. Kline
2007 Fluted Point Recovered from San Diego County Excavation. *Proceedings of the Society for California Archaeology* 20:55–59.

Knell, Edward J., and Mark S. Becker
2017 Early Holocene San Dieguito Complex Lithic Technological Strategies at the C.W. Harris Site, San Diego, California. *Journal of California and Great Basin Anthropology* 37(2):183-201.

Koerper, Henry C., Roger D. Mason, and Mark L. Peterson
2002 Complexity, Demography, and Change in Late Holocene Orange County. In Catalysts to *Complexity: Late Holocene Societies of the Southern California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 63–81. Perspectives in California Archaeology, Vol. 6, Jeanne E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.

Koerper, Henry C., Paul E. Langenwalter II, and Adella Schroth
1991 Early Holocene Adaptations and the Transition Phase Problem: Evidence from the Allan O. Kelly Site, Agua Hedionda Lagoon. In *Hunter-Gatherers of Early Holocene Coastal California*, edited by Jon M. Erlandson and Roger H. Colton, pp. 43–62. Perspectives in California Archaeology, Vol. 1, Jeanne E. Arnold, series editor. Institute of Archaeology, University of California, Los Angeles.

Kowta, Makoto
1969 *The Sayles Complex: A Late Milling Stone Assemblage from the Cajon Pass and the Ecological Implications of its Scraper Planes.* University of California Publications Anthropology 6. Berkeley and Los Angeles.

Kroeber, A.L.
1925 *Handbook of the Indians of California*. American Bureau of Ethnology Bulletin 78. Washington, D.C. Lithographed edition 1953, Third Printing 1970, California Book Company, LTD, Berkeley.

LaMont, Edward H., Gaby M. Bogdanoff, and Kyle R. McHargue
2020 Updated Geotechnical Evaluation Proposed Single-Family Residential Development APN 487-470-025, Winco Site Northeast of Alessandro Boulevard and Lasselle Avenue Intersection City of Moreno Valley, Riverside County, California.

Lech, Steve
2004 *Along the Old Roads: A History of the Portion of Southern California That Became Riverside County, 1772–1893*. Steve Lech, Riverside, California

Lightfoot, Kent G., and Otis Parrish
2009 *California Indians and the Environment*. University of California Press: Berkeley.

McCarthy, Daniel F.
1986 Archaeological Studies at Hi Card Ranch (CA-RIV-1806), Santa Rosa Plateau, Riverside, County, California. *Pacific Coast Archaeological Society Quarterly* 22(2):45-79.

1987 Archaeological Studies at Wildomar, CA-RIV-2769, Riverside, County, California. *Pacific Coast Archaeological Society Quarterly* 23(1):1-46.

McCown, B.E.
1955 *Temeku: A Page from the History of the Luiseño Indians*. Archaeological Survey Association of Southern California Paper No. 3.

McDougall, Dennis P.
2001 CA-RIV-5086/H. In *Metropolitan Water District of Southern California, Eastside Reservoir Project, Final Report of Archaeological Investigations, Volume II:* Archaic and Late Prehistoric Occupation Sites, edited by Susan K. Goldberg, Chap. 9. Prepared by Applied Earthworks, Hemet, California for Metropolitan Water District of Southern California, Los Angeles.

Meighan, Clement W.
1954 A Late Complex in Southern California Prehistory. *Southwestern Journal of Anthropology* 10(2):215-227.

Miller, Wick R.
1984 The Classification of the Uto-Aztecan Languages Based on Lexical Evidence. *International Journal of American Linguistics* 50(1):1–24.

Mills, James
1957 Journalistic Remarks on the Los Angeles and Tucson Mails. *San Diego Historical Society Quarterly* 3(3).

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, Orlando.

Morton, Douglas M. and Jonathan C. Matti
2001 *Geologic Map of the Sunnymead 7.5' Quadrangle, Riverside County, California, version 1.0*. United States Geological Survey

Natural Resources Conservation Service (NRCS)
2017 Web Soil Survey. United States Department of Agriculture (USDA). Retrieved from: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.Aspx.

NETR Online
2017 Historic Aerials. Nationwide Environmental Title Research, LLC. Electronic document available at: http://www.historicaerials.com, accessed March 15, 2021.

National Oceanic and Atmospheric Administration (NOAA)
2014 Electronic document available at http://forecast.weather.gov/MapClick.php?zoneid=CAZ048#.VGlzkP0tA1U, accessed in September 2014.

O'Connell, James F, Philip J. Wilke, Thomas F. King and Carol L. Mix, editors
1974 *Perris Reservoir Archaeology: Late Prehistoric Demographic Change in Southeastern California*. Report prepared by the Archaeological Research Unit, Department of Anthropology, University of California, Riverside, California, for the State of California Department of Parks and Recreation.

Oxendine, Joan
1983 *The Luiseño Village during the Late Prehistoric Era*. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

Phillips, George Harwood
1975 *Chiefs and Challengers, Indian Resistance and Cooperation in Southern California.* University of California Press, Berkeley.

Pigniolo, Andrew R.
2004 Points, Patterns, and People: Distribution of the Desert Side-Notched Point in San Diego. *Proceedings of the Society for California Archaeology* 14:27–40.

2005 A Different Context: San Dieguito in the Mountains of Southern California. *Proceedings of the Society for California Archaeology* 18:255-262.

Pourade, Richard F.
1962 The History of San Diego: The Early Explorers. The Union-Tribune Publishing Company, San Diego.

Price, James N.
1988 The Railroad Stations of San Diego County. In *The Journal of San Diego History*, Spring 1988, Volume 34, Number 2. San Diego Historical Society Quarterly.

Robinson, Mark C.
2001 Units of Analysis. In *Metropolitan Water District of Southern California, Eastside Reservoir Project, Final Report of Archaeological Investigations, Volume IV: Prehistoric Archaeology Synthesis of Findings*, edited by Susan K. Goldberg, Chapter 4. Prepared by Applied Earthworks, Hemet, California for Metropolitan Water District of Southern California, Los Angeles.

Rogers, Malcolm J.
1936 *Yuman Pottery Making.* San Diego Museum of Man Papers No. 2. San Diego Museum of Man.

1939 *Early Lithic Industries of the Lower Basin of the Colorado River and Adjacent Desert Areas*. San Diego Museum of Man Papers No. 3. San Diego Museum of Man.

1966 *Ancient Hunters of the Far West*. Union-Tribune Publishing Company, San Diego.

Rolle, A. F.
1963 *California: A History*. Thomas Y. Crowell Company, New York, New York.

Rondeau, Michael F., James Cassidy, and, and Terry L. Jones
2007 Colonization Technologies: Fluted Projectile Points and the First Californians. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar. AltaMira Press, Lanham, Maryland.

Sanka, J.
2007 Site record form for P-33-016788. Form on file at Eastern Information Center, University of California, Riverside.

Schaefer, Jerry
2006 *A Class I Cultural Resources Inventory of the Truckhaven Geothermal Leasing Area, Imperial County, California*. Report prepared for Ecology and Environmental, Inc., San Diego, California. Prepared by ASM Affiliates, Inc., Carlsbad, California.

Shipley, William F.
1978 Native Languages of California. In *California*, edited by Robert F. Heizer, pp. 80-90. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor, Smithsonian Institution, Washington, D.C.

Sparkman, Philip Stedman
1908 The Culture of the Luiseño Indians. *University of California Publications in American Archaeology and Ethnology* 8(4):187-234.

State Lands Commission
1982 *Grants of Land in California Made by Spanish or Mexican Authorities*. Boundary Determination Office, State Lands Commission, Boundary Investigation Unit.

Stine, S.
1994 Extreme and Persistent Drought in California and Patagonia during Mediaeval Time. *Nature* 369:546–549.

Stott, K. W.
1968 Fifty Years of Stagecoaching in Southern California. In *Brand Book Number One: The San Diego Corral of the Westerners*, edited by R. Brandes.

Strong, William D.
1929 *Aboriginal Society in Southern California.* University of California Publications in American Archaeology and Ethnology 26(1):1–358. Berkeley.

Sutton, Mark Q., and Jill K. Gardner
2010 Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly*, 42(4)1–64. Costa Mesa.

Sutton, Mark Q., and Donn R. Grenda
2012 Defining Level 1 at Malaga Cove (CA-LAN-138), Alta California. *California Archaeology* 4(1): 123–144.

Sutton, Mark Q., Mark E. Basgall, Jill K. Gardner, and Mark W. Allen
2007 Advances in the Understanding of Mojave Desert Prehistory. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar. Altamira Press, Lanham, Maryland.

Swope, Karen K.
1987 Site record form for P-33-003249/ CA-RIV-3249-H. Form on file at Eastern Information Center, University of California, Riverside.

Treutlein, Theodore E.
1968 The Portolá Expedition of 1769-1770. *California Historical Society Quarterly* 47(4):291–313.

True, D.L.
1958 An Early Complex in San Diego County, California. *American Antiquity* 23(3): 255–263.

1980 The Pauma Complex in Northern San Diego County: 1978. *Journal of New World Archaeology* 3(4): 1–30. Institute of Archaeology, University of California, Los Angeles.

1990 Site Locations and Water Supply: A Perspective from Northern San Diego County, California. *Journal of New World Archaeology* 7(4):37-60. Institute of Archaeology, University of California, Los Angeles.

True, D.L., and Paul D. Bouey
1990 Gladishill: A Probable San Dieguito Camp Near Valley Center, California. *Journal of New World Archaeology* 7(4): 1-28.

True, D.L., Clement W. Meighan, and Harvey Crew
1974 *Archaeological Investigations at Molpa, San Diego County, California.* University of California Publications in Anthropology, Vol 11.

Vaughan, Sheila J.
1982 *A Replicative Systems Analysis of the San Dieguito Component at the C.W. Harris Site.* Master's thesis, Department of Anthropology, University of Nevada, Las Vegas.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. Southwestern Journal of Anthropology 11:214-230.

Ward, J.W.
1967 *The Cahuilla: A Historical-Anthropological Study of a Southern California People*. Los Angeles, California.

Warren, Claude N.
1967 The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32:168-185.

1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by C. Irwin-Williams, pp. 1–14. Eastern New Mexico Contributions in Anthropology 1(3). Portales, New Mexico.

1984 The Desert Region. In *California Archaeology*, edited by Michael J. Moratto, pp. 339–430. Academic Press, Orlando, Florida.

Warren, Claude N. (editor)
1966 *The San Dieguito Type Site: M. J. Rogers' 1938 Excavation on the San Dieguito River*. San Diego Museum Papers No. 5. San Diego Museum of Man.

Warren, Claude N., and H.T. Ore
2011 The Age of the San Dieguito Artifact Assemblage at the C. W. Harris Site. *Journal of California and Great basin Anthropology* 31(1):81-97.

Warren, Claude N., and D.L. True
1961 The San Dieguito Complex and Its Place in San Diego County Prehistory. *Archaeological Survey Annual Report*, 1960-1961, pp. 246-291. University of California, Los Angeles.

Warren, Claude N., Gretchen Siegler, and Frank Dittmer
1998 Paleoindian and Early Archaic Periods. In *Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study*. Prepared for the Metropolitan Wastewater Department, City of San Diego. ASM Affiliates, Encinitas, California

Weber, David
1992 *The Spanish Frontier in North America*. Yale University Press.

Weaver, Richard A.
1975 Environmental Impact Evaluation: Archaeology of Brodiaea Avenue, Pl 984, Water Systems Addition, Riverside County, California. On file at the Eastern Information Center, University of California, Riverside.

White, Raymond C.
1963 Luiseño Social Organization. *University of California Publications in American Archaeology and Ethnology* 48(2):91-194.

Wilke, Philip
1974 Settlement and Subsistence at Perris Reservoir: A Summary of Archaeological Investigations. In *Perris Reservoir Archaeology,* edited by James F. O'Connell, Phillip J. Wilke, Thomas F. King, and Carol L. Mix, pp. 20–30. California Department of Parks and Recreation Reports No. 14. Sacramento.

1978 *Late Prehistoric Human Ecology at Lake Cahuilla, Coachella Valley, California.* Contributions of the University of California Archaeological Research Facility, No. 38. Berkeley, California.

1979 Environmental Impact Evaluation: An Archaeological Assessment of 17.64 Acres Considered for Change of Zone (CZ 2707), Southeast of Sunnymead, Riverside County, California. On file at the Eastern Information Center, University of California, Riverside.

Worthington, David

2006 Geotechnical Investigation for 17.7 Acre Proposed Mixed Use Commercial and Residential Property Located at NEC of Alessandro Blvd. and Lasselle Street. Moreno Valley, California.

2007 Update to Soils Report Dated 5/10/06 by EGA Consultants for 17.7 Acre Proposed Mixed Use Commercial and Residential Property Located at NEC of Alessandro Blvd. and Lasselle Street. Moreno Valley, California.