APPENDIX E

Cultural Resources Report
Part 1

CULTURAL RESOURCES REPORT
for the
JVR ENERGY PARK PROJECT,
SAN DIEGO COUNTY, CALIFORNIA

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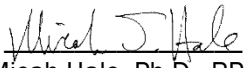

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Report Date:	July 2020 (Updated June 2021)
Report Title:	Cultural Resources Report for the JVR Energy Park Project, San Diego County, California
Type of Study:	Survey and Archaeological Evaluation
New Sites:	CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22728, CA-SDI-22729, CA-SDI-22730, CA-SDI-22731, CA-SDI-22732, CA-SDI-22733, P-37-038609, P-37-038610, P-37-038611, P-37-038612, P-37-038613, P-37-038614, P-37-038615, P-37-038616, P-37-038617, P-37-038618, P-37-038619, P-37-038620, P-37-038621, P-37-038622, P-37-038623, P-37-038624, P-37-038625, P-37-038626, P-37-038627, P-37-038628, P-37-038629, P-37-038630, P-37-038631, P-37-038632, and P-37-038633
Updated Sites:	CA-SDI-4455, CA-SDI-4457/H, CA-SDI-4459, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11677, CA-SDI- 11681, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19906, CA-SDI- 19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-21764, and P-37-030190
USGS Quads:	Jacumba Overextended South, CA/BC 1:24,000; T 18 S, R 8 E; Section 4, 5, 8, and 9.
Acreage:	1,356 acres (Project Area); ~~643~~ 626 acres (ADI)
Permit Numbers:	PDS2018-MUP-18-022
Keywords:	Inventory; Evaluation; lithic scatter; groundstone; flakedstone tool; retouched flake; simple flake tool; millingstone; debitage; quarry; shovel test pit; surface collection; shovel scrape; not significant; not eligible; CRHR; CA-SDI-4455, CA-SDI-4457/H, CA-SDI-4459, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11677, CA-SDI-11681, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-21764, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI- 22728, CA-SDI-22729, CA-SDI-22730, CA-SDI-22731, CA-SDI-22732, CA-SDI-22733, P-37-030190,

P-37-038609, P-37-038610, P-37-038611, P-37-038612, P-37-038613, P-37-038614, P-37-038615, P-37-038616, P-37-038617, P-37-038618, P-37-038619, P-37-038620, P-37-038621, P-37-038622, P-37-038623, P-37-038624, P-37-038625, P-37-038626, P-37-038627, P-37-038628, P-37-038629, P-37-038630, P-37-038631, P-37-038632, P-37-038633

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List of Acronyms and Abbreviations

Acronym	Abbreviation
AMSL	Above mean sea level
ADI	Area of Direct Impact
APN	Assessor's Parcel Number
CCR	California Code of Regulations
CCS	Cryprocrystaline Silica
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
CM	Centimeters
CSC	Controlled Surface Collection
CU	Control Unit
DPR	California Department of Parks and Recreation
G	Grams
GIS	Geographic Information System
GPS	Global Positioning system
JDAD	Jacumba Discontinuous Archaeological District
JVAD	Jacumba Valley Archaeological District
KG	Kilograms
MLD	Most Likely Descendant
MM	Millimeters
NAHC	Native American Heritage Commission
RPA	Register of Professional Archaeologists
RPO	Resource Protection Ordinance
SCIC	South Coastal Information Center
SHPO	State Historic Preservation Officer
SSU	Shovel Scrape Unit
STP	Shovel Test Pit
STU	Shovel Test Unit
TCR	Tribal Cultural Resources
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

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Management Summary

BayWa R.E. Solar Projects, LLC (BayWa) is proposing the development of a solar energy facility and energy storage system, the JVR Energy Park Project (JVR Project) located in the unincorporated community of Jacumba, San Diego County, California. BayWa contracted Dudek to provide environmental consulting services and preparation of an Environmental Impact Report (EIR). This report presents the results of Dudek's archaeological resource and Tribal Cultural Resources (TCR) analysis for the JVR Project in support of the EIR. This report collectively refers to archaeological resources and TCRs as cultural resources. The County of San Diego is the lead agency responsible for ensuring that this cultural resources study complies with cultural resources guidelines identified in the California Environmental Quality Act (CEQA) and San Diego County guidelines.

The Project Area includes 24 parcels of private land that encompass an area of 1,356 acres immediately east of the community of Jacumba Hot Springs. Located within the Project Area is the ~~643~~ 626-acre area of direct impact (ADI). Proposed construction within the ADI includes approximately 300,000 photovoltaic modules, a collection system, 25 inverter/transformer platforms , an on-site collector substation, ~~and switchyard~~ Switchyard Facilities, a battery energy storage system, interior access and access driveways, fencing and landscaping.

Dudek conducted a records search of files obtained from the South Coastal Information Center (SCIC) for the Project Area and a 0.5-mile buffer surrounding the Project Area. SCIC records indicate that 35 previous cultural resources studies have been performed within 0.5-miles of the Project Area; of these, 19 cover at least a portion of the Project Area. The SCIC records search also identified 143 cultural resources previously recorded within the 0.5-miles of the Project Area. Of the 143 resources, 51 are located within the Project Area, 24 of which are within the Project ADI. Prehistoric resources previously recorded within the Project Area include 33 artifact scatters, six (6) temporary campsites, a village site, a bedrock milling station, and an isolated flake. There are also nine (9) multicomponent artifact scatters, and one historic railroad track.

Dudek contacted the Native American Heritage Commission (NAHC) to request a search of their Sacred Lands Files. The NAHC responded indicating the presence of Native American cultural sites and recommended Dudek contact Native American representatives who may have information about cultural resources within the Project Area. Dudek sent outreach letters and have received four responses. The response letters did not indicate knowledge of any specific TCRs that may be impacted by the Project but did comment on the sensitivity of the area and requested Native American monitoring. San Diego County staff will initiate formal Native American consultation as required by Assembly Bill 52.

An intensive pedestrian survey was completed in July and August 2018 and February and December 2019 for the JVR Project and this was followed by significance evaluation testing in February, March, and June 2019, and January 2020. The pedestrian survey identified nine (9) newly identified archaeological resources and 25 new isolates. The survey also revisited 28 previously recorded archaeological sites and one (1) isolate. Following the initial intensive pedestrian survey in July and August 2018, the JVR project design was adjusted to avoid project impacts to significant archaeological sites. After design modifications, the ADI contains 28 archaeological sites and 20 isolated finds. Red Tail Monitoring and Research, Inc. provided Kumeyaay Native American monitors during all field studies, from survey to evaluation.

Sites CA-SDI-6741, CA-SDI-7056, CA-SDI-8072, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI- 19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733 were identified within the JVR ADI and previously unevaluated. After field evaluation and laboratory analysis, Dudek recommends these sites, in their entirety, as not significant, and not eligible for listing in the CRHR, or local register

based on CEQA Criterion 4, and based on County Significance Guidelines. Four additional sites located within the ADI were only partially evaluated by Dudek: CA-SDI-4457/H, CA-SDI-6741, CA-SDI-8430, CA-SDI-11676. The portions of the sites within the current ADI were evaluated during the current study and are recommended not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines. These portions of the sites are therefore recommended as non-contributing elements to the overall eligibility of the resource. Sites CA-SDI-11675, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, and CA-SDI-

19909 are located within the ADI but have been previously evaluated not significant or are no longer extent. There are 31 archaeological sites that are located within the Project Area but are outside of the Project ADI. These sites will not be impacted by Project implementation.

The evaluations documented in this report, coupled with recommended mitigation measures, will reduce the impacts to all resources (or portion of resources) within the Project ADI to less than significant under CEQA and County Guidelines

1.0 Introduction

BayWa R.E. Solar Projects, LLC (BayWa) is proposing the development of a solar energy facility and energy storage system, the JVR Energy Park Project (JVR Project) located in the unincorporated community of Jacumba, San Diego County, California (Figure 1). BayWa contracted Dudek to provide environmental consulting services and preparation of an Environmental Impact Report (EIR). This report presents the results of Dudek's cultural resources analysis for the JVR Project in support of the EIR.

The County of San Diego is the lead agency responsible for ensuring that this cultural resources study complies with cultural resources guidelines identified in the California Environmental Quality Act (CEQA) and San Diego County guidelines. All cultural resources personnel that participated in this Project exceeded the Secretary of Interior's standards for their respective roles, and the Principal Investigator, Dr. Micah Hale, is listed as an approved archaeological consultant with the County of San Diego. While this report meets the format and content guidelines established by the County of San Diego, it also meets the requirements of the Archaeological Resource Management Report (ARMR) report format and content guidelines recommended by the California Office of Historic Preservation (OHP 1995).

1.1 Project Description

The Project site totals approximately 1,356 acres in southeastern San Diego County (Figure 1, Project Location). The Project would be located to the south of Interstate (I) 8, immediately east of the community of Jacumba Hot Springs, and immediately north of the U.S./Mexico international border. The Project falls in Section 5, 6, 8, and 9 of Township 18S; Range 8E and Section 32 and 33 of Township 17S; Range 8E of the *Jacumba Overextended South*, CA/BC 1:24,000 USGS map. The Project site is located entirely on private land and consists of 24 parcels. The Project site includes right-of-way easements for Old Highway 80, SDG&E easements, and an easement for the San Diego and Arizona Eastern Railway. The proposed solar facility would cover approximately ~~643~~ 626 acres within the 1,356-acre Project site. Access to the Project site would be provided from Old Highway 80 and Carrizo Gorge Road.

The Project would include the construction of approximately 300,000 photovoltaic modules mounted on single-axis solar trackers, installation of a collection system, construction of 25 inverter/transformer platforms, an on-site collector substation, ~~and switchyard~~ Switchyard Facilities, a battery energy storage system, interior access and access driveways, fencing and landscaping.

1.1.1 Project Area and Area of Direct Impacts

The Project Area includes 24 parcels of private land that encompass an area of 1,356 acres immediately east of the community of Jacumba Hot Springs. Located within the Project Area is the ~~643~~ 626-acre area of direct impact (ADI) (Figure 2, ADI). The ADI includes all proposed Project ~~facilities~~ components, including access driveways, fencing, ~~and~~ landscaping, and realignment of an existing water main. The vertical ADI for the Project is considered to be the sediments disturbed during Project construction. The amount of disturbed sediments varies according to topography and construction needs. The foundations for photovoltaic cells, which cover the extreme bulk of the ADI, consists of metal pipe or I-beams driven 10 to 15 feet into the ground. Installation of the collection system would include trenches three (3) to four (4) feet in depth. The water main realignment will include trenching at a depth of 3.8 feet.

1.1.2 Indirect Impacts Area of Potential Effects

A half-mile buffer around the maximum extents of the Project Area was considered for indirect impacts to cultural resources. No indirect effects to cultural resources will occur as a result of project implementation.

1.2 Existing Conditions

This section draws off of existing documentation completed for nearby projects such as San Diego Gas & Electric's (SDG&E) East County (ECO) Substation, Sunrise Powerlink, and the Energia Sierra Juarez (ESJ) U.S. Gen-Tie Line projects. Together, cultural resources documentation for these projects forms a substantial body of literature analyzing, in particular, aboriginal archaeological deposits.

1.2.1 Environmental Setting

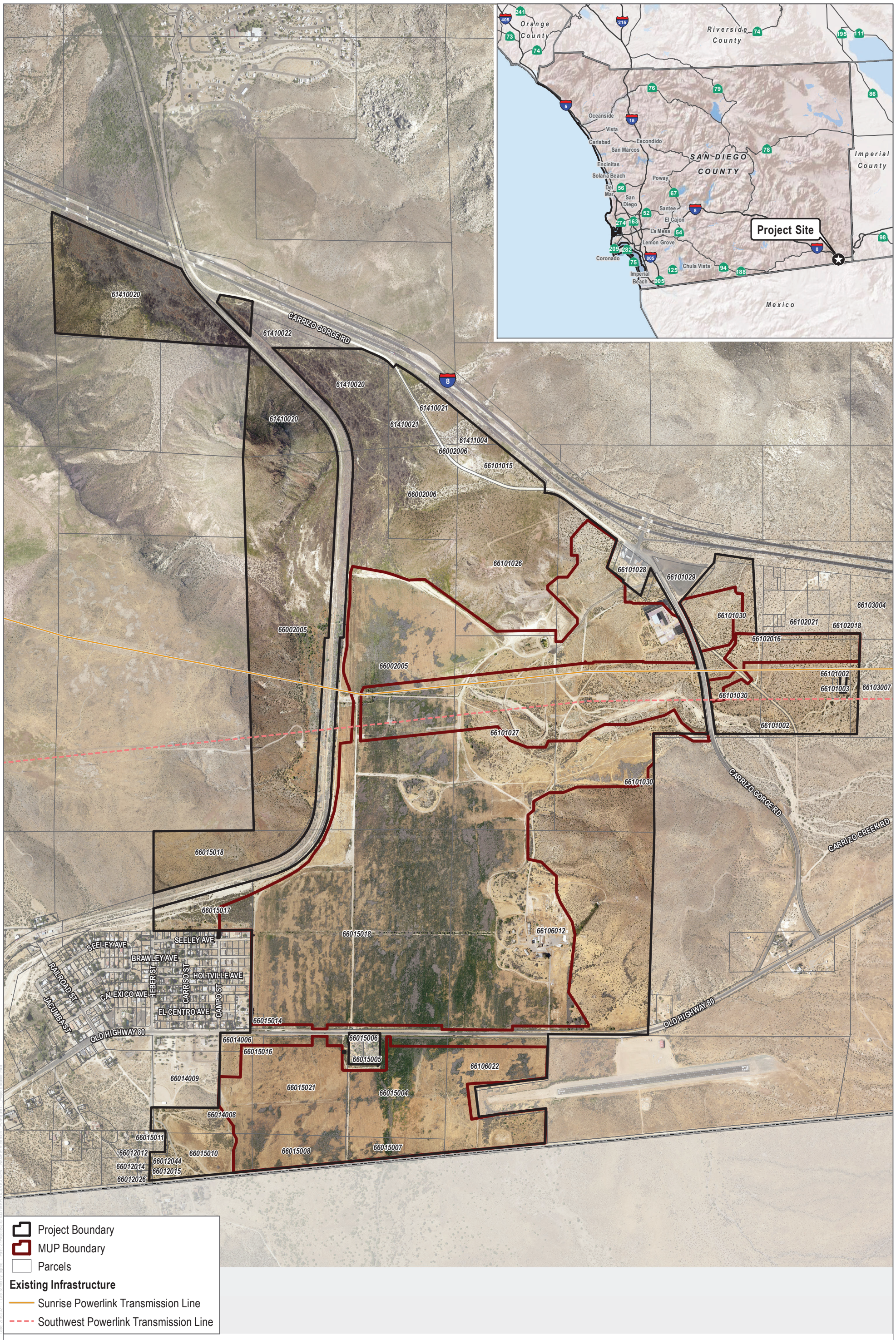
Natural Setting

The Project Area is located within Jacumba Valley. The Project ADI is largely confined to the valley floor, a portion of has been altered by prior dairy farming and other agricultural activities. The valley floor on which most of the solar field would be constructed is located at an elevation of approximately 2,800 feet above mean sea level (amsl).

The Project Area is located in the eastern portion of the Peninsular Range Geomorphic Province of Southern California. The Peninsular Range Geomorphic Province is typified by northwest to southeast trending mountain ranges that parallel the trace of the San Andreas and related regional fault system. The Peninsular Ranges generally comprise the granitic of the Peninsular Ranges batholith and associated metamorphic rocks. West of the batholith, in the San Diego embayment, the Peninsular Range Geomorphic Province comprises sedimentary rocks ranging from Late Cretaceous to Pleistocene in age (Krazan 2011).

The majority of the Project site is underlain by the Tonalite of La Posta, a granitic formation produced by the subduction of the Farallon Plate beneath the North American Plate, approximately 95 million years ago (MA). The Tonalite of La Posta is characterized by the abundant white-weathering plagioclase feldspars. Surface exposures of the Tonalite of La Posta can be found in portions of the Project Area. Adjacent to, and older than Tonalite of La Posta, is the migmatitic schist of Stephenson Peak, located a mile east of the Project Area. The Stephenson Peak migmatitic schist is thought to have originated as a partial melt of predominantly metasedimentary rocks during the early stages of subduction in the Late and Middle Jurassic (Todd 2004).

Overlying both the Tonalite of La Posta and the Stephenson Peak schist in the Project site is the Anza Formation, an early Miocene age (~16 to 23 MA) coarse conglomerate sandstone. The Anza Formation, formed by weathering of continental rocks, is characterized by its reddish color, which results from the weathering of iron-bearing minerals. It is an indurated, unfossiliferous sandstone that is locally preserved by the flows of the Jacumba Volcanics.



SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 1

Project Location

JVR Energy Park Project

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SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 1A

ADI Map

JVR Energy Park Project

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SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

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FIGURE 1B

ADI Map

JVR Energy Park Project

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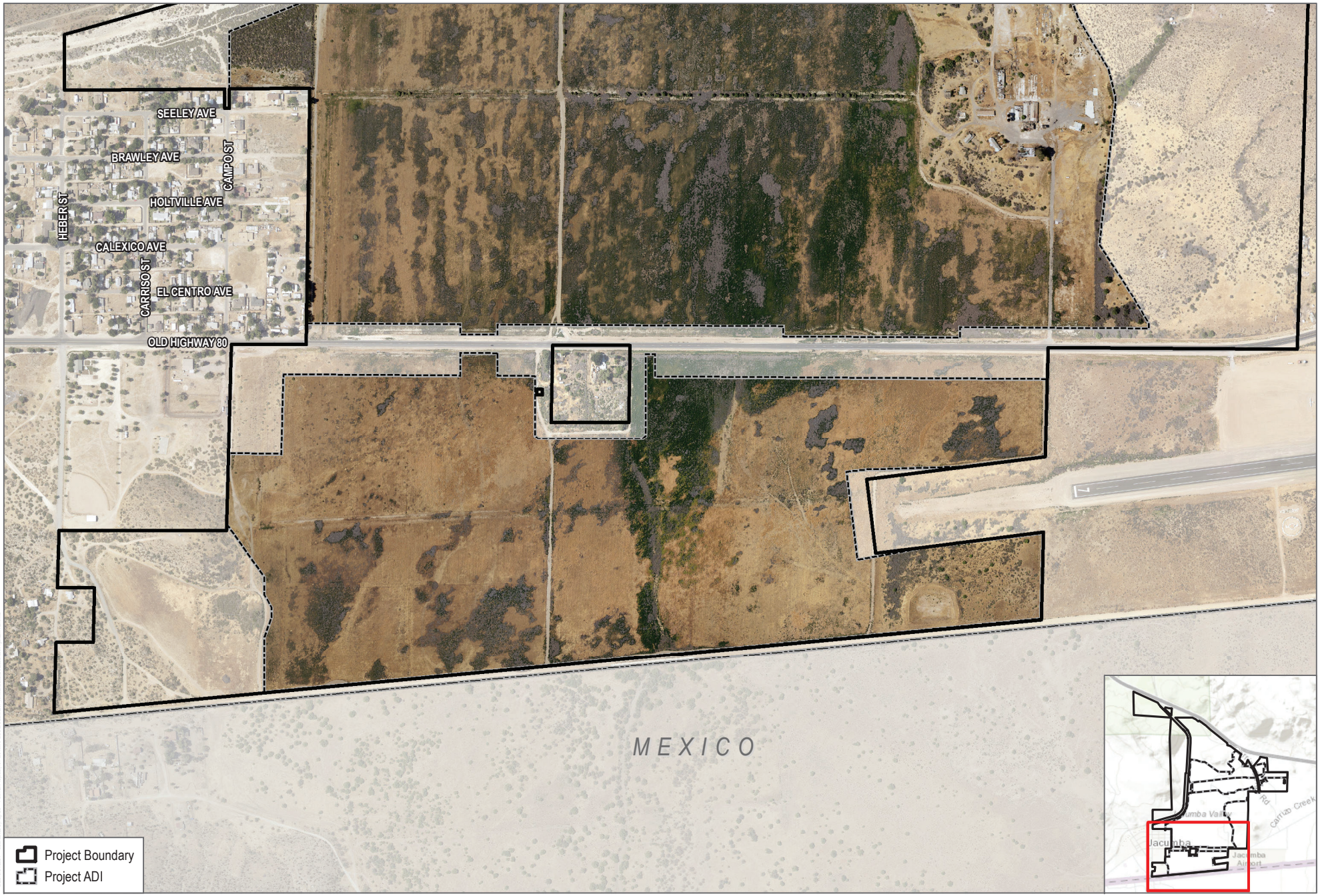

SOURCE: Kimley-Horn 2020; SANGIS 2017, 2020

DUDEK

0 500 1,000 Feet

FIGURE 1C

ADI Map

JVR Energy Park Project

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A massive plug of the Jacumba Volcanics rises approximately 500 feet above the surrounding valley on the western edge of the Project boundary. Abundant cobble to boulder size (> 6 cm diameter) fragments of the Jacumba Volcanics were found on the ground surface at the Project Site, and were heavily exploited by aboriginal occupants. The Jacumba Volcanics are lower to middle Miocene (~19 MA) basalts and andesites that formed during the initial stages of rifting that accompanied the onset of strike slip faulting in the Salton Trough. Coincident in time with the onset of faulting in the Salton Trough, the Peninsular Ranges block to the west of the San Andreas fault began to rise, lifting the Miocene volcanics and older plutonic rocks about 500 m above the desert floor to the east (Todd 2004). Continued uplift, faulting and erosion created the alluvial valley in which the Project Site is located.

Quaternary alluvium overlies the Miocene and older formations in the majority of the Project Area. Older alluvial deposits, referred to as terrace deposits, are exposed in the Project site, where they overlie the Anza Formation. These comprise unconsolidated sand, silt and gravel. They are distinguished from younger alluvial deposits because they are cut by modern streams. Younger alluvial deposits are exposed at the surface throughout the Project Area.

Disturbances to the area are greatly attributed to previous agricultural activity on the valley floor. Much of the ADI has been leveled for agriculture and the soil repeatedly tilled. This has left an obvious impact to the archaeological deposits that previously rested on the surface of the valley floor. Artifacts are scattered throughout the fallow agricultural field with no dense concentrations or features. Surrounding infrastructural development such as highway development, commercial buildings, and previously constructed utilities have also greatly altered the periphery of the valley floor.

The climate is classified as Mediterranean Hot Summer, or Csa in the Köppen classification (Pryde 2004). Rainfall is about 24 cm (9.5 inches) per year, based on rain gauge averages between 1963 and 2011, falling primarily between December and March. The average January daily minimum temperature is 4°C (39°F), and the average July daily maximum is 32°C (90°F). The climate would have imposed few constraints on prehistoric hunter-gatherers in the region.

The predominant natural vegetation community of the region is chaparral, although perhaps mixed with coastal sage scrub (Pryde 2004). These communities are located off of the developed valley floor and cling to the hillsides on the periphery of Project Area. Typical natural plant species can include laurel sumac (*Rhus laurina*), black sage (*Salvia mellifera*), manzanita (*Arctostaphylos* spp.), redshank (*Adenostoma sparsifolium*), oak (*Quercus* spp.), chamise (*Adenostoma fasciculatum*), California lilac (*Ceanothus* spp.), and Juniper tree (*Juniperus* spp.) along with various grasses and legumes. Russian thistle (*Salsola tragus)* dominates the fallow agricultural fields located on the valley floor within the proposed Project ADI.

Mammals, birds, and reptiles within these communities provided potential food resources to prehistoric inhabitants. Common animals within this area may include coyote (*Canis latrans*), California ground squirrel (*Spermophilus beecheyi*), cottontail *(Sylvilagus audubonit),* black-tailed jackrabbit (*Lepus californicus bennettii)*, deer mouse *(Peromyscus maniculatus)* song sparrow *(Melospiza melodia),* as well as a number of other species of birds, mammals, reptiles and amphibians.

Cultural Setting

Evidence for continuous human occupation in southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes

essentially similar trends in assemblage composition in more or less detail. The prehistoric sequence within the general Jacumba region is particularly complicated by potential overlap with aboriginal groups traveling west from the Colorado Desert and Imperial Valley. The Kumeyaay also traveled between the Pacific Ocean and the desert and north and south of the current U.S./Mexico border. To overcome potential issues in the application of disparate cultural sequences, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769).

Paleoindian (pre-5500 BC)

Evidence for Paleoindian occupation in Southern California is tenuous, especially considering the fact that the oldest dated archaeological assemblages look nothing like the Paleoindian artifacts from the Great Basin. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from CA-SDI-4669/W-12, in La Jolla. A human burial from CA-SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of groundstone, battered cobbles, and expedient flake tools). Given the coastal bluff setting of this site, it is not surprising that its inhabitants made use of fish and shellfish taken through passive means (i.e., bone gorge and sinker fishing, shellfish gathering). There is no evidence at this site for economically significant exploitation of large game; rather, the assemblage is wholly consistent with what early researcher's termed the "Millingstone Horizon" (Wallace 1955), or "La Jolla" culture (Warren 1964, 1968).

In the Jacumba region, SDG&E's East County (ECO) Substation uncovered more than a hundred roasting pits within loosely consolidated alluvium from the surface to more than 20 feet below the surface. Several such features had calibrated radiocarbon dates on charcoal that were older than 6,000 BC; one of these dated as old as 7,590-7,750 BC—squarely within the Paleoindian period, even by Great Basin standards (Williams et al. 2014). These early roasting pits rarely include artifacts other than burned rocks and the occasional piece of debitage and a recycled piece of groundstone. Noticeably absent from the ECO assemblage are those artifacts considered typical of Paleoindian toolkits, such as large projectile points or knives, and formed flake tools. Interestingly, the landform on which the old roasting pits were identified contained hundreds of roasting pits that spanned the Holocene in age with radiocarbon dates reaching to just prior to Ethnohistoric times (Williams et al. 2013). However, there is no significant variability in roasting pit structure, content, or associated artifactual assemblage throughout the deposit. Together with data from specialized ethnobotanical studies identified fragments of cactus seed, juniper seed, and yucca, the overall archaeological assemblage indicates the area was occupied for millennia to exploit locally and seasonally abundant plants including yucca or agave.

Aside from a few discoveries of Lake Mojave or Silver Lake projectile points, typical Paleoindian assemblages that include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools are not discernable in southern California. For comparison, prime examples of "typical" pattern are sites that were studied by Emma Lou Davis (1978) on China Lake Naval Air Weapons Station near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (CA-MNO-679)—a multicomponent fluted point site, and CA-MNO-680—a single component Great Basined Stemmed point site (Basgall et al. 2002). At CA-MNO-679 and CA-MNO-680, groundstone tools were rare while finely made projectile points were common.

Turning back to Southern California, the fact that some of the earliest dated assemblages are dominated by processing tools runs counter to traditional notions of mobile hunter–gatherers traversing the landscape for highly valued prey. Evidence for the latter—that is, typical Paleoindian assemblages—may have been located along the coastal margin at one time, prior to glacial desiccation and a rapid rise in sea level during the early Holocene (pre-7500 BP) that submerged as much as 1.8 kilometer of the San Diego coastline. If this were true, however, it would also be expected that such sites would be located on older landforms near the current coastline. Some sites, such as CA-SDI-210 along Agua Hedionda Lagoon, contained stemmed points similar in form to Silver Lake and Lake Mojave projectile points (pre-8000 BP) that are commonly found at sites in California's high desert (Basgall and Hall 1990). CA-SDI-210 yielded one corrected radiocarbon date of 6520-7520 BC (8520–9520 BP; Warren et al. 2004). However, sites of this nature are extremely rare and cannot be separated from large numbers of milling tools that intermingle with old projectile point forms.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (CA-SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 8,365-6,200 BC (Warren et al. 2004, p. 26). Termed San Dieguito (Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos' interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early-Holocene sites. Producing finely made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in southern California deserts, wherein hunting-related tools are replaced by processing tools during the early Holocene (Basgall and Hall 1990).

Indeed, the San Dieguito complex is the apex of easterly cultural sequences defined for the Colorado Desert and adjacent areas east of the Peninsular Range. Malcolm Rogers (1966) initially separated the San Dieguito complex into three phases that were based on an evolutionary concept that more refined tools are the result of cultures learning refined manufacture techniques and incorporating greater complexity through time. As a result, the San Dieguito complex portrayed early assemblages from simple (San Dieguito I) to complex (San Dieguito III), relative to one another. In Imperial County, the general lack of radiocarbon dates associated with perceived San Dieguito sites has stunted modern refinement of Roger's San Dieguito complex, both in terms of chronology and assemblage content. Cobble terraces exposed during the Pleistocene were available to both Paleoindian and later aboriginal groups. The ease of acquiring toolstone from desert pavements was probably attractive to hunter-gatherers

traversing the region throughout prehistory, complicating definition of chronological variability in flakedstone reduction trajectories. As a result, speculation has emerged that the San Dieguito complex persisted for much of the Holocene, whether or not it changed in coastal regions or areas farther to the north.

Notwithstanding sample bias in trying to refine southern California Paleoindian sequences, including geomorphological transitions surrounding the Salton Trough that make discovery of well-preserved early surfaces in the western Colorado Desert near impossible, the early dates associated with strikingly Archaic-looking toolkits implies that little technological variability actually existed in the last 10,000 years (Hale 2010).

Archaic (8000 BC–AD 500)

The more than 1500-year overlap between the presumed age of Paleoindian occupations and the Archaic period (see Warren et al. 2004) highlights the difficulty in defining a cultural chronology in southern California desert region. If San Dieguito is the only recognized Paleoindian component, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong connections between San Dieguito and the Lake Mojave complex of the Great Basin. Thus, the Archaic pattern is the earliest local socioeconomic adaptation to southern California coastal and desert/peninsular environments (Hale 2001, 2009).

The Archaic pattern is relatively easy to define with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across San Diego County, from the coast past the Peninsular Range, with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurs until the bow and arrow is adopted after AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remains low. After the bow is adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decrease in proportion relative to expedient, unshaped groundstone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complimented only by the addition of the bow and ceramics.

Several cultural sequences that chronologically fit within southern California's "Archiac" period have been identified in the Mojave Desert, such as Deadman Lake, Pinto, and Gypsum periods (Sutton et al. 2007). However, these appear to be regionally specific and are generally not manifest south of the Transverse Ranges, particularly in San Diego and Imperial Counties other than isolated occurrences of time-sensitive projectile points. As with any time-sensitive artifact, its form can have strikingly different chronological placement by region such that a "Pinto" projectile point cannot be assumed to confer the same age estimates on an archaeological assemblage in say, San Diego or Imperial counties that it does in the Mojave Desert.

Reasons for the rapid and early development of a generalized processing economy have cited environmental deterioration or population growth as primary agents of change. Environmental deterioration cannot account for its development since southern California environments have had established plant communities for much of the last 15,000 years (Axelrod 1978; see Hale 2001) that varied mostly in vertical distribution. Indeed, the Pinto period seems to have thrived during the Archaic period, even if specific local manifestations are less obvious than others (Basgall et al. 2002). Population growth itself also presents a weak case as a primary agent of change since the

archaeological record is either too incomplete to support such an analysis or because it implies a shift in mobility rather than population density. Archaic period sites reflect serial site occupation rather than either high residential mobility or sedentism (Basgall and True 1985; Hale 2001). Rather, the best explanation for the appearance and persistence of the Archaic pattern is that it represents a strongly stable socioeconomic strategy tailormade for southern California with its rich crops of roots and tubers, seeds, and nuts and small animals.

Late Prehistoric (AD 500–1769)

The period of time following the Archaic and prior to Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (M. Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-AD 1450 period is called the San Luis Rey Complex (True 1980), while the same period in southern San Diego County is called the Cuyamaca Complex and is thought to extend from AD 500 until Ethnohistoric times (Meighan 1959). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics and the presumed spread of Yuman-speaking groups into the Colorado Desert (Moriarty 1966, 1967). There, the Patayan pattern was defined to characterize the appearance of paddle and anvil pottery from Arizona sometime after the first-century AD (Rogers 1945; Waters 1992).

Despite these regional complexes, each is defined by the addition of arrow points and ceramics, and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of late complexes difficult, including the local Cuyamaca complex manifestation. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in the San Diego region.

Temporal trends in socioeconomic adaptations during the Late Prehistoric period are poorly understood. This is partly due to the fact that the fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces; bowl mortars are actually rare in the San Diego region. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred prior to AD 1400. True (1980) argued that acorn processing and ceramic use in the northern San Diego region did not occur until the San Luis Rey pattern emerged after approximately AD 1450. For southern San Diego County, the picture is less clear. The Cuyamaca Complex is most recognizable after AD 1450 (Hector 1984). Similar to True (1980), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to Ethnohistoric times, and that when it did occur, a major shift in social organization followed.

Considering eastern influences from the Colorado Desert, early agricultural practices never gained traction in California, and western Colorado Desert evidence for aboriginal agriculture is virtually non-existent, absent early ethnohistoric accounts of Fort Mojave Indians (Kroeber 1925). It is likely that the stable Archaic economy persisted into the Late Prehistoric era and absorbed the efficiencies of certain technological innovations including the bow and arrow and ceramics. Locally, however, Tizon Brownware ceramic vessels dominate archaeological assemblages; Colorado buffware fragments are relatively rare, and could have been obtained simply through trade. Aboriginal agriculture probably hit a socioeconomic brick wall in southern California where a stable economy focused on generalized but regular exploitation of locally abundant plant foods was simply too efficient and socially reinforced to allow a labor intensive practice of agriculture take root (Bettinger 1999; Hale 2010).

Ethnohistoric (post-AD 1769)

The history of the Native American communities prior to the mid-1700s has largely been reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the San Diego region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the San Diego region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Kroeber 1925; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the precontact, culturally specific practices, ideologies, and languages that had survived the destabilizing effects of missionization and colonialism. This research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005:32) by recording languages and oral histories within the San Diego region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seemed to indicate that traditional cultural practices and beliefs survived among local Native American communities. These accounts supported, and were supported by, previous governmental decisions which made San Diego County the location of more federally recognized tribes than anywhere else in the United States: 18 tribes on 18 reservations that cover more than 116,000 acres (CSP 2009).

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact, aboriginal culture was being increasingly supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change had undoubtedly occurred by 1850 among the Native American survivors of California.

The traditional cultural boundaries between the Luiseño and Kumeyaay Native American tribal groups have been well defined by anthropologist Florence C. Shipek (1993; as summarized in San Diego County Board of Supervisors 2007:6):

> In 1769, the Kumeyaay national territory started at the coast about 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007). As the project area is located approximately 25 km south of the San Luis Rey River, the Native American inhabitants of the region spoke using the Ipai language subgroup of the Yuman language group. Ipai and Tipai, spoken respectively by the northern and southern Kumeyaay communities,

are mutually intelligible. For this reason, these two are often treated as dialects of a larger Kumeyaay tribal group rather than as distinctive languages, though this has been debated (Luomala 1978; Laylander 2010).

Victor Golla has contended that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007:80). A large amount of variation within the language of a group represents a greater time depth then a group's language with less internal diversity. One method that he has employed is by drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla (2007:71) has observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates. This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

Golla suggests that there are two language families associated with Native American groups who traditionally lived throughout the San Diego County region. The northern San Diego tribes have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007:74). These groups include the Luiseño, Cupeño, and Cahuilla. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking San Diego tribes, occurring approximately 1500 BC–AD 1000 (Laylander 2010). The majority of Native American tribal groups in southern San Diego region have traditionally spoken Yuman languages, a subgroup of the Hokan Phylum. Golla has suggested that the time depth of Hokan is approximately 8,000 years (Golla 200774). The Kumeyaay tribal communities share a common language group with the Cocopa, Quechan, Maricopa, Mojave, and others to east, and the Kiliwa to the south. The time depth for both the Ipai (north of the San Diego River, from Escondido to Lake Henshaw) and the Tipai (south of the San Diego River, the Laguna Mountains through Ensenada) is approximated to be 2,000 years at the most. Laylander has contended that previous research indicates a divergence between Ipai and Tipai to have occurred approximately AD 600–1200 (Laylander 1985). Despite the distinct linguistic differences between the Takic-speaking tribes to the north, the Ipai-speaking communities in central San Diego, and the Tipai southern Kumeyaay, attempts to illustrate the distinctions between these groups based solely on cultural material alone have had only limited success (Pigniolo 2004; True 1966).

The Kumeyaay generally lived in smaller family subgroups that would inhabit two or more locations over the course of the year. While less common, there is sufficient evidence that there were also permanently occupied villages, and that some members may have remained at these locations throughout the year (Owen 1965; Shipek 1982, 1985; Spier 1923). Each autonomous tribelet was internally socially stratified, commonly including higher status individuals such as a tribal head (*Kwaaypay*), shaman (*Kuseyaay*), and general members with various responsibilities and skills (Shipek 1982). Higher-status individuals tended to have greater rights to land resources, and owned more goods, such as shell money and beads, decorative items, and clothing. To some degree, titles were passed along family lines; however, tangible goods were generally ceremonially burned or destroyed following the deaths of their owners (Luomala 1978). Remains were cremated over a pyre and then relocated to a cremation ceramic vessel that was placed in a removed or hidden location. A broken metate was commonly placed at the location of the cremated remains, with the intent of providing aid and further use after death. At maturity, tribal members often left to other bands in order to find a partner. The families formed networks of communication and exchange around such partnerships.

Areas or regions, identified by known physical landmarks, could be recognized as band-specific territories that might be violently defended against use by other members of the Kumeyaay. Other areas or resources, such as water sources and other locations that were rich in natural resources, were generally understood as communal land to

be shared amongst all the Kumeyaay (Loumala 1978). The coastal Kumeyaay exchanged a number of local goods, such as seafood, coastal plants, and various types of shell for items including acorns, agave, mesquite beans, gourds, and other more inland plants of use (Luomala 1978). While evidence for limited marine resource use exists in inland areas, terrestrial animals and other resources would have provided a much larger portion of sustenance. Game animals consisted of rabbits, hares (*Leporidae*), birds, ground squirrels, woodrats (*Neotoma*), deer, bears, mountain lions (*Puma concolor*), bobcats (*Lynx rufus)*, coyotes (*Canis latrans*), and others. In lesser numbers, reptiles and amphibians may have been consumed.

A number of local plants were used for food and medicine. These were exploited seasonally, and were both traded between regional groups and gathered as a single tribelet moved between habitation areas. Some of the more common of these that might have been procured locally or at higher elevation varieties would have included buckwheat (*Eriogonum fasciculatum*), *Agave*, *Yucca*, lemonade berry (*Rhus integrifolia*), sugar brush (*Rhus ovata*), sage scrub (*Artemisia californica*), yerba santa (*Eriodictyon*), sage (*Salvia*), *Ephedra*, prickly pear (*Opuntia*), mulefat (*Baccharis salicifolia*), chamise (*Adenostoma fasciculatum*), elderberry (*Sambucus nigra*), oak (*Quercus*), willow (Salix), and *Juncus* grass among many others (Wilken 2012).

The Historic Period (post-AD 1542)

European activity in the region began as early as AD 1542, when Juan Rodríguez Cabrillo landed in San Diego Bay. Sebastián Vizcaíno returned in 1602, and it is possible that there were subsequent contacts that went unrecorded. These brief encounters made the local native people aware of the existence of other cultures that were technologically more complex than their own. Epidemic diseases may also have been introduced into the region at an early date, either by direct contacts with the infrequent European visitors or through waves of diffusion emanating from native peoples farther to the east or south (Preston 2002). It is possible, but as yet unproven, that the precipitous demographic decline of native peoples had already begun prior to the arrival of Gaspar de Portolá and Junípero Serra in 1769.

Spanish colonial settlement was initiated in 1769, when multiple expeditions arrived in San Diego by land and sea, and then continued northward through the coastal plain toward Monterey. A military presidio and a mission to deal with the local Kumeyaay and Ipai were soon firmly established at San Diego, despite violent resistance to them from a coalition of native communities in 1776. Private ranchos subsequently established by Spanish and Mexican soldiers, as well as other non-natives, appropriated much of the remaining coastal or near-coastal locations (Pourade 1960–1967). No land grants were established in the mountains of eastern San Diego County, leaving the local Kumeyaay relatively unaffected by the arrival of the Spanish and Mexican immigrants.

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations in western San Diego County. Some former mission neophytes were absorbed into the work forces on the ranchos, while others drifted toward the urban centers at San Diego and Los Angeles or moved to the eastern portions of the county where they were able to join still largely autonomous native communities. The Jacumba region was one of the strongholds of Kumeyaay who never came under the Mission system's control. In one attack on San Diego in 1840, Mexican soldiers pursued Kumeyaay ot the Jacumba region where they were ambushed and had to return to San Diego. United States conquest and annexation, together with the gold rush in Northern California, brought many additional outsiders into the region. Development during the following decades was fitful, undergoing cycles of boom and bust.

The Campo-Jacumba region was largely considered unsettled southern California territory—a fact that drew to the region a few prominent ranchers such as the McCain family. Originally from Arkansas and Texas, the McCain family began

ranching in California as early as 1858 in the Mendocino region, and after an aborted return trip to Arkansas, decided to settle in what is now known as McCain Valley in 1868 (Ní Ghabhláin et al. 2010; Wade et al. 2008). With the McCain family alongside several small sheep and cattle ranching outfits tied to the Laguna Mountain area (just northwest of McCain Valley), ranching thrived until the mid-twentieth century. After this time, ranching dwindled in productivity due to several reasons, including more productive cattle outfits to the north, a collapse in the demand for wool, and the appropriation of some prime pasturelands (such as Laguna Meadows) by the National Parks Service for watershed protection and conservation (see Wade et al. 2008). In its heyday, cattle ranching associated with McCain Valley to the west spread as far south as the lower portions of northern Baja (Wade et al. 2008). Not surprisingly, the intensification of ranching and homesteading in the McCain Valley area lead to conflicts with local Kumeyaay inhabitants. One such conflict, recounted by Tom Lucas, a local Kwaayimii Indian, was the apparent last stand of some Kumeyaay families in conflict with the McCain family that took place near McCain Valley in Campo or Jacumba in the 1880s (Carrico 1983, 1987). However, it is also true that many of the Native American inhabitants were employed by local ranchers, including Tom Lucas (Carrico 1983). Wade et al. (2008) provide a region-wide overview of ranching in San Diego County including eligibility considerations.

Several railroad routes were planned to pass through the region but each was abandoned, until 1906, when John D. Spreckels incorporated the San Diego and Arizona Railroad. Construction on the railroad began in 1907 (Kimball 1985). The local population grew slowly during the construction of Morena Dam and the San Diego and Arizona Railroad. In the meantime, civil unrest was common across the border just to the south. The Mexican Revolution began in the fall of 1910, and by the following spring a Mexican rebel camp was located just 6 mi. from Campo. Refugees fled to Campo, which was partially protected by U.S. soldiers.

Finally, on November 16, 1919, the San Diego and Arizona Railroad was completed, and the first train passed through the Campo Valley, carrying prominent San Diego residents, including John D. Spreckels. While some residents felt that the new railroad line would ruin the beautiful landscape of San Diego County's backcountry, many others were strong advocates for the rail line, predicting that it would increase the economic capacity of the area by enabling the shipment of cattle and sheep as well as fruit, vegetables, and honey out of Campo (San Diego Union, 4 July 4 1915:7). The railroad finally provided a direct link for San Diego to the eastern United States.

1.2.2 Records Search Results

Dudek conducted a records search of files obtained from the South Coastal Information Center (SCIC) for the Project Area and a 0.5-mile buffer surrounding the Project Area in November 2017. The records search results are included in the report as Confidential Appendix A. SCIC records indicate that 35 previous cultural resources studies have been performed within 0.5-miles of the Project Area; of these, 19 cover at least a portion of the Project Area (Table 1-1). Three of these studies include evaluations of cultural resources located within the Project ADI: Chase 1980; Mooney Associates 1991; and ASM 2010.

Table 1-1. Cultural Studies within Project Area

Report Number	Year	Title	Author	Proximity
SD-00479	1980	A CULTURAL RESOURCES ASSESSMENT OF JACUMBA, SAN DIEGO COUNTY.	PAUL G. CHACE & ASSOCIATES	Intersects ADI
SD-01267	1976	AN ARCHAEOLOGICAL INVENTORY AND ASSESSMENT OF CORRIDOR SEGMENTS 46 AND 49, PREFERRED SOUTHERN ROUTE, SAN DIEGO COUNTY.	SAN DIEGO STATE UNIVERSITY	Intersects ADI

Table 1-1. Cultural Studies within Project Area

Report Number	Year	Title	Author	Proximity
SD-01318	1979	ARCHAEOLOGICAL SURVEY OF THE MAZZANTI PROPERTY, JACUMBA, CALIFORNIA	WESTEC SERVICES, INC.	Intersects ADI
SD-01463	1982	ARCHAEOLOGICAL REPORT-VOLUME II DATA PRESENTATION ON THE RE-SURVEY, SURFACE COLLECTION AND TEST EXCAVATIONS OF THE ARCHAEOLOGICAL RESOURCES ON THE MAZZANTI PROPERTY LOCATED IN THE JACUMBA AREA OF THE COUNTY OF SAN DIEGO, TPM 13416 LOG79222	SCIENTIFIC RESOURCE SURVEYS, INC.	Intersects ADI
SD-01588	1981	MIGUEL TO MOUNTAIN SPRINGS GRADE (JADE) ARCHAEOLOGICAL SURVEY REPORT	WIRTH ASSOCIATES, INC.	Intersects ADI
SD-03836	1984	SOUTHWEST POWERLINK CULTURAL RESOURCES MANAGMENT PLAN	WIRTH ENVIRONMENTAL SERVICES	Intersects ADI
SD-04401	1987	JACUMBA ARCHAEOLOGICAL DISTIRCT ***SAME REPORT AS WIRTH30 AND WIRTH 33	WIRTH ASSOCIATES	Intersects ADI
SD-05490	1991	APPENDIX F CULTURAL RESOURCES DRAFT ENVIRONMENTAL IMPACT REPORT FOR JACUMBA VALLEY RANCH SPECIFIC PLAN VOLUME I	BRIAN MOONEY AND ASSOCIATES	Intersects ADI
SD-07618	1981	JACUMBA ARCHAEOLGOY DISTRICT ***SAME REPORT AS WITH13 AND WIRTH33***	WIRTH ASSOC.	Intersects ADI
SD-08602	1981	JACUMBA ARCHAEOLOGICAL DISTRICT	WIRTH ASSOCIATES, INC.	Intersects ADI
SD-08604	1980	ARCHAEOLOGICAL SURVEY REPORT AND ASSESSMENT ON THE MAZZANTI LOT SPLIT, TPM 15977, LOG #79-22- 2	SRS.INC	Intersects ADI
SD-10558	1981	THE RE-SURVEY, SURFACE COLLECTION AND TEST EXCAVATIONS OF THE ARCHAEOLOGICAL RESOURCES ON THE MAZZANTI PORPERTY LOCATED IN THE JACUMBA AREA OF THE COUNTY OF SAN DIEGO, TPM 13416, LOG #79-22-2	SCIENTIFIC RESOURCE SURVEYS, INC.	Intersects ADI
SD-12711	2010	FINAL INVENTORY REPORT OF THE CULTURAL RESOURCES WITHIN THE APPROVED SAN DIEGO GAS & ELECTRIC SUNRISE POWERLINK FINAL ENVIRONMENTALLY SUPERIOR SOUTHERN ROUTE, SAN DIEGO AND IMPERIAL COUNTIES, CALIFORNIA	ASM AFFILIATES	Intersects ADI
SD-14408	2013	CULTURAL RESOURCE RECORDS SEARCH AND SITE VISIT RESULTS FOR AT&T MOBILITY, LLC CANDIDATE SD0245 (JACUMBA), 1494 CARRIZO GORGE ROAD, JACUMBA, SAN DIEGO COUNTY, CALIFORNIA	MICHAEL BRANDMAN ASSOCIATES	Intersects ADI
SD-16541	2011	DRAFT IMPACTS ASSESSMENT FOR THE SDG&E EAST COUNTY SUBSTATION PROJECT, SAN DIEGO COUNTY, CALIFORNIA	ASM AFFILIATES	Intersects ADI
SD-02125	1988	47-ACRE COMMERCIAL/INDUSTRIAL GENERAL PLAN AMENDMENT(GPA) REQUEST COUNTY OFSAN DIEGO JACUMBA (MAZZANTI,GPA 88-03)	COLEMAN PLANNING GROUP	Within Project Area

Table 1-1. Cultural Studies within Project Area

Report Number	Year	Title	Author	Proximity
SD-02626	1980	TABLE MOUNTAIN DISTRICT NATIONAL REGISTER OF HISTORIC PLACES	BLM	Within Project Area
SD-05510	—	JACUMBA DISCONTIGUOUS ARCHAEOLOGICAL DISTRICT	CALIFORNIA DESERT DISTRICT	Within Project Area
SD-12421	2000	FINAL: A CULTURAL RESOURCES INVENTORY OF THE PROPOSED AT&T / PF. NET FIBER OPTICS CONDUIT OCOTILLO TO SAN DIEGO, CALIFORNIA	ASM AFFILIATES	Within Project Area

Covering a large portion of the southwestern Project ADI, Chase (1980) identified and evaluated cultural resources in preparation for agricultural development. Chase evaluated two resources important to the current Project Area: CA-SDI- 4455 and CA-SDI-4457. Both sites were located within the Project ADI, but after avoidance redesign, only one of two loci attributed to CA-SDI-4457 is located within the Project ADI. Chase (1980) placed two augers within CA-SDI-4457 and found that ceramic and lithic materials "may extend to depths of 24 and 28 inches." This subsurface component was identified within Locus A, which has been avoided and is no longer located within the Project ADI.

In 1991, an EIR was conducted for the development of the Jacumba Valley including residential dwellings, a hotel, golf course, and retail stores. Mooney Associates (1991) conducted a large scale archaeological inventory for the effort that nearly covers the entire Project Area. Mooney Associates (1991) conducted archaeological testing of 15 archaeological sites located within the Project Area, 12 of these are located within the current Project ADI. The current study relies on Mooney Associates' findings in determining whether archaeological testing was required at these 12 resources.

ASM (2010) conducted a cultural resources inventory of 118 miles of electrical distribution line corridor, which passes through the Project Area and Project ADI. ASM (2010) identified seven (7) cultural resources located within the current Project ADI. Resources that were evaluated by ASM and subsequently destroyed during previous projects were not evaluated in this study.

The SCIC records search also identified 143 cultural resources previously recorded within the 0.5-miles of the Project Area (Confidential Appendix A). Of the 143 resources, 51 are located within the Project Area, 24 of which are within the Project ADI (Table 1-2). Prehistoric resources located within the Project Area include 33 artifact scatters, six (6) temporary campsites, a village site, a bedrock milling station, and an isolated flake. There are also nine (9) multicomponent artifact scatters, and one historic railroad track.

Table 1-2. Cultural Resources within Project Area

Trinomial	Primary Number	Period	Site Type	Project Proximity	Eligibility Status
CA-SDI-4457	P-37-004457	Multicomponent	Artifact Scatter	In ADI	Components recommended eligible

Table 1-2. Cultural Resources within Project Area

Trinomial	Primary Number	Period	Site Type	Project Proximity	Eligibility Status
CA-SDI-6741	P-37-006741	Prehistoric	Artifact Scatter	In ADI	Recommended not eligible
CA-SDI-7054	P-37-007054	Multicomponent	Lithic Scatter; Historic Refuse Scatter	In ADI	Not evaluated
CA-SDI-7056	P-37-007056	Prehistoric	Lithic Scatter	In ADI	Recommended not eligible
CA-SDI-8072	P-37-008072	Prehistoric	Temporary Camp	In ADI	Recommended not eligible
CA-SDI-8430	P-37-008430	Multicomponent	Artifact Scatter/Quarry	In ADI	Recommended eligible
CA-SDI-11675	P-37-011675	Prehistoric	Artifact Scatter	In ADI	Evaluated in 1990
CA-SDI-11676	P-37-011676	Prehistoric	Artifact Scatter	In ADI	Evaluated in 1990
CA-SDI-11682	P-37-011682	Prehistoric	Artifact Scatter	In ADI	Evaluated in 1990
CA-SDI-11684	P-37-011684	Prehistoric	Artifact Scatter	In ADI	Evaluated in 1990
CA-SDI-11685	P-37-011685	Prehistoric	Artifact Scatter	In ADI	Evaluated in 1990
CA-SDI-11686	P-37-011686	Prehistoric	Artifact Scatter	In ADI	Evaluated in 1990
CA-SDI-11688	P-37-011688	Prehistoric	Temporary Camp	In ADI	Evaluated in 1990
CA-SDI-11689	P-37-011689	Prehistoric	Temporary Camp	In ADI	Evaluated in 1990
CA-SDI-19070	P-37-029823	Prehistoric	Lithic Scatter	In ADI	Not evaluated
	P-37-030190	Prehistoric	Isolate	In ADI	Not eligible
CA-SDI-19904	P-37-031341	Multicomponent	Lithic Scatter; Historic Isolate	In ADI	Not evaluated
CA-SDI-19905	P-37-031342	Multicomponent	Artifact Scatter; Historic Isolate	In ADI	Not evaluated
CA-SDI-19906	P-37-031343	Multicomponent	Artifact Scatter; Historic Refuse Scatter;	In ADI	Not evaluated
CA-SDI-19907	P-37-031344	Prehistoric	Lithic Scatter	In ADI	Not evaluated
CA-SDI-19908	P-37-031345	Prehistoric	Lithic Scatter	In ADI	Not evaluated

Table 1-2. Cultural Resources within Project Area

Trinomial	Primary Number	Period	Site Type	Project Proximity	Eligibility Status
CA-SDI-19909	P-37-031346	Prehistoric	Artifact Scatter	In ADI	Not evaluated
CA-SDI-19910	P-37-031347	Prehistoric	Lithic Scatter	In ADI	Not evaluated
CA-SDI-21758	P-37-035218	Prehistoric	Artifact Scatter	In ADI	Not evaluated
CA-SDI-4455	P-37-004455	Prehistoric	Village	Project Area	Recommended eligible
CA-SDI-4459	P-37-004459	Prehistoric	Artifact Scatter	Project Area	Not evaluated
CA-SDI-7036	P-37-007036	Prehistoric	Artifact Scatter	Project Area	Not evaluated
CA-SDI-7037	P-37-007037	Prehistoric	Isolate	Project Area	Not eligible
CA-SDI-7040	P-37-007040	Multicomponent	Artifact Scatter; Historic Refuse Scatter	Project Area	Not evaluated
CA-SDI-7041	P-37-007041	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-7043	P-37-007043	Multicomponent	Temporary Camp; Mining	Project Area	Not evaluated
CA-SDI-7917	P-37-007917	Multicomponent	Artifact Scatter; Historic Refuse Scatter; Mining	Project Area	Not evaluated
CA-SDI-11677	P-37-011677	Prehistoric	Temporary Camp	Project Area	Evaluated in 1990
CA-SDI-11678	P-37-011678	Prehistoric	Artifact Scatter/Quarry	Project Area	Evaluated in 1990
CA-SDI-11679	P-37-011679	Prehistoric	Artifact Scatter/Quarry	Project Area	Evaluated in 1990
CA-SDI-11681	P-37-011681	Prehistoric	Artifact Scatter/Quarry	Project Area	Evaluated in 1990
CA-SDI-11690	P-37-011690	Prehistoric	Lithic Scatter	Project Area	Evaluated in 1990
CA-SDI-11691	P-37-011691	Prehistoric	Lithic Scatter	Project Area	Evaluated in 1990
CA-SDI-11692	P-37-011692	Prehistoric	Bedrock Milling	Project Area	Evaluated in 1990
CA-SDI-11693	P-37-011693	Prehistoric	Lithic Scatter	Project Area	Evaluated in 1990

Table 1-2. Cultural Resources within Project Area

Trinomial	Primary Number	Period	Site Type	Project Proximity	Eligibility Status
CA-SDI-11694	P-37-011694	Prehistoric	Lithic Scatter	Project Area	Evaluated in 1990
	P-37-025680	Historic	Railroad	Project Area	Evaluated in 2000
CA-SDI-19066	P-37-029819	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-19067	P-37-029820	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-19068	P-37-029821	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-19069	P-37-029822	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-19887	P-37-031324	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-20985	P-37-033364	Prehistoric	Artifact Scatter	Project Area	Not evaluated
CA-SDI-21757	P-37-035217	Prehistoric	Artifact Scatter	Project Area	Not evaluated
CA-SDI-21764	P-37-035224	Prehistoric	Lithic Scatter	Project Area	Not evaluated
CA-SDI-21766	P-37-035226	Prehistoric	Temporary Camp	Project Area	Not evaluated

Several of these previously recorded sites have been combined into the Jacumba Valley Archaeological District (JVAD) (Williams et al. 2014), including: CA-SDI-4455, CA-SDI-4457/H, CA-SDI-4459, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11677, CA-SDI-11681, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19904, CA-SDI-19905, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-21764 and P-37-030190. The JVAD contains many areas of aboriginal habitation, but its primary constituent is lithic stone tool manufacturing debris. The character defining elements of the JVAD overlaps basalt landforms that have abundant quantities of easily accessible raw material suitable for the production of stone tools.

As is specifically mentioned in the JVAD update, the district boundaries are arbitrarily drawn based on management considerations, including property boundary lines. The current JVR Energy Park Project is situated on private lands, although prehistoric sites that intersect the current Project Area were included in the Williams et al. (2014) update to the JVAD without formal significance evaluations.

1.3 Applicable Regulations

Cultural resource regulations that apply to the Project Area are the County of San Diego RPO, the Local Register, CEQA, and provisions for the CRHR. Within this framework, historic and archaeological districts, sites, buildings, structures, and objects are assigned significance based on their exceptional value or quality in illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance.

1.3.1 State Level Regulations

CEQA requires that all private and public activities not specifically exempted be evaluated against the potential for environmental damage, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. The act defines historical resources as "any object, building, structure, site, area, or place that is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1[b]).

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA Guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) is considered to materially impair the resource's significance. The CRHR is used in the consideration of historical resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for listing in, the National Register of Historic Places (NRHP) and some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory, may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise. CEQA significance criteria are modeled after those identified in Section 106.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852), which consist of the following:

1. 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; or
2. it is associated with the lives of persons important to local, California, or national history; or
3. 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; or
4. it has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

In 2014, CEQA was amended through Assembly Bill 52 to apply to "tribal culture resources" as well. Specifically, PRC Section 21074(a) provides guidance for defining tribal cultural resources as either of the following:

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following: (A) Included or determined to be eligible for inclusion in the California Register of Cultural Resources. (B) Included in a local register of cultural resources as defined in subdivision (k) of § 5020.1.
2. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of § 5024.1. In applying the criteria set forth in subdivision (c) of § 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria of PRC Section 21074(a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. (PRC § 21074(b).) A historical resource described in PRC § 21084.1, a unique archaeological resource as defined in PRC § 21083.2(g), or a "nonunique archaeological resource" as defined in PRC § 21083.2(h) may also be a TCR if it conforms to the criteria in PRC § 21074(a). PRC § 21084.2 states that a "project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."

As the lead agency responsible for environmental compliance for the JVR Project, the County of San Diego will conduct AB 52 outreach and consultation with interested tribal entities.

In the event that Native American human remains or related cultural material are encountered, Section 15064.5(e) of the State CEQA Guidelines (as incorporated from Public Resources Code section 5097.98) and Health and Safety Code Section 7050.5 define the subsequent protocol. In the event of the accidental discovery or recognition of any human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin.. If the remains are determined to be of Native American origin, the Coroner shall contact the Native American Heritage Commission (NAHC) who will identify the Most Likely Descendant (MLD). The property owner or their representative are required to consult with the MLD to determine the proper treatment and disposition of the human remains. The MLD may make recommendations to the property owner or their representative, or the person responsible for the excavation work, for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code section 5097.98 (California Code of Regulations, Title 14; Chapter 3; Article 5; Section 15064.5(e)).

1.3.2 San Diego County Local Register of Historical Resources

The County maintains a Local Register that was modeled after the CRHR. Significance is assigned to districts, sites, buildings, structures, and objects that possess exceptional value or quality illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, or culture. Any resource that is significant at the national or state level is by definition also significant at the local level. The criteria for eligibility for the Local Register are comparable to the criteria for eligibility for the CRHR and NRHP, but significance is evaluated at the local level. Local Register criteria includes the following:

1. Resources associated with events that have made a significant contribution to the broad patterns of California or San Diego County's history and cultural heritage;
2. Resources associated with the lives of persons important to our past, including the history of San Diego and our communities;
3. Resources that embody the distinctive characteristics of a type, period, region (San Diego County), or method of construction, or represent the work of an important creative individual, or possesses high artistic values; and
4. Resources that have yielded or are likely to yield, information important in prehistory or history.

Districts are significant resources if they are composed of integral parts of the environment that collectively (but not necessarily as individual elements) are exceptional or outstanding examples of prehistory or history.

The County also treats human remains as "highly sensitive." They are considered significant if interred outside a formal cemetery. Avoidance is the preferred treatment.

Under County guidelines for determining significance of cultural and historical resources, any site that yields information or has the potential to yield information is considered a significant site (County of San Diego 2007: 16). Unless a resource is determined to be "not significant" based on the criteria for eligibility described above, it will be considered a significant resource. If it is agreed to forego significance testing on cultural sites, the sites will be treated as significant resources and must be preserved through project design (County of San Diego 2007:19).

1.3.3 County of San Diego Resource Protection Ordinance (RPO)

The County uses the CRHR criteria to evaluate the significance of cultural resources. In addition, other regulations must be considered during the evaluation of cultural resources. Specifically, the County of San Diego's RPO defines significant prehistoric and historic sites as follows:

Sites that provide information regarding important scientific research questions about prehistoric or historic activities that have scientific, religious, or other ethnic value of local, regional, State, or Federal importance. Such locations shall include, but not be limited to:

1. Any prehistoric or historic district, site, interrelated collection of features or artifacts, building, structure, or object either:
    a. Formally determined eligible or listed in the National Register of Historic Places by the Keeper of the National Register; or
    b. To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or
2. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data or materials; and
3. Any location of past or current sacred religious or ceremonial observances which is either:
    a. Protected under Public Law 95-341, the American Religious Freedom Act, or Public Resources Code Section 5097.9, such as burials, pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures, or
    b. Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

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2.0 Guidelines for Determining Significance

2.1 County of San Diego

For the purposes of this technical report, any of the following will be considered a potentially significant environmental impact to cultural resources:

1. The project causes a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant in a manner not consistent with the Secretary of Interior Standards.
2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.
3. The project disturbs any human remains, including those interred outside of formal cemeteries.
4. The project proposes activities or uses damaging to significant cultural resources as defined by the RPO and fails to preserve those resources.
5. The project proposes activities or uses that would impact tribal cultural resources as defined under PRC §21074

The significance guidelines listed above have been selected for the following reasons:

- Guidelines 1 and 2 are derived directly from CEQA. Sections 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines recommend evaluating historical and archaeological resources to determine whether a proposed action would have a significant effect on unique historical or archaeological resources. Guideline 3 is included because human remains must be treated with dignity and respect and CEQA requires consultation with the "Most Likely Descendant" as identified by the NAHC for any project in which human remains have been identified.
- Guideline 4 was selected because the RPO requires that cultural resources be considered when assessing environmental impacts. Any project that would have an adverse impact (direct, indirect, and cumulative) on significant cultural resources as defined by this Guideline would be considered a significant impact. The RPO does not allow non-exempt activities or uses damaging to significant prehistoric lands on properties under County jurisdiction. The only exempt activity is scientific investigation.
- Guideline 5 was selected because tribal cultural resources are of cultural value to Native American tribes. Any project that would have an adverse impact (direct, indirect, and cumulative) on tribal cultural resources as defined by PRC §21074 would be considered a significant impact.

All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites, as well as requirements listed in the Zoning Ordinance, General Plan, and the Grading, Clearing, and Watercourses Ordinance (§87.429). Non-compliance would result in a project that is inconsistent with County standards.

2.2 CEQA

According to CEQA (§15064.5b), a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. CEQA defines a substantial adverse change:

Substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired.

The significance of an historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR; or
- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its eligibility for inclusion in the CRHR as determined by a lead agency for purposes of CEQA.

Section 15064.5(c) of CEQA applies to effects on archaeological sites and contains the following additional provisions regarding archaeological sites:

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.
- If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) and (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

When an initial study identifies the existence of, or the probable likelihood, of Native American human remains within the project, a lead agency shall work with the appropriate Native Americans as identified by the Native American Heritage Commission as provided in Public Resources Code SS5097.98. The applicant may develop an agreement for treating or disposing of, with appropriate dignity, the human remains and any items associated with Native American burials with the appropriate Native Americans as identified by the Native American Heritage Commission. Action implementing such an agreement is exempt from:

- The general prohibition on disinterring, disturbing, or removing human remains from any location other than a dedicated cemetery (Health and Safety Code Section 7050.5); and
- The requirements of CEQA and the Coastal Act.

According to the County's Guidelines (County of San Diego 2007: 21-22), any of the following will be considered a potentially significant impact to cultural resources:

- The project causes a substantial adverse change in the significance of a historic resource as defined in §15064.5 of the State CEQA Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant, in a manner not consistent with the Secretary of Interior Standards.
- The project causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history or prehistory.
- The project disturbs any human remains, including those interred outside of formal cemeteries.
- The project proposed activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance and fails to preserve those resources.

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3.0 Research Design

The objective of the evaluation portion of this project was to obtain archaeological assemblage data that could be used to evaluate historical significance under CEQA and County guidelines. The following discussion identifies potential questions and appropriate archaeological evidence within a series of broad research themes that derive from theory about human behavior and ecology. General issues pertinent to the assessment of the sites include determination of the extent and integrity of cultural deposits, age, cultural affiliation, site function, and subsistence. Given the extensive research completed at archaeological sites in the local area, this research design has been developed to address the kinds of resources identified during the inventory completed for this project, and to build on the extensive research completed at archaeological sites in the local area. Notably, this research design considers only the most basic historic themes since only four multicomponent sites with historic period refuse dumps are identified in the Project ADI.

3.1 Integrity and Structure of Archaeological Deposits

Delineation of the horizontal distribution and vertical depth of an archaeological site is necessary for an assessment of research potential. Of particular importance is the integrity of the deposits: whether or not features or surfaces are preserved and whether the potential exists for identifying horizontal and vertical spatial patterning in the evidence for prehistoric behavior.

A variety of post-depositional disturbance processes can greatly alter the original character of prehistoric sites (e.g., Gross and Robbins-Wade 2008; Schiffer 1987; Waters 1992). Formation processes such as alluvial deposition, erosion, bioturbation, and modern disturbance can considerably affect the integrity of archaeological sites. Here, attempts are made to identify and interpret the processes that formed the site, with particular attention given to the character of post-depositional processes and the extent to which they have affected the integrity of the archaeological deposits.

The testing program applied to archaeological deposits within the project area have been used to address the following issues:

- Does the horizontal and vertical extent of the archaeological record represent continuous or discrete occupation?
- Is it possible to discern depositional versus post-depositional processes that have contributed to the present condition of the archaeological record? In other words, what are the factors, both natural and anthropogenic, that have altered the position and condition of artifacts?
- What kinds of features have been preserved (e.g., hearths, earth ovens)? Are there features that are highly disrupted by postdepositional processes but that are still recognizable? Can these features be associated with particular functions?
- By examining spatial patterns in the horizontal distribution of artifacts, is it possible to discern areas that were associated with specific functions? Do patterns in the vertical distribution of artifacts tell us anything about changes in the function, materials exploited, or human activities through time?
- At historical archaeological sites, is there evidence of overlapping dump episodes, such as multiple points of concentration or concentration of artifacts of a certain age?

Investigating the integrity of archaeological deposits has at its core investigation of the structure of these deposits. Human occupation can sometimes result in the development of discrete occupation areas that take advantage of

particularly convenient landforms, or patches of useful resources. Indeed, such a "mapping-on" strategy is common to residentially mobile hunter-gatherers that are thought to have inhabited the region for the entire Holocene.

3.2 Chronological Placement

Chronological issues are basic to any archaeological research design, as they provide the primary framework of prehistory. Previous research in the southern San Diego region has documented a range of prehistoric sites dating to both the Archaic (6000 BC to AD 500) and Late Prehistoric periods (post-AD 500), and more recently, even to the Paleoindian period (pre-6000 BC) with a series of roasting pits identified at San Diego Gas & Electric's (SDG&E) East County (ECO) substation radiocarbon dated as early as 9,700 years BP. The ECO substation project is located less than a 2.25 miles east of the Project Area and data recovery efforts there at prehistoric site CA-SDI-7074 documented more than 100 "thermal features" having radiocarbon dates spanning much of the last 10,000 years of prehistory. The ECO project documented assemblages with large numbers of crude flake and cobble tools with smaller frequencies of late Holocene markers such as arrow points and ceramics. Groundstone there is also somewhat common, represented by millingstones and handstones (rather than mortars and pestles). The distribution of such artifacts was found to be widespread, but also occurred in recognizable clusters. Aside from arrow points and ceramics, the same basic toolkit of crude flake and cobble tools, and groundstone characterized deposits identified more than 20 feet (7 meters) deep. To be sure, thermal features were one of the most common site constituents identified on that project—these consisting mostly of a scatter of burned rock and ash-infused sediments with low frequencies of associate artifacts and virtually no faunal bone.

The ECO substation project essentially resulted in the determination that the local area was inhabited over the last 10,000 years for very similar purposes, probably roasting of locally abundant plants, such as agave along with the opportunistic exploitation of other locally available foods and lithic raw material.

Along these lines, potential research issues derived from this basic problem include:

- How did the transition from the Archaic period to the Late Prehistoric period occur? This transition is characterized by shifts in food storage and cooking technology with the inception of ceramics, and a shift in hunting technology with the addition of the bow and arrow. These shifts did not occur simultaneously (cf. McDonald et al. 1993), and their implications for local population expansion in the Late Prehistoric period are unknown.
- Was there a shift in emphasis of acorn use during the Late Prehistoric period? The mortar and pestle appear to have been added to the repertoire of food processing tools during the Late Prehistoric period, but in limited quantities compared to handstones (Hale 2001, 2009; Hale et al. 2010). Is there evidence for earlier use of bedrock mortars? Is the addition of the mortar and pestle correlated to the inception of ceramics in the region and/or intensified use of a particular resource?

Because chronological controls are essential to any archaeological investigation, several other basic questions concerning the temporal data potential of evaluated sites pertain to the current study, including:

- Can the chronological placement of project sites be determined?
- What kinds of chronometric data can project sites provide? Of those obtained during survey, how well do they correlate in terms of the age estimates they provide (e.g., projectile point types vs. obsidian hydration dates; cans vs. bottles).
- Are there data indicating the presence of multiple occupation episodes at project sites?

- Do diagnostic artifacts appear to fit with temporal patterns recognized in the surrounding region? Are there any unique diagnostic items present?
- Can chronometric data from project sites help to refine dating schemes in the local region?

Potential chronometric evidence from the Project Area includes radiocarbon dates, obsidian hydration measurements, and diagnostic artifact forms. Radiocarbon dates are generally the most precise and reliable form of chronometric evidence, and they provide the foundation for the region's prehistoric chronology. However, obsidian hydration measurements may have a more direct cultural interpretation as they are individually less expensive to run, and they can address very late prehistoric to protohistoric time periods that cannot be distinguished through radiocarbon dating. Chronologically diagnostic artifacts include various projectile point forms and pottery, although these only define very broad time periods. Specific types or attributes of buffware ceramics may have a potential to define somewhat more precise time ranges, but that potential is not yet well established.

For historic sites, time sensitive artifacts are usually limited to items with maker's marks, specific can manufacture styles, or coins. However, it is common for dates of manufacture for a particular artifact to be much broader than those for another artifact class, making a determination for age of consumption for any given class difficult, if not impossible. For this reason, the date of refuse disposal is more pertinent for refuse deposits that are not located at homesites; and this is usually determined by the early manufacture date on the youngest artifact for each dump event. Hale et al. (2010) document a widespread pattern of dumping items of mixed manufacture and consumption age as the result of homesite cleanup and off-site dumping. If refuse deposits are located at a homesite, assessing the age of consumption for historic artifacts is an approximation based on overlapping manufacture dates, taking into account the earliest and latest possible dates. Assemblages that cannot be securely placed chronologically would be less likely to possess a significant research potential. Of course, archival research can provide direct information on the date of construction and occupancy for historic homesites and lands used for agricultural, ranching, or mining.

3.3 Settlement and Site Function

Interpretation of the study sites depends upon an assessment of their places within the larger settlement-subsistence system of their occupants. Sites belonging to functional types that are relatively ubiquitous within the region would be less likely to be considered significant than unusual site types. Sites with evidence of multiple functions may possess richer information content than relatively simple sites; on the other hand, single-function sites may have a greater research potential than multiple-function sites if the residues from the various activities at the latter cannot be effectively differentiated.

Evidence for the functional uses represented by the site come from surface observations made during both the survey and testing phases, as well as through the results of subsurface excavations. Interpretations of functions rest upon both the range and the relative and absolute frequencies of various classes of features, artifacts, and ecofacts.

Widespread and substantial occupation during the Late Prehistoric period has been documented in the vicinity of the Project Area and within the greater Peninsular Ranges (Berryman and Whitaker 2010; Cook 1985; Hector 1984; Jordan 2010; Meighan 1959), particularly during the last 1,000 years, based on large numbers of ceramic sherds. The Late Prehistoric is a time when significant shifts in settlement and subsistence may have occurred.

While several important prehistoric sites and ethnohistoric villages have been extensively studied in the area, including in the nearby town of Jacumba, the character of settlement and subsistence shifts have not been fully

explored. A key variable in understanding social organization during this time is the kind of socioeconomic shifts that occurred after adoption of the bow and arrow and the subsequent widespread use of ceramics. Specific data requirements include information on arrow point manufacture, general patterns of lithic reduction, and raw material use, including the use of exotic stone. Was arrow point production occurring at sites in the project area, or were points being discarded in exhausted condition? What does the debitage assemblage imply about the production and/or maintenance of stone tools at project sites?

Information on ceramic vessel forms and functions, and their diversity, is also critical for determining whether residential occupation was brief or prolonged. How many kinds of vessels are indicated in the assemblage and for what purposes were they used? The latter is particularly important for understanding intensification in the exploitation of plant foods (see Eerkens 2001). Is there evidence, in the form of clay residues and other manufacturing residues, that clay vessels were being manufactured at sites in the project area? Finally, the manufacture and use of groundstone implements in conjunction with the ubiquitous milling elements within the project area can help clarify the nature of site occupation and settlement duration. Shaped handstones and pestles can be an indication that populations are somewhat mobile, implying use in off-site contexts; the idea being that shaping can reduce mass, thereby reducing transport costs (Hale 2001).

Recent archaeological investigations in the local area have revisited archaeological districts defined on federal, BLM lands in an effort to better understand the nature of human occupation that can link archaeological deposits together. The Jacumba Valley Archaeological District (Williams et al. 2014) attempted to link similar kinds of resources. Considering the single most common identifying element of archaeological sites inside and outside of the district is lithic quarrying for stone tool manufacture, the current project investigation has somewhat limited potential to contribute to the research narrative because the large majority of the project area is located in an alluvial plain without rock outcrops suitable for quarry. However, other artifacts within the project area, such as debitage and ceramic fragments, may help clarify local prehistoric mobility as the lithic materials that were discarded at these non-quarry sites. A detailed lithic analysis of all quarry and non-quarry archaeological deposits within the project study area will help clarify local hunter-gatherer mobility.

Considering historical archaeological sites, the kinds of artifacts present, the activities they represent, and their overall proportions can give some indication of where refuse originated, and why it was abandoned at its place of discard. The main question for historical archaeological sites is:

- What is the nature of refuse at historic sites? Are proportions of consumptive, household, industrial, and other artifacts substantial enough to derive context of origin(s)?
- Are any maker's marks on historic artifacts indicative of specific places of manufacture? Do they provide any information about where particular goods might have been purchased or otherwise obtained?

These kinds of questions are relevant for understanding the nature of historical occupation, including at homesites or agricultural facilities (i.e., field worker residential areas). Archival research helps bolster field data by documenting past historical landowners, lease holders, or residents, and by documenting historical changes in the local landscape. While it is virtually impossible to tie historic refuse deposits to residential or agricultural sites, it is possible to identify potential sources of refuse and make informed assumptions about its origin.

3.4 Subsistence

The issues related to subsistence are interwoven with the previously discussed settlement, and this section complements the issues discussed previously. Unfortunately, animal remains were noticeably lacking, limited to an insignificant amount of small rodent bone of questionable origin. However, plant remains have been identified in more recent studies from adjacent projects. Among the questions addressed are the following:

- Are floral and faunal remains present in archaeological deposits?
- Which specific resources were exploited?
- Can changes in the emphasis on specific resources be detected and are these changes related to changes in procurement?
- With respect to floral resources, Williams et al. (2013) identified remains of cactus and juniper seed, and yucca fiber in roasting pits. Are such remains present in archaeological deposits within the project site?

Subsistence is often assessed indirectly through technology. Groundstone tools are a good indicator that plant processing occurred, while projectile points generally indicate animal exploitation. With such tools noticeably absent in the project area, and general vicinity, subsistence must be indirectly inferred from crude, heavy flake-based implements. Such inferences have been the norm in greater San Diego County since the earliest archaeological work was completed, and especially during the 1960s emphasis on investigating "Millingstone Horizon" assemblages with their abundant scraping tools (e.g., Kaldenberg 1982; Warren 1967). The robust archaeological literature compiled for the region in the decades since has helped refine assumptions about the purpose of cobble tools, making inferences about subsistence less tenuous (Buonasera 2013; Hale 2001; Kowta 1969).

As with prehistoric sites, the issues related to subsistence at historic sites are also interwoven with the previously discussed settlement organization, and this section complements the issues discussed previously.

The primary question to address at historic sites is:

- Are artifacts present that provide information on the kinds of foods consumed (i.e., food cans, glass bottles, etc.)?

The data necessary to address this issue is generally limited to the kinds of food containers and food processing items found at historical archaeological sites as well as potential food remains, such as butchered animal remains.

3.5 Prehistoric Quarrying

The Project Area mostly covers an alluvial plain with a few elevated rocky areas intersecting the Project Area. It is on these low rocky knolls that basalt and other volcanics outcrop, providing access to toolstone. The commonality of lithic raw material exposures in the greater Jacumba region, such as Table Mountain, has apparently been a draw to prehistoric hunter-gatherers since lithic reduction has been the primary characteristic identified by archaeologists when defining archaeological sites (see Townsend 1984 ; Williams et al. 2014). The Jacumba Valley Archaeological District (JVAD) (Williams et al. 2014), contains many areas of aboriginal habitation, but its primary constituent is lithic stone tool manufacturing debris. Within the JVR Project area, lithic quarrying of local toolstone is limited to the few fringe rocky knolls; little to no toolstone was naturally available in the alluvial plain that characterizes the vast majority of the JVR Project area. Indeed, the JVAD boundary was drawn to follow individual site boundaries and these boundaries follow the rocky landforms, largely avoiding the Jacumba Valley Ranch Project area. Aboriginal

archaeological sites within the JVR Project area are limited to low density clusters of flakes and ceramic sherds with an occasional piece of groundstone. This seemingly ephemeral deposits, however, may shed some insight on overall regional occupation.

Archaeological studies for the JVR Project will contribute little to the discussion of local toolstone quarrying. However, the seemingly ephemeral archaeological deposits within the JVR Project area alluvial plain may shed some light on overall regional occupation. If stone was being reduced in adjacent areas to prepare tools or tool blanks for transport off site, the debitage and tool assemblage from evaluated sites in the JVR Project area should reflect that. Given the abundance of lithic raw material in the greater Jacumba region, it is unlikely that bulky, unprepared flakes or cobbles would be transported very far if it is just as easy to opportunistically procure another cobble in transit to another location for resource procurement or processing (Bleed 1987; Comeau and Hale 2015; Hale 2001; Horsefall 1987). An analysis of remaining debitage and tested cobbles from within the project area may help clarify such questions.

4.0 Analysis of Project Effects

4.1 Methods

This section describes the techniques employed to identify and evaluate archaeological resources within the Project ADI. All methods exceed the Secretary of Interior's guidelines, as do all project personnel for their respective roles.

As described in Chapter 1, prior to initiating fieldwork, pre-field research was completed consisting of a records search at the SCIC to obtain records for previously recorded cultural resources and any other relevant documentation including but not limited to previous cultural resources investigation reports and GIS data.

Minimally, all identified resources were recorded with a real-time corrected Trimble GeoXT Global Positioning System (GPS) receiver with sub-meter accuracy. An Apple 3rd Generation iPad equipped with the ESRI ArcGIS application was also used for mapping and navigation. Standard Department of Parks and Recreation (DPR) 523 series resource forms were used to document all resources, including updating previously recorded sites. Overall, documentation of cultural resources complied with the Office of Historic Preservation (OHP) and Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-44740) and the California Office of Historic Preservation Planning Bulletin Number 4(a).

4.1.1 Field Methods

Inventory

Dudek conducted an initial intensive pedestrian survey of the JVR Project in July and August 2018. In spite of the much larger Project Area, Dudek only surveyed within the JVR ADI as areas outside of the Project Area will be avoided. After the initial survey in the summer of 2018, the Project applicant refined the proposed JVR site plan to avoid highly sensitive cultural and biological resources. This refinement excluded some lands previously surveyed by Dudek from the ADI and required Dudek to survey additional land in February 2019. Additional refinements required Dudek to survey additional land in December 2019. As a result of the JVR ADI refinement, this inventory includes site updates to previously identified resources and newly discovered resources that are not located within the JVR ADI.

The pedestrian survey was conducted in less than 15 m intervals; however, actual survey transect spacing depended on ground visibility. Areas with dense vegetation required shorter, 10 m transect spacing and areas with excellent ground visibility at times allowed for a maximum transect width of 15 m. All survey transects were oriented according to cardinal directions or to major topographic features. Transect spacing was kept using a compass but field tablets with a mobile ESRI GIS application with real-time locations plotted on aerials were used to help navigate the survey and ensure the entire Project ADI was covered. The crew moved together as a team to ensure accurate transect spacing and to facilitate resource identification. Upon discovery of an artifact or feature, the entire crew stopped while the crew chief confirmed the identified resource. At the same time, all other crew members more closely inspected the area around their individual transects. All artifact concentrations and features were recorded during transect sweeps.

When recording a site, visible artifacts were marked with pin flags to delineate the size and boundaries of its surface deposit. Once artifacts and features were identified, crew members completed the following tasks: fill out field

versions of DPR resource forms; produce a site sketch map; make a detailed surface artifact inventory; fully describe any features; take high-resolution digital site photographs, including close-ups of important or prominent features and diagnostic artifacts; record UTM coordinates at the locations of formal artifacts, features, and the site boundary. Each new site was assigned a temporary resource identifier for tracking during post field data processing. No artifact collections were made during the initial inventory of the JVR ADI.

Archaeological Evaluation

In February, March, and June 2019 and January 2020, Dudek conducted archaeological evaluations of any previously unevaluated resources located wholly or partially in the JVR ADI. Dudek evaluated 17 resources or a portion of a resource located within the JVR ADI. As described above, Dudek updated or identified resources located within a previous project site plan, but have since been removed from the JVR ADI. Since these resources will not be impacted by the JVR Project, Dudek did not conduct archaeological evaluations of these sites. One exception is resource CA-SDI-21764 which was removed from the JVR ADI only after it was archaeologically evaluated. Furthermore, all testing efforts within each resource were conducted only within those portions of the site that fall within the ADI. Portions of cultural resources that fall outside of the ADI were not evaluated as a part of the current investigation.

The methods used during this archaeological evaluation were designed according to methods and procedures developed by Dudek and others over many years of archaeological study in southern California, and they comply with federal and state guidelines regarding cultural resource evaluations and eligibility recommendations (Hale and Becker 2006; Hale and Comeau 2010). Field methods and techniques are intended to maximize artifact recovery from sparse archaeological deposits, while at the same time allowing for the careful documentation, exposure, and removal of surface and subsurface features and affording a practical level of provenience control. Because many known cultural deposits consist primarily of surface manifestations, having only limited quantities of artifacts buried at shallow depths, recovery efforts must emphasize surface collection as much as subsurface testing in order to obtain artifact samples large enough for meaningful technological and statistical analyses. Artifact treatments focused on examining aspects of morphology, condition, technology, and function. Analytical interpretations are approached largely from a functional-materialist perspective, with patterns of artifact production, use, and discard being viewed within a framework of a socioeconomic adaptation with a utilitarian technological system.

During the archaeological evaluation, each site underwent an intensive surface survey with regular-interval sweeps of the site surface, and pin-flagging of artifacts, concentrations, and features to confirm the originally mapped items and site boundaries. This phase was made more efficient with the use of color-coded pin flags representing diagnostic artifacts, features, etc. After the site was defined with pin-flags, formal artifacts, features, and landforms were recorded with a decimeter-accurate Trimble global positioning system (GPS) unit and an iPad equipped with georeferenced JVR Project maps.

Concentrations or areas where artifact density was relatively higher than other portions of the site were mapped and collected separately from any artifacts and materials collected at a non-specific site. Non-specific, site-wide surface collection was the minimal collection method conducted at every site where artifacts were still present. Some resources encountered in this study had been previously collected but additional cultural materials were noted and collected.

Due to site conditions, only four types of units were used for field evaluations for this study. All units were excavated with square corners to enable their expansion in order to more thoroughly explore deposits. Shovel Test Pits (STPs) are small; 0.5 x 0.25 m exploratory units excavated in 20 cm increments to depths of no more than 80 cm, and were subjectively placed. It is Dudek's experience that excavation below 80 cm in an STP increases the probability

of error in determining the depth of artifact recovery because of the extensive sidewall scraping that occurs to remove matrix at lower depths. STPs are typically used to explore the edges of cultural deposits, providing a positive-negative indication with little reliability in terms of estimating depth of cultural deposits or integrity. Another excavation unit, auger units (AUG), were utilized to test for the presence or absence of sub-surface cultural deposits within large previously recorded resource areas with no cultural surface manifestations. AUGs were excavated using an auger with a 10-cm diameter blade that was excavated in 20 cm levels. In cases where surface artifacts were present but the STPs and other units excavated strongly suggested minimal sub-surface cultural deposits or where the potential for sediment accumulation was limited (e.g., areas of near-surface bedrock, or erosional surfaces), Surface Scrape Units (SSU) were utilized. SSUs typically measuring between 2 x 2 m to 3 x 3 m in size and are excavated in one 5-cm level in an effort to collect the maximum artifact deposit with only minimal excavation. SSUs can provide plan views of shallow features not seen from the surface, as well as help determine whether surface materials are in fact a significant subsurface deposit. If substantial quantities of artifacts are uncovered and identified during STP or SSU excavation, a 1 x 1 m Control Unit (CU) would be used to explore the feature. CUs would typically be excavated in standard 10-cm levels. Controlled Surface Collection (CSC) units were utilized at CA-SDI-11689. The 10-x-10-m square units allowed for refined collection of artifacts within artifact concentrations.All excavated matrix, regardless of unit type, was screened through 1/8-in (3-mm) mesh. Typically, most of the excavation at prehistoric sites terminated between 40-60 cm below the surface, when consecutive culturally sterile strata were encountered. Many of the tested sites are located in fallow agricultural land and the excavations revealed homogeneous, mixed soil. To determine the limits of the agricultural disturbance, several auger, not formalized AUGs, were placed in the bottom of a terminated STP. Sediment profiles from STPs were recorded and photographed where appropriate and Munsell colors were recorded. Sediment profiles of STPs were photographed, as these provide a better understanding of site formation processes and disturbances.

The sites were mapped using a Trimble Pathfinder GPS receiver with real-time correction capabilities and down to 10-cm accuracy to plot all surface artifacts, excavation units (STPs, AUGs, and SSUs), and the boundaries of any defined loci, concentrations, and features. The GPS was also used to record site boundaries, landform edges, drainages, roads, and other relevant surface information. In addition to the mapping, a series of overview photographs were taken to show the site landscape situation and condition. Photographs were also taken of features or other site attributes when appropriate.

4.1.2 Native American Correspondence and Participation

Dudek contacted the Native American Heritage Commission (NAHC) on July 27, 2018 to request a search of their Sacred Lands Files (Appendix B). The NAHC responded indicating the presence of Native American cultural sites in the Jacumba Quad that may be impacted. The NAHC response letter advised Dudek to contact Native American representatives who may have information about cultural resources within the Project Area. Dudek sent outreach letters to all Native American contacts supplied by the NAHC requesting any information these representatives have concerning TCRs within the JVR Project Area. When mailing addresses were not available, Dudek attempted to contact Native American representatives by telephone. To date, Dudek has received four responses to these Native American outreach efforts. Lacy Padilla of Agua Caliente Band of Cahuilla Indians and Chris Devers of Pauma Band of Luiseno Indians both responded via email and advised Dudek that the JVR Project is outside of their tribes' traditional area. Both deferred to Tribal entities more closely associated with the Project Area.

Gwendolyn Parada, Chairwoman of La Posta Band of Mission Indians, responded via a letter dated August 21, 2018 stating that the Project Area is located within the Diegueno traditional territory and that they would like to consult on the Project. Chairwoman Parada requested to be added to distribution list for public notices and environmental

review documents for the Project. La Posta tribe does not have knowledge of any specific TCRs that may be impacted by the Project but requested that a Native monitor be present during survey and archaeological testing. La Posta tribe further requested to meet with Dudek to "consult" on the JVR Project and to discuss their concerns and proposed mitigation. Dudek sent a response letter via email on October 2, 2018 letting Ms. Parada know that the County of San Diego was the lead agency overseeing the JVR Project and that they would be leading Native American consultation. La Posta did not send any further communications to Dudek.

Carmen Lucas of the Kwaavmii Laguna Band of Mission Indians called Dudek archaeologist Matthew DeCarlo on September 10, 2018 in response to Dudek's outreach letter. Ms. Lucas did not have knowledge of any specific TCRs that may be impacted by the Project but she stated that Jacumba is a sacred area and that "not one inch" of the area does not have cultural significance. Ms. Lucas recommended that a qualified Native American monitor be present during survey of the JVR Project. She also recommended that forensic dogs be utilized to identify human remains and that the dog analysis should dictate the design of the solar arrays. Mr. DeCarlo notified Ms. Lucas that the County of San Diego was the lead agency overseeing the project and that they would be leading Native American consultation.

San Diego County staff initiated formal Native American consultation as required by Assembly Bill 52 (AB-52) on January 31, 2019. Eight tribes (Barona, Campo, Jamul, Kwaaymii, Manzanita, Santa Ysabel, Sycuan, Viejas) who have requested to consult under AB-52 were notified of the project. Five tribes (Campo, Jamul, Manzanita, Santa Ysabel, Viejas) responded. Jamul and Santa Ysabel deferred to the Campo tribe. The County has been consulting with Campo, Manzanita and Viejas. Consultation is ongoing and will continue throughout the processing of the project.

Red Tail Monitoring and Research, Inc. provided Kumeyaay Native American monitors during all field studies, from survey to evaluation. Justin Linton, Tushon Phoenix, Shuuluk Linton, and Daniel "Bobo" Linton represented Red Tail during various sessions of fieldwork and presided over all archaeological findings.

5.0 Results

This section describes the results of the cultural resources survey and archaeological significance evaluations of the JVR ADI. After the initial survey in the summer of 2018, BayWa refined the proposed JVR site plan to avoid highly sensitive cultural and biological resources. This refinement excluded land previously surveyed by Dudek from the JVR ADI. As a result of the JVR ADI refinement, this inventory includes site updates of previously identified resources and descriptions of newly discovered resources that are no longer located within the JVR ADI.

5.1 Inventory Results

An intensive pedestrian survey was completed in July and August 2018 and February and December 2019 for the JVR Project and this was followed by significance evaluation testing in February, March, and June 2019 and January 2020. The pedestrian survey identified nine (9) newly identified archaeological resources and 25 new isolates. The survey also revisited 28 previously recorded archaeological sites and one (1) isolate (Table 5-1) (Confidential Appendix C). Following the initial intensive pedestrian survey in July and August 2018, the JVR project design was adjusted to avoid project impacts to significant archaeological sites. After design modifications, the ADI contains

28 archaeological sites and 20 isolated finds. Below is a description of the resources visited during the pedestrian survey, their proximity to the ADI, and whether they will be avoided through project design. The excavation results of those resources within the ADI are also described below. Site forms for all recorded archaeological sites can be found in Confidential Appendix C.

Table 5-1. Cultural Resources Analyzed During Survey

Resource Number	New/Previously Recorded	Period	Type	Currently Evaluated
Resources within the ADI				
CA-SDI-4457/H	Previously Recorded	Multicomponent	Quarry and lithic reduction	Yes
CA-SDI-6741	Previously Recorded	Prehistoric	Artifact scatter	Yes
CA-SDI-7054	Previously Recorded	Multicomponent	Lithic scatter and historic refuse	Previously Evaluated portion within ADI
CA-SDI-7056	Previously Recorded	Multicomponent	Lithic scatter	Yes
CA-SDI-8072	Previously Recorded	Prehistoric	Artifact scatter	Yes
CA-SDI-8430	Previously Recorded	Multicomponent	Lithic quarry and historic refuse	Yes
CA-SDI-11675	Previously Recorded	Prehistoric	Artifact scatter	Previously Evaluated
CA-SDI-11676	Previously Recorded	Prehistoric	Lithic scatter	Yes
CA-SDI-11682	Previously Recorded	Prehistoric	Lithic scatter	Previously Evaluated
CA-SDI-11684	Previously Recorded	Prehistoric	Lithic scatter	Previously Evaluated
CA-SDI-11685	Previously Recorded	Prehistoric	Lithic scatter	No longer extant

Table 5-1. Cultural Resources Analyzed During Survey

Resource Number	New/Previously Recorded	Period	Type	Currently Evaluated
CA-SDI-11686	Previously Recorded	Prehistoric	Lithic scatter	Previously Evaluated
CA-SDI-11688	Previously Recorded	Prehistoric	Lithic and ceramic scatter	Previously Evaluated
CA-SDI-11689	Previously Recorded	Prehistoric	Temporary camp	Yes
CA-SDI-19070	Previously Recorded	Prehistoric	Lithic scatter	Yes
CA-SDI-19904	Previously Recorded	Multicomponent	Lithic scatter	Yes
CA-SDI-19905	Previously Recorded	Multicomponent	Lithic scatter	Yes
CA-SDI-19906	Previously Recorded	Multicomponent	Artifact scatter	No longer extant
CA-SDI-19907	Previously Recorded	Prehistoric	Lithic scatter	No longer extant
CA-SDI-19908	Previously Recorded	Prehistoric	Lithic scatter	No longer extant
CA-SDI-19909	Previously Recorded	Prehistoric	Lithic scatter	No longer extant
CA-SDI-19910	Previously Recorded	Prehistoric	Lithic scatter	Yes
CA-SDI-21758	Previously Recorded	Prehistoric	Artifact scatter	Yes
CA-SDI-22725	New	Multicomponent	Artifact scatter	Yes
CA-SDI-22726	New	Prehistoric	Lithic and ceramic scatter	Yes
CA-SDI-22727	New	Prehistoric	Lithic and ceramic scatter	Yes
CA-SDI-22729	New	Prehistoric	Lithic and ceramic scatter	Yes
CA-SDI-22733	New	Prehistoric	Bedrock milling station	Yes
P-37-030190	Previously Recorded	Prehistoric	Isolated flake	Not Required
P-37-038609	New	Prehistoric	Isolated flake	Not Required
P-37-038610	New	Prehistoric	Isolated lithics	Not Required
P-37-038611	New	Prehistoric	Isolated lithics	Not Required
P-37-038612	New	Prehistoric	Isolated flake	Not Required
P-37-038613	New	Prehistoric	Isolated lithics	Not Required
P-37-038614	New	Prehistoric	Isolated flake	Not Required
P-37-038615	New	Prehistoric	Isolated lithics	Not Required
P-37-038616	New	Prehistoric	Isolated lithics	Not Required
P-37-038617	New	Prehistoric	Isolated lithics	Not Required
P-37-038618	New	Prehistoric	Isolated lithics	Not Required
P-37-038619	New	Prehistoric	Isolated lithics	Not Required
P-37-038624	New	Prehistoric	Isolated flake	Not Required
P-37-038626	New	Prehistoric	Isolated flake	Not Required
P-37-038627	New	Prehistoric	Isolated ceramic	Not Required
P-37-038628	New	Prehistoric	Isolated flake	Not Required
P-37-038629	New	Prehistoric	Isolated tool	Not Required
P-37-038630	New	Prehistoric	Isolated lithic tools	Not Required

Table 5-1. Cultural Resources Analyzed During Survey

Resource Number	New/Previously Recorded	Period	Type	Currently Evaluated
P-37-038631	New	Prehistoric	Isolated lithics	Not Required
P-37-038632	New	Prehistoric	Isolated handstone	Not Required
Resources within the Project Area – Outside ADI				
CA-SDI-4455	Previously Recorded	Prehistoric	Village of Hakum	No - Avoided
CA-SDI-4459	Previously Recorded	Prehistoric	Lithic scatter	No - Avoided
CA-SDI-11677	Previously Recorded	Prehistoric	Lithic scatter/Bedrock milling station	No - Avoided
CA-SDI-11681	Previously Recorded	Prehistoric	Artifact scatter	No - Avoided
CA-SDI-21764	Previously Recorded	Prehistoric	Artifact scatter	Yes
CA-SDI-22728	New	Prehistoric	Lithic and ceramic scatter	No - Avoided
CA-SDI-22730	New	Prehistoric	Bedrock milling station	No - Avoided
CA-SDI-22731	New	Prehistoric	Lithic scatter	No - Avoided
CA-SDI-22732	New	Prehistoric	Lithic scatter/Bedrock milling station	No - Avoided
P-37-038620	New	Prehistoric	Isolated flake	Not Required
P-37-038621	New	Prehistoric	Isolated milling stone	Not Required
P-37-038622	New	Prehistoric	Isolated flake	Not Required
P-37-038623	New	Prehistoric	Isolated handstone	Not Required
P-37-038625	New	Prehistoric	Isolated flake	Not Required
P-37-038633	New	Prehistoric	Isolated artifacts	Not Required

5.1.1 Archaeological Resources within the ADI

CA-SDI-4457/H; P-37-004457

CA-SDI-4457/H is a multicomponent site consisting of scattered historic ranching debris, prehistoric ceramics and lithic debitage. The site is divided between the two loci; Locus A is located in the west on a south sloping hill and has been avoided by the Project Area and is not located within the Project ADI. Locus B is located to the east atop a small rise overlooking a fallow agricultural field and falls completely within the ADI. Locus A was originally recorded by Waldon in 1976 who described it as a felsite flake and ceramic scatter that may have been associated with "Hacum Village". Chace excavated Locus A to depths of 5 cm and placed two auger tests to 60 - 70 cm in Locus B in 1980. Chase did not specify what was found in the testing units. Anna Noah updated the site in 1980 and described Locus B as a campsite with "deep archaeological deposit, ceramics, ground stone and flaked lithics." It is unclear how the deep archaeological deposits were identified. Noah also noted a "partially enclosed rock outcropping, completed with a 3-course wall."

During the current effort, Dudek archaeologists resurveyed CA-SDI-4457/H on 8/1/2018 and found the site in similar condition as previously recorded. Locus A is located on top of a rocky hilltop with the majority of the locus located north of a wire fence and the Project ADI. The southern extent of the locus has been largely graded though artifacts were still present. Prehistoric artifacts included volcanic flakes and ceramic sherds and historic artifacts included green and colorless glass bottle fragments, barbed wire fragments, and a scatter of historic smokeless heater components used for agricultural purposes. The rock wall described by Noah in 1980 was not relocated and may be located outside of the Project ADI beyond the wire fence. Locus B has been highly disturbed by multiple dirt roads and agricultural activity but still consists of a moderately dense artifact scatter. Artifacts include ceramics, mostly volcanic debitage with a few quartz and CCS flakes, a handstone fragment and a CCS distal biface fragment.

Dudek returned to CA-SDI-4457 on 3/6/2019 to conduct a surface collection and archeological testing. Prior to Project ADI refinements avoiding Locus A, the surface collection of a portion of Locus A located within the Project Area included 64 volcanic debitage fragments, ten ceramic sherds, and a multidirectional volcanic core (A-1). The surface collection of Locus B consisted of 41 volcanic debitage fragments, two ceramic body sherds, one quartz flake, three volcanic cores and a milling stone fragment.

Due to its exposed bedrock surface and lack of any soil, the subsurface of Locus A was not archaeologically tested. Since the field visit, Project ADI refinements now avoid Locus A. Locus B of CA-SDI-4457/H is located within the Project ADI so Dudek excavated a STP and an auger. STP-01 was placed in the south eastern section of the site where the artifacts were most concentrated. The STP was excavated to a depth of 60 cm. STP-01 produced four volcanic debitage and one green glass fragment within the 20 – 40 cm level and two debitage within the 40 – 60 cm level. An auger was placed in the center of STP-01 and excavated from 60 – 100 cm. These levels were negative. The stratigraphy of STP-01 showed a clear transitional mottling layer at 37 cm, where the upper layer was a damp loamy sand of very dark greyish brown color and the lower layer of dark greyish brown. An auger unit, Aug-01, was positioned in the northern portion of CA-SDI-4457/H. The auger was excavated to a depth of 100cm. The auger produced no cultural materials but its stratigraphy mirrored STP-01.

The exposed bedrock surface of Locus A suggests that there is no potential for significant subsurface deposits. STP-01 and AUG-01 excavated within Locus B produced little cultural material and showed the soil has been extensively mixed by agricultural activity. Considering the history of surface disturbance by agricultural activities, the mixed subsurface stratigraphy, and the few subsurface artifacts, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-6741; P-37-006741

CA-SDI-6741 is a highly dispersed prehistoric artifact scatter partially located within the Project ADI. This site was originally recorded in 1990 by Wirth Associates as a temporary camp, characterized by lithic debitage, ceramic sherds, and a burned bone of unknown type. The site was described to be located on a “low sand dune area.” Since its original recording, the 380 m diameter site has been impacted by the development of an airstrip with protective fence and agricultural use.

During the current effort, Dudek archaeologists resurveyed CA-SDI-6741 and found the site to contain a widely dispersed scatter of artifacts. The current airstrip and protective fence bisects the previous site boundaries and segment it into three sections, north, west, and south. The southern section was especially disturbed by large scale grading to create a 10 ft. raised earthen berm for a large stock pond. Only five artifacts were recovered on the surface of the southerhn section: two ceramic body sherds, two volcanic debitage fragments, and one volcanic core. No artifacts were identified in the northern portion. Dudek found nearly all artifacts west of both the airstrip and

the previous boundaries of CA-SDI-6741 within an area measuring 150 x 240. Surface collection of the western portion included 185 debitage, 32 ceramic sherds, four handstones, three milling stone fragments, a simple flaked tool, and volcanic tested cobbles.

Seven STPs and six Auger Units were excavated at CA-SDI-6741 during the archaeological testing phase of the JVR Project. All STPs were excavated to a depth of 60 cm and then augered down to 100 cm. The exception is the auger placed in the bottom of STP-03 which was excavated to 300 cm to determine the depth of the mixed agricultural soil. Auger Units were excavated from the ground surface and extended 100 cm, except AUG-03 which struck a rock at 70 cm and had to be abandoned.

STP-1, STP-2, AUG-01, and AUG-02 were placed in the highly disturbed area south of the airstrip. STP-06 and STP-07 were placed north of the airstrip where no surface artifacts were identified. All of other units were located within the artifact scatter located west of the airstrip. Of the seven STPs and six Auger Units excavated, only STP-03 and STP-06 were positive. STP-03 produced one faunal bone fragment and one volcanic debitage artifact in the 0-20 cm level and another faunal bone fragment in level 20-40 cm. STP-6 only produced one (1) faunal bone fragment in level 20-40 cm but it does not appear to be cultural. Excavation throughout the entire site displayed the same stratigraphy. All seven of the STPs exhibited loose to moderately compact well sorted dark brown silty loam from surface to approximately 80 cm. While the upper 1 meter was slightly moist from recent rains, the water did not permeate past that point. The sediments observed from 80 cm to 300 cm were consistently a sandy silt loam. No midden was identified.

Considering disturbance of the site by construction of the airstrip, the repeated tilling of the soil for agricultural use, and the homogenous mixed subsurface sediments, CA-CDI-6741 has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-7054; P-37-007054

CA-SDI-7054 is a prehistoric lithic scatter and reduction station with a historical refuse component. Townsend first identified the resource in 1979 as a felsite flake and cobble scatter with historic refuse including auto parts, a spring, and a terra cotta tile fragment. ASM Affiliates expanded the boundary of CA-SDI-7054 in 2009 to encompass two additional sites: CA-SDI-7055 and CA-SDI-11683. CA-SDI-7055 was also identified by Townsend in 1979 and described as a lithic scatter and quarry site. Whitaker revisited CA-SDI-7055 in 2009 and relocated felsite flakes but no evidence of lithic quarrying activity. CA-SDI-11683 was originally identified by Mooney Associates in 1990 and described as a low density scatter comprised of 4 reduction stations. Mooney Associates conducted a surface collection and excavated two 1 x 1 meter test units in CA-SDI-11683. The test units confirmed that the scatter was surfical with few flakes located in the upper 5 cm. Mooney Associates recommended CA-SDI-11683 as not significant under CEQA. After expanding the site boundary of CA-SDI-7054 to subsume CA-SDI-7055 and CA-SDI-11683, ASM Affiliates recommended that the portion of CA-SDI-7054 originally recorded as CA-SDI-11683 will not require further management if impacted.

A portion of CA-SDI-7054 is located in the Project ADI and Dudek resurveyed the area in December 2019. No cultural materials were identified and the portion of the resource located within the ADI consists of the former CA-SDI-11683 portion of CA-SDI-7054. This portion has been highly disturbed and now consists of a graded construction pad and dirt access road for a transmission tower. Because the portion of the site within the ADI was previously tested and recommended not significant under CEQA, Dudek did not conduct subsurface significance testing. There is a low potential of encountering intact cultural deposits within the ADI portion of the resource.

CA-SDI-7056; P-37-007056

CA-SDI-7056 is a prehistoric lithic scatter and historic refuse dump measuring 350 x 190 m located within the ADI. The site was originally recorded by K.L. Crotteau in 1979 as a lithic scatter on a terrace overlooking a cultivated area. Crotteau identified "approximately 68 felsite flakes, 2 felsite cores" over a 32 m^2 area. A letter and a map in the site record suggest that the site boundary for CA-SDI-7056 was expanded in 1990 by Brian F. Mooney Associates. The letter and the map did not contain any details why the boundary was expanded. In 2009, HDR resurveyed the resource but only identified "a sparse flaked lithic artifact scatter of 8 porphyritic felsite flakes."

During the current effort, Dudek archaeologists resurveyed CA-SDI-7056 and found the site to contain a widely dispersed scatter of volcanic lithic artifacts. All lithic artifacts were identified within the existing boundaries of the site though the scatter was less dense at the southern extent of the site where the terrace meets the cultivated land. The lithic artifacts are predominantly primary and secondary volcanic flakes and volcanic shatter. Besides several developed cores, no tools were identified.

Five concentrations of lithic artifacts were identified on level areas of the terrace that overlook drainages that descend to the north, west, and east of the terrace. The current survey also identified large quantities of historic refuse not previously recorded within the boundaries of CA-SDI-7056. The historic refuse is confined to the central, eastern extent of the site boundary where four concentrations of refuse were dumped into drainages. The historic refuse includes a low diversity of cans including church key opened cans, cone-top-cans, and sardine cans, numbering more than 200. Broken bottle glass comprises a large quantity of the historic period refuse including Clorox bleach bottles, liquor bottles, brown beer bottles, soda bottles, and milk bottles.

Eight STPs were excavated at CA-SDI-7056 during the archaeological testing phase of the JVR Project. STP-01 and STP-02 were placed within historic refuse Concentration 3 so that the northern border of STP-01 touched the southern border of STP-02. This created a 25 x 100 cm trench to expose a profile of Concentration 3. STP-01 and STP-02 were abandoned at 19 cm and 16 cm below surface when a stratum of large cobbles were encountered. STP-03 and STP-04 were placed at opposite ends of Concentration 1, a lithic concentration, to determine if there was a subsurface component to Concentration 1. One piece of debitage was identified from 0 to 20 cm in STP-03, which was terminated at 20 cm due to dense clay. STP-04 produced two pieces of debitage from 0 to 20 cm and 1 piece of debitage from 20-39 cm. STP-04 was also terminated due to dense clay. STP-05 was placed at the southern extent of CA-SDI-7056 where the terrace begins to descend towards the cultivated land. STP-05 produced no cultural materials and was terminated at 20 cm due to dense clay. STP-06 was placed in Concentration C1b, a lithic concentration, to determine if there was a subsurface component. One piece of debitage was identified from 0 to 20 cm in STP-06, which was terminated at 25 cm due to dense clay. STP-07 was placed in Concentration C3b, a lithic concentration, to determine if there was a subsurface component. STP-01 produced no subsurface artifacts and was terminated at 20 cm due to a dense clay and cobble stratum. STP-08 was placed in Concentration C4b, a lithic concentration, to determine if there was a subsurface component. STP-08 produced no subsurface artifacts and was terminated at 20 cm due to a dense clay stratum.

Dudek completed a general surface collection of prehistoric artifacts at CA-SDI-7056, collecting the northern and southern half of the sites separately for lab comparison. All prehistoric artifacts were collected except lithic shatter, tested cobbles, and possible cores that could not be positively identified. Though not collected, a count of lithic shatter, tested cobbles, and ambiguous cores were tallied. The surface collection included 241 volcanic debitage, one quartz debitage, four volcanic cores, and one faunal bone. An opportunistic collection of diagnostic historic era artifacts was also conducted.

The large rock cobble stratum encountered at the base of STP-01 and STP-02 demonstrate that the historic refuse concentrations lack depth and appear to be the result of multiple dumping events. This, with the low productivity of the STPs within the densest concentrations of surface lithics and the homogeneity of artifact types identified at CA-SDI-7056, indicates that the site has a low potential to contain significant buried deposits or culturally sensitive material.

CA-SDI-8072; P-37-008072

CA-SDI-8072 was initially recorded as a large light prehistoric temporary camp site measuring 670.5 x 260 m by Chace & Associates in 1980. The resource consisted of prehistoric ceramic sherds, lithic flakes, several simple stone tools, and a milling implements within the disturbed context of an agricultural field bisected by Old Hwy 80. ASM Affiliates tested the site in 2000 by excavating six STPs near Old Hwy 80. All six STPs were negative.

During the current effort, Dudek archaeologists resurveyed CA-SDI-8072 in July 2018 and identified additional artifacts, extending the site boundary east. Newly identified artifacts include volcanic flakes and cores, ceramic sherds, handstones, and milling stone fragments. A concentration of artifacts, CON-1A, was identified in the southern portion of the site. As previously noted, the area has been completely disturbed by agricultural activity. In March of 2019, Dudek conducted a surface collection and archaeological testing. The surface collection included 271 debitage fragments, six cores, four hammerstones, one simple flake stone tool, one quartz biface fragment, 218 ceramics, and, 16 groundstone.

Five STPs, one SSU, and six AUG units were excavated at site CA-SDI-8072. The STPs were placed in areas where surface artifacts were observed and represented the best opportunity for intact deposits. All five STPs were excavated in standard 20 cm levels to a depth of 60 cm then an auger was placed in the center of the unit and excavated to 100 cm. STPs-01, -03, and -04 were negative. STP-02 produced one ceramic fragment at a depth of 20-40 cm and STP-5 yielded one ceramic sherd from level 0-20 cm. All STPs exhibited moist, moderately compacted well sorted, dark brown silty clay loam.

One shovel scrape unit was placed within CON-1A, in the area of highest surface artifact density. The unit measured 2 x 2 m and was excavated to a depth of 10 cm. Artifacts were only observed from the surface to 5 cm. In total the unit produced 30 debitage (all volcanic), 17 ceramic body sherds, and one faunal bone fragment. The faunal bone fragment is a proximal femur of a small bird, with some small amount of charring. SSU-1 exhibited moderately compacted silty clay.

AUGs were placed in alternating conjunction with the STPs for improved coverage and soil profiling. A total of six AUGs were placed throughout the site, with a particular interest in the north western boundary. No surface artifacts were observed in that portion of the site, thus AUGs were excavated to investigate subsurface deposit and soil change. None of the augers resulted in cultural materials or soil change.

Though CA-SDI-8072 produced a high number of artifacts, the artifacts are spread over a very large area and have been highly disturbed by previous agricultural activity. Considering this disturbance, the homogenous stratigraphy, and few subsurface artifacts, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-8430; P-37-008430

CA-SDI-8430 was initially recorded by D. Goldberg of Scientific Resource Surveys, Inc., in 1980 as a prehistoric lithic scatter in a 100 x 60 m area. The site was revisited in 1988 by D. Van Horn and R. White of Archaeological Associates, who expanded the site to approximately 350 x 150 m. Then the site was updated in 2009 by J. Whitaker

of HDR for the SDG&E East County Substation Project. ASM surveyed the site in 2011 for the northern Highway realignment option and Carrizo Canyon Road alternative, and identified a prehistoric lithic scatter and a historic scatter on both sides of Carrizo Canyon Rd near the intersection with Highway 80. It was noted that the site had been disturbed by vehicle traffic, modern trash, and grading. Between the 1988 and 2011 site visits, the site had grown to approximately 290 acres, with a diameter of 1,300 m. This included, Locus A- D lithic scatters, Locus E a cobble quarry, Locus F a lithic scatter, and Locus G a historic refuse. The current site boundary now completely covers a mountain rising out of Jacumba Valley's floor.

A previous ADI for the Project included the western half of CA-SDI-8430, including a proposed fence line that would have bisected the mountain site from north to south. Dudek archaeologists resurveyed the western half of CA-SDI-8430 in August 2018, paying close attention to the area bisected by the proposed fence line. Along the fence line path, Dudek identified artifact assemblages as previously recorded at the site. The survey did not, however, identify cultural assemblages on the western or northern extension of the site boundary, where the mountain site extends into the flat terrain of the valley. To avoid the significant components of the site, the ADI was adjusted to its current alignment which avoids the artifact rich mountainous portion of the site and instead crosses into the flat terrain at the western and northern extent of the site boundary.

Dudek returned to CA-SDI-8430 in March 2019 to conduct a surface collection and archaeologically test the portions of the site located within the current ADI. The current ADI overlaps the site boundary in two different areas; in the west adjacent to the remains of a dairy complex and in a northern area that has been leveled with grading. The surface collection included 60 volcanic flakes and shatter and one volcanic biface. All but one of the artifacts, a volcanic flake, were identified in the western portion of the site adjacent to the abandoned dairy complex.

Five STPs, two SSU, and three AUG units were excavated within the current ADI at site CA-SDI-8430. A total of five STPs were excavated to 40 cmbs and then augured to 100 cmbs. STP-01 was placed in the western portion of the site boundary and produced a dark reddish brown moderately compacted clay loam. STPs 02 – 05 were in the northern extent situated in a field that has been heavily disturbed from plowing activities. These STPs exhibited soil between brown and pale brown. The range in soil color is attributed to the disturbances in the field. All STPs were negative and did not display any evidence of significant deposits.

Two SSUs were excavated along the western hillside boundary of CA-SDI-8430. SSU-01 was placed in a sparse lithic scatter on a southern facing slope. SSU-2 was placed high on the slope of a western facing drainage were surface artifacts were found at the bottom. Both SSUs had moderately compacted brown silty clay. Each SSU was excavated to five cmbs and both were positive. SSU-1 produced a single piece of volcanic debitage and SSU-02 produced four pieces of volcanic debitage.

Three AUGs were excavated in the northern extent of the site CA-SDI-8430 because of the depth of the displaced soil. AUG-01 through -03 exposed brown moderately compacted silty sand ranging in color from dark brown to dark yellowish brown. All three auger tests were excavated to 100 cmbs and were negative.

The mountainous portion of CA-SDI-8430 is a well-documented, artifactually dense resource, however, portions of its western and northern extent are located in flat, developed terrain. The lack of significant surface artifacts and negative subsurface testing results suggest that the portions of the site crossing the Project ADI are unlikely to contain significant buried deposits or culturally sensitive materials. The Project ADI was altered to avoid the significant portions of CA-SDI-8430 and only crosses the non-contributing portions of the site.

CA-SDI-11675; P-37-011675

CA-SDI-11675 is a prehistoric lithic and ceramic scatter dispersed over a 90 x 30 m area. Mooney and Associates initially recorded the site in 1990 and identified volcanic flakes, cores, retouched flakes, a scraper, and 28 sherds from two ceramic vessels. All surface artifacts were collected and the site was tested with two STPs. Mooney and Associates recommended the site not eligible for the CRHR. ASM revisited the site in 2010, identified additional artifacts but also recommended the site not eligible for CRHR listing.

CA-SDI-11675 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the area appears to have undergone mechanical and erosional disturbance. Because the site was previously tested and recommended not eligible, Dudek did not conduct subsurface significance testing. There is a low potential of encountering intact cultural deposits.

CA-SDI-11676; P-37-011676

CA-SDI-11676 was initially recorded as a prehistoric lithic scatter and raw material procurement site measuring 110 x 215 m. The site was recorded by D. Ferarro of Brian F. Mooney Associates in 1990 as a lithic scatter situated on the northeastern facing slope south of the I-8 freeway. Ferarro identified and collected 150 pieces of debitage, nine cores, and four tools on the surface. Ferarro also excavated two 1 x 1 m units to a depth of approximately 10 cmbs. Six pieces of debitage were recovered in one unit and three pieces of debitage were recovered in the other. The southeastern corner of the site falls within the current Project ADI.

Dudek revisited CA-SDI-11676 in February 2019 and resurveyed the portion of the site that extends into the current ADI. This portion of the resource is located at the base of hills rising to the north and west and is undeveloped. Dudek identified and collected a sparse prehistoric scatter consisting of one volcanic core, 22 pieces of debitage, and one piece of ceramic. Much of the assemblage was located along ephemeral drainages and were misplaced by erosion.

Two STPs were excavated within the small portion of the Project ADI that crosses into the boundary of CA-SDI-11676. The STPs were placed in areas where artifacts were most concentrated. Both STPs exhibited loosely compacted well sorted brown silty loam from their surfaces to approximately 40 cmbs. A single piece of volcanic debitage was recovered in the 0-20 cmbs level of STP-01. The excavation unit was excavated to 60 cmbs but produced no other cultural material. STP-02 was negative and abandoned at 40 cmbs.

The portion of CA-SDI-11676 located in the Project ADI does not possess a wide range of artifact types and is dominated by volcanic flakes from locally sourced stone. The archaeological testing demonstrates that there is nearly no subsurface manifestation of the site and it is likely that the artifacts present are the result of erosion. Considering the lack of context, few artifact types, and few recovered subsurface artifacts, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-11682; P-37-011682

CA-SDI-11682 was originally recorded as a small lithic scatter by Mooney Associates in 1990. The volcanic scatter consisted of one unidirectional core, one core fragment, and five secondary flakes. Mooney Associates excavated two STPs. The excavations did not identify a subsurface component.

CA-SDI-11682 is partially located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified though the area does not appear to have been disturbed. Because the site was previously tested,

Dudek did not conduct subsurface significance testing. The previous negative archaeological testing suggest that there is a low potential of encountering intact subsurface cultural deposits.

CA-SDI-11684; P-37-011684

CA-SDI-11684 was originally recorded as a small lithic scatter by Mooney Associates in 1990. The volcanic scatter consisted of two cores and three secondary flakes. Mooney Associates stated that the resource had "0 cm" depth, but did not describe their testing methods.

CA-SDI-11684 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified though the area does not appear to have been disturbed. Because the site was previously tested, Dudek did not conduct subsurface significance testing. The previous negative archaeological testing suggest that there is a low potential of encountering intact subsurface cultural deposits.

CA-SDI-11685; P-37-011685

CA-SDI-11685 was originally recorded as a small lithic scatter by Mooney Associates in 1990. The volcanic scatter consisted of one core tool fragment and two secondary flakes. Mooney Associates excavated one STP. The STP identified no subsurface artifacts. ASM Affiliates revisited the resource in 2010 and identified two additional flakes. ASM Affiliates noted that an installed water culvert has reduced the original resource location into a large gully.

CA-SDI-11685 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the area has been highly eroded. Because the site was previously tested, Dudek did not conduct subsurface significance testing. The previous negative archaeological testing and the complete alteration of the original site location suggest that there is a low potential of encountering intact subsurface cultural deposits.

CA-SDI-11686; P-37-011686

CA-SDI-11686 was originally recorded as a lithic scatter/raw material procurement site by Mooney Associates in 1990. The resources consisted of five lithic reduction stations including tested cores, reduced cores, bifacial cores, and 235+ flakes, and one ceramic sherd. Mooney Associates excavated three 1 x 1 m test unites and seven STPs. The excavations identified two flakes within the upper 5 cm.

Only a small portion of CA-SDI-11686 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and it appears that this portion of the site may have been disturbed by the adjacent road. Because the site was previously tested, Dudek did not conduct subsurface significance testing. The minimal subsurface artifacts identified during previous archaeological testing and the lack of surface artifacts within the Project ADI suggest that there is a low potential of encountering intact subsurface cultural deposits.

CA-SDI-11688; P-37-011688

CA-SDI-11688 was originally recorded as a prehistoric lithic scatter by Mooney Associates in 1990. The resources consisted of a three cores, one core fragment, 27 flakes, and two ceramic sherds located on a slight slope that was eroding into the flood plain. Mooney Associates conducted a surface collection of the entire site and excavated two STPs. The excavations did not identify a subsurface component.

CA-SDI-11688 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the area has been highly impacted by agricultural activity. Because the site was previously tested,

Dudek did not conduct subsurface significance testing. The previous negative archaeological testing, the surface collection and the disturbance of the resource location by agricultural activity suggest that there is a low potential of encountering intact subsurface cultural deposits.

CA-SDI-11689; P-37-011689

CA-SDI-11689 was initially recorded as a prehistoric temporary camp by Mooney Associates in 1990. Artifacts observed at the site included approximately, two projectile point fragments, five scrapers, five hammer stones, 12 hand stones, 30 cores, 250 pieces of debitage, 155 pieces of ceramic, two shell disc beads, and one pipe fragment. From the surface, Mooney Associates collected a quartz projectile point and a preform, one core, three obsidian flakes, 28 ceramic sherds, and a ceramic pipe fragment. They also identified several bone fragments, some of which were burned, near the eastern edge of the site boundary. Mooney Associates suggested that these may be cremation remains. Mooney Associates also excavated two 1 x 1 m test units and identified six flakes and two ceramic sherds in the upper 30 cm, with most artifacts found near the surface. Mooney Associates postulated that the site extent and depth were due to seasonal flooding and agricultural disturbance.

During the current effort, Dudek archaeologists resurveyed CA-SDI-8072 in August 2018 and conducted evaluation testing in March 2019. Dudek identified additional artifacts outside of the previously recorded site boundary which extended the site west and northeast. Newly identified artifacts include volcanic flakes and cores, ceramic sherds, handstones, and milling stone fragments. During the surface inventory, a dense lithic scatter, Concentration 1, was identified on the northwestern side of the site that measuring 44 x 11 m. Dudek conducted a complete surface collection of the site boundary consisting of 38 debitage fragments, two cores, three milling stone fragments, and 39 ceramic fragments.

Dudek excavated three STPs and three AUGs at CA-SDI-11689. The STPs and AUGs were placed evenly throughout the site, with STP-02 placed within Concentration 1. The STPs were excavated to approximately 40 cmbs then augured to 100 cmbs. All three STPs exhibited soil that appeared to be dark brown silty sand. The soil from 80 – 100 cmbs appeared to be lighter, sandier, and drier than the soil from 0 – 80 cmbs. All STPs were negative and showed no sign of significant deposits. The three AUGs were excavated to a depth of 100 cmbs. The AUGs revealed a similar stratigraphy to the STPs and all three AUGs were negative.

The August 2018 survey and the March 2019 evaluation testing identified no bone ecofacts. Concerned that human remains may be present, as indicated by Mooney Associates identification of burned bone in 1990, Dudek returned to CA-SDI-11689 in December 2019 to conduct further review. Dudek archaeologists and a Red Tail Environmental Native American monitor resurveyed CA-SDI-11689 using transects of approximately three meters (3 m). The survey crew flagged all identified artifacts and then established two CSC.

CSC-01 produced five brownware ceramic body sherds, one Brownware ceramic rim sherd, five volcanic pieces of debitage, and one granitic handstone. CSC-02 produced one Brownware ceramic body sherd, one volcanic core, two pieces of volcanic debitage, one piece of quartz debitage, and one granitic milling stone fragment. The survey team did identify modern rodent bone on the ground surface, however, no burned or cultural bone was identified.

Though CA-SDI-11689 had many surface artifacts, the artifacts are spread over a very large area and have been highly disturbed by previous agricultural activity. Like the excavations conducted in 1990, the current excavations suggest that there is no depth to the resource. In spite of intensified field analysis, no evidence of burned bone was identified, as indicated by Mooney Associates in 1990. Considering the disturbance, the homogenous stratigraphy,

and the exhausted research potential (surface collection), this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-19070; P-37-029823

CA-SDI-19070 was originally recorded as three fine-grained volcanic flakes located in an area of 2 x 3 m by Whitaker in 2008. The resource is located within the current ADI so Dudek archaeologists resurveyed and conducted evaluation testing of CA-SDI-19070 in March 2019. Dudek relocated two of the volcanic flakes as well as a volcanic core. The site measures 16 x 16 and is located in an area heavily impacted by agricultural activities.

Dudek conducted a surface collection consisting of one volcanic core and one volcanic retouched edge tool. Dudek also excavated one STP within the recorded site boundary of CA-SDI-19070. The STP was excavated in 20 cmbs intervals to a depth of 40cm. An auger was then placed in the center of the STP and excavated to 90 cmbs. The sediments encountered at the 0 to 65cm level were a moderately compact, very dark brown, sandy clay with less than 5% well sorted angular gravels. In the 65 – 80cm level the sediments were a loosely compacted, brown, sandy clay with less than 5% well sorted angular gravels. The 80 – 90cm level sediments consisted of a loosely compacted, brown, silty sand, with no gravels. The STP was negative for cultural material.

CA-SDI-19070 consists of only a few artifacts of the same type located on the ground surface in an area highly disturbed by previous agricultural activity. Considering this disturbance, few artifacts, and negative evaluation testing, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-19904; P-37-031341

CA-SDI-19904 is a prehistoric lithic scatter measuring 85 x 20 m located within the ADI. The site was originally recorded by ASM Affiliates in 2010 as a prehistoric lithic scatter and a historic solder-top can. ASM Affiliates identified 68 lithic flakes, 10 cores, two hammerstones, one solder-top can, and a possible historic hearth.

Dudek archaeologists resurveyed and conducted evaluation testing of CA-SDI-19904 in February 2019. The site is located on a narrow rise between a dirt road and an ephemeral drainage. Dudek found the site to be in roughly the same condition as previously recorded with volcanic flakes scattered throughout the resource boundary. Two concentrations of lithic artifacts were identified. Concentration C1 contained 21 volcanic debitage fragments and concentration C2 contained a volcanic core, 16 volcanic flakes, and a quartz flake. Dudek also conducted a general surface collection of the site consisting of 95 volcanic debitage, seven volcanic cores, and one volcanic biface. Dudek relocated a small amount of ash and FAR near the base of the rise within the ephemeral drainage. The FAR was in no particular pattern such as a hearth ring and may have been displaced by seasonal erosion.

Dudek excavated six STPs at CA-SDI-19904 during the archaeological testing phase of the JVR Project. STP-01 was placed within concentration C1 while the other STPs were evenly placed throughout the ridge side of the site. STP-01, STP-03 and STP-06 revealed a moderately compacted sandy clay and were abandoned between 20-38 cmbs where they encountered a highly compacted clay and disintegrating granite stratum. STP-02 produced a very loosely compacted clay at the surface but encountered a densely compacted clay and disintegrated granite stratum at 11 cmbs. STP-02 was abandoned at 27 cmbs due to disintegrated granite. STP-04 produced a yellow brown, moderately compacted, dry sandy loam from the surface to 40 cmbs. STP-05 produced a dark brown, moderately compacted, moist sandy clay with light gravel from the surface to 40 cmbs. All STPs were negative except STP-02 which produced a single volcanic debitage in the upper 20 cm.

Dudek also excavated two SSUs at CA-SDI-19904. SSU-01 was placed within the concentration of lithic flakes, C1. SSU-01 was excavated to 2 cmbs but only produced four volcanic flakes. SSU-02 was placed where ASM Affiliates identified a possible hearth feature and Dudek identified a small amount of charcoal on the ground surface. SSU-02 was excavated to 5 cmbs in very loosely compacted silt from the adjacent ephemeral drainage. At roughly 2 cmbs, a burned piece of modern willed wood was encountered revealing that the possible hearth feature is modern and not historic.

Though largely undisturbed along its crest, CA-SDI-19904 contains a very limited number of artifact types and the subsurface testing suggest that the scatter is surficial. CA-SDI-19904 has a low potential to contain significant buried deposits or culturally sensitive material.

CA-SDI-19905; P-37-031342

CA-SDI-19905 was initially recorded as a light prehistoric artifact scatter site measuring 40 x 15 m by ASM & Affiliates in 2010. They observed a total of six debitage flakes, one ceramic vessel sherd, and one possibly historic ceramic insulator. Dudek resurveyed CA-SDI-19905 in February 2019 and identified 11 volcanic debitage flakes and one volcanic simple flake tool on its surface. The prehistoric ceramic sherd and historic insulator were not relocated. The land surrounding the site showed signs of extensive disturbance but the site itself was not disturbed.

Dudek conducted a surface collection and excavated two STP within the recorded site boundary of CA-SDI-19905. These STPs were placed in areas where surface artifacts were observed and represented the best opportunity for intact deposits. STP-01 and STP-02 both exhibited moist, moderately compacted well sorted, brown sandy loam with decomposed granite gravels in the upper 0-40 cmbs. The sediments from 40-60 cmbs exhibited the same color but with a 20% increase in gravels. Both STPs were abandoned at 60 cmbs; STP-01 was negative for cultural materials, while STP-02 produced one volcanic flake in it 0-20 cmbs level.

CA-SDI-19905 consists of only 11 volcanic debitage fragments and one volcanic simple flake tool on the surface and one volcanic flake in the upper 20 cm of STP-02. Considering the limited number of surface artifacts, the limited number of artifact types, and the poor productivity of the subsurface testing, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-19906; P-37-031343

CA-SDI-19906 was originally recorded as a historic and prehistoric artifact scatter by ASM Affiliates in 2010. The scatter consisted of an intact, colorless medicine bottle and six glass bottle fragments ranging in amethyst, cobalt, and aqua colors. There was also three volcanic prehistoric flakes. ASM Affiliates noted that the resource was identified on brown alluvium with decomposed granite.

CA-SDI-19906 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the ground surface showed signs that it had been completely graded for use as a laydown yard for a previous utility project. Dudek did not conduct subsurface significance testing because the area has been completely graded and the site was destroyed.

CA-SDI-19907; P-37-031344

CA-SDI-19907 was originally recorded as a prehistoric lithic scatter by ASM Affiliates in 2010. The scatter consisted of three volcanic flakes and ASM Affiliates noted that the area was completely terraformed brown alluvium with decomposed granite.

CA-SDI-19907 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the ground surface showed signs that it had been completely graded for use as a laydown yard for a previous utility project. Dudek did not conduct subsurface significance testing because the area has been completely graded and the site was destroyed.

CA-SDI-19908; P-37-031345

CA-SDI-19908 was originally recorded as a small prehistoric lithic scatter by ASM Affiliates in 2010. The scatter consisted of two volcanic flakes and a core. ASM Affiliates noted that the area was completely terraformed brown alluvium with decomposed granite.

CA-SDI-19908 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the ground surface showed signs that it had been completely graded for use as a laydown yard for a previous utility project. Dudek did not conduct subsurface significance testing because the area has been completely graded and the site was destroyed.

CA-SDI-19909; P-37-031346

CA-SDI-19909 was originally recorded as a small prehistoric artifact scatter by ASM Affiliates in 2010. The scatter consisted of two volcanic flakes and two ceramic sherds. ASM Affiliates noted that the area was completely terraformed brown alluvium with decomposed granite.

CA-SDI-19909 is located in the Project ADI and Dudek resurveyed the area in August 2018. No resources were identified and the ground surface showed signs that it had been completely graded for use as a laydown yard for a previous utility project. Dudek did not conduct subsurface significance testing because the area has been completely graded and the site was destroyed.

CA-SDI-19910; P-37-031347

CA-SDI-19910 is a prehistoric lithic chipping station initially recorded by ASM Affiliates in 2010. The site consisted of one volcanic core, 17 volcanic flakes and 1 quartz shatter. The resource is immediately adjacent to the project ADI so Dudek revisited the site in February 2019. Dudek resurveyed the area and identified 12 volcanic flakes and one multidirectional volcanic core scattered down the tow of a rocky slope, overlooking an ephemeral drainage.

Dudek conducted a surface collection and excavated two STPs at CA-SDI-19910. STP-01 was placed at the base of the rocky slope at the eastern extent of the site and STP-02 was placed on the rocky slope. STP-01 produced a lightly compacted, weak red silt and was terminated at 40 cmbs. STP-02 produced moderately compacted, sandy clay loam from 0 – 20 cmbs and a very compact clay with large gravel below 20 cm. The unit was terminated at 25 cmbs due to degraded granite. Both STP-01 and STP-02 were negative for cultural material.

CA-SDI-19910 consists of limited artifact types, had few surface artifacts, and very shallow bedrock. CA-SDI-19910 has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-21758; P-37-035218

CA-SDI-21758 is a light-density prehistoric artifact scatter initially recorded by ASM Affiliates in 2013. The site consisted of four pieces of volcanic debitage and a single ceramic sherd. ASM Affiliates noted that the resource was surrounded by disturbance including graded dirt roads and some modern trash dumping.

The resource is within the project ADI so Dudek revisited the site in June 2019. Dudek resurveyed the area and identified seven possible volcanic debitage and one possible volcanic core located within an ephemeral drainage immediately adjacent to a dirt road and transmission tower construction pad. None of the debitage exhibit formal flake structure and it is possible that these broken rock may be non-cultural and the result of heavy machinery used during construction of the dirt road or transmission tower.

Dudek conducted a surface collection and excavated one STP at CA-SDI-21758. STP-01 was placed on a rock covered rise within the previously recorded boundary. STP-01 produced very loosely compacted silt matrix with sub- angular gravel from the ground surface to 17 cmbs. From 17 -40 cmbs, the silt matrix was damper, slightly more compacted, but with very little gravel. The unit was terminated at 40 cmbs as it produced no cultural material.

It is possible that the lithic material identified at CA-SDI-21758 is non-cultural and that any artifacts previously located there have been eroded away by the seasonal drainage. The negative excavation results further suggest that CA-SDI-21758 has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-22725; P-37-038606

CA-SDI-22725 is a multicomponent artifact scatter measuring 49 X 29 m and is located within the ADI. The resource was first recorded on 7/31/2018 by Dudek during their initial Project ADI survey. The scatter is located south of a historic industrial complex (Mountain Meadow Creamery and Dairy) that is situated on a knoll overlooking Highway 80. The artifact and lithic scatter trends down the southern exposure of the complex.

In February 2019, Dudek performed a surface inventory and conducted subsurface excavations. Previously unidentified prehistoric and historic artifacts were recorded and collected. The site's boundaries did not extend beyond the previously mapped extents. The surface collection includes one volcanic core, one rhyolite tool, 14 volcanic flakes, and a historic era brick. The prehistoric tool artifacts include: one rhyolite flake tool/scraper (A1) and one multidirectional volcanic core. A brick fragment with "LAB" stamped into its surface was also collected (A2).

Two STPs were excavated at CA-SDI-22725. STP-01 was placed in the plateau area on the northern side of the site. STP-01 was situated adjacent to a previous structure, evidenced by a wide concrete foundation to the south (oriented E/W), and square concrete footings spaced evenly to the west (oriented N/S). This appears to have been a shed style structure with only 3 walls. The sediments consisted of a sandy clay loam with modern trash and roots, from 0-14 cm then transitioned into silty clay loam with 10% imported pea gravel and bedrock projections into the unit beginning at 20cm. The STP was terminated at 37cm due to bedrock. No resources were recovered.

STP-02 was placed on the southern slope of the site, in the midst of surface artifacts with no obvious rock outcrops present subsurface. STP-02 was excavated to a total depth of eight centimeters below surface and was characterized by very loosely compacted clay loam. This STP was terminated due to bedrock. No resources were recovered subsurface.

Test excavations at site CA-SDI-22725 indicate prehistoric lithic production from material sourced within the immediate vicinity, specifically the volcanic outcrop/quarry overlooking the site to the east. Due to the shallow soil deposit and high bedrock exposure, the risk of encountering intact cultural deposits is low. Neither groundstone nor ceramic artifacts types were identified.

CA-SDI-22726; P-37-038607

CA-SDI-22726 is a widely dispersed prehistoric artifact scatter measuring approximately 60 x 20 m located within the Project ADI. It was originally recorded by Dudek on 8/2/2018 for the current Project and consisted of two fragmented milling stones, a handstone, two ceramic body sherds, and seven volcanic flakes located in a fallow agricultural field. Dudek returned to the site on 3/7/19 to perform surface collection and subsurface testing. Due to heavy rainfall since its initial recordation, the site is now covered with grass and weeds obscuring ground visibility. Only two artifacts could be relocated and collected from the surface consisting of a milling stone fragment (A1) and a flake.

The subsurface evaluations consisted of the excavation of one STP in the center of the site. This STP was excavated to 60 cm and produced only one item, a bird bone fragment located 40-60cm below surface. This fragment is likely non-cultural. An auger was positioned in the center of the STP and excavated to 100 cm. Excavation showed a largely homogenous subsurface stratigraphy consisting of silty sand.

Considering the history of surface disturbance by agricultural activities, the homogenous subsurface stratigraphy, and the few surface artifacts, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-22727; P-37-038608

CA-SDI-22727 is a widely dispersed prehistoric artifact scatter measuring approximately 31 x 16 m located within the Project ADI. It was originally recorded by Dudek on 8/2/2018 for the current Project and consisted of a volcanic core, volcanic flakes and shatter, a handstone, and two ceramic sherds located in a fallow agricultural field. Dudek returned to the site on 3/7/19 to perform surface collection and subsurface testing. All surface artifacts were collected and the GPS coordinates were recorded for three of them, a unidirectional volcanic core (A-01), a sandstone handstone (A-02), and another possible handstone (A-03).

The subsurface evaluations consisted of the excavation of one STP in the center of the site. This STP was excavated to 60 cm but produced no cultural material. An auger was positioned in the center of the STP and excavated to 100 cm. Excavation showed a largely homogenous subsurface stratigraphy consisting of moderately compacted 7.5 YR 5/3 reddish brown silty sand to a depth of 100 cm.

Considering the history of surface disturbance by agricultural activities, the homogeneous subsurface stratigraphy, and the few surface artifacts, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-22729; P-37-038635

CA-SDI-22729 is a sparse prehistoric lithic and ceramic scatter measuring approximately 33 x 19 m and is located within the Project ADI. It was originally recorded by Dudek on 8/6/2018 and is situated on a N/S trending windrow within a fallow agricultural field. The scatter consist of two volcanic flakes, a volcanic core, and obsidian piece of shatter, and a brownware body fragment. Dudek returned on 2/27/2019 to perform surface collection and subsurface testing. The subsurface evaluations consisted of the excavation of three STPs. The site's boundaries did not extend beyond the previously mapped extents.

The surface collection of CA-SDI-22729 identified eight volcanic debitage fragments and one point provenience artifact, a multidirectional volcanic core (A1).

STP-01 was placed in the central northern section of the site, with STP-02 placed in the central southern section. STP- 03 was placed to the east side of the site boundary to test for buried deposits outside of the surface scatter. All three STPs were negative for cultural material. All three STPs were excavated to a depth of 60 cm. An auger was then positioned in the center of each of the excavated STP. STP-01 and STP-03 were augured to a depth of 100 cm and STP-02 was augured to 200 cm. The sediments observed were consistent between the three units, with 0-80cm consisting of brown silty loam with less than 5% subangular gravels. The lower stratum, from 80 cm to 200 cm, consisted of brown silty sand. The upper level still retained moisture from recent rains, while the lower level was dry.

Considering the history of surface disturbance by agricultural activities, the mixed subsurface stratigraphy, and the few surface artifacts, this site has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-22733; P-37-038639

CA-SDI-22733 is a prehistoric milling station measuring approximately 3.3 x 4.3 m located at the northeastern extent of the Project ADI. It was originally recorded by Dudek on 2/19/2019 and is situated on a N/S trending drainage. The site consists of a single milling feature with five milling elements. A single artifact, a battered quartz cobble was identified and was sitting atop of the milling feature. Dudek returned on 2/25/2019 to perform surface collection and subsurface testing. The subsurface evaluations consisted of the excavation of three STPs spaced around the milling boulder for ideal artifact catchment. The site's boundaries did not extend beyond the previously mapped extents.

No surface artifacts were observed in the survey or testing phases aside from one quartz cobble identified on top of the milling feature. The GPS coordinates of this artifact was recorded and the artifact was collected.

Three STPs were placed around the milling feature to assess the possibility of buried deposits. STP-01 was placed to the east of the boulder within a shallow ephemeral drainage corridor. This STP produced one bone fragment at the level of 40- 60cm in conjunction with one fragment of debitage. These artifacts were located within a moderately compacted dark brown (moist), poorly sorted, clay-sandy loam stratum. This stratum was observed from surface down to 60 cm. From 60 cm to 80 cm there was a mottled intermixing of light decomposing granite (DG) beginning to be observed.

STPs 2 and 3 were both negative. STP-02 was placed immediately north of the milling feature and excavated two sterile levels (40 cm). STP-03 was placed east of the milling feature atop a rising hillside. This STP was excavated down to bedrock at 52 cm. The sedimentation seen in STP-01 was mirrored in STP-02 and STP-03.

Excavations indicate that the primary resource at this site is the milling feature. With only one surface artifact and only two subsurface artifacts, it is unlikely that this site possesses significant buried deposits or culturally sensitive materials.

5.1.2 Surveyed Archaeological Resources within Project Area

CA-SDI-4455; P-37-004455

CA-SDI-4455 is the remnants of the prehistoric village of Hakum which reaches from the town of Jacumba and down into Mexico. The village was originally recorded by Malcolm Rogers as the village of Hakum but the resource has been updated and expanded extensively. Waldron described the site as containing lithic cores, mortars, slicks, ceramics, and portable milling implements in 1976. Chace identified seven distinct loci, including artifact scatters

and milling features in 1980. Wilcox and von Werlhof extended the boundary to the Mexico border in 1987 and recorded the positive cultural finding during the installation of water pipes. Mooney tested a portion of the site in 1990 and found midden to have a depth of 70 cm. The site was recommended eligible for the NRHP by the County of San Diego in 1991 and SHPO concurred.

During the current effort, Dudek archaeologists resurveyed the southeastern corner of CA-SDI-4455. The southeastern corner of CA-SDI-4455 crossed into a previous version of the Project ADI. This southeastern corner of CA-SDI-4455 also meets another site, CA-SDI-4459 which consists of a prehistoric lithic and ceramic scatter. During the survey, Dudek identified a widely dispersed scatter of artifacts within the flat, fallow agricultural field. This scatter overlaps portions of both CA-SDI-4455 and CA-SDI-4459. The dispersed artifacts consisted of 100+ volcanic debitage, multiple volcanic cores, three ceramic sherds, a bifacially shaped handstone, and a shaped, bifacial milling stone fragment. This area has been highly dispersed by agricultural activity. A less developed hillside located on a west side of a dirt road is covered with a granite outcrop overlooking the flat agricultural land. On this hill, Dudek identified nine granite bedrock milling features with a total of 19 milling elements. Surface artifacts included 200+ volcanic flakes, volcanic cores, volcanic tested cores, quartz flakes, and ceramic body and rim sherds. Though there was evidence suggesting the hillside had been partially impacted by the construction of the surrounding roadways, the in situ bedrock and moderately dense artifact scatter suggest that this resource may have intact subsurface deposits.

Because SHPO has confirmed that CA-SDI-4455 is NRHP eligible and because there is good chance that the site possesses significant subsurface components, the Project ADI was refined to avoid the resource. As such, Dudek did not conduct significance testing at the site and the Project will not impact the resource.

CA-SDI-4459; P-37-004459

CA-SDI-4459 is a prehistoric lithic and ceramic scatter identified within fallow agricultural land. The resource was recorded in 1976 as a ceramic and lithic scatter that was widely dispersed by agricultural tilling and erosion. This resource overlaps the far southeastern extension of CA-SDI-4455, the village of Hakum. During the current effort, Dudek archaeologists resurveyed CA-SDI-4459 and identified a widely dispersed scatter of artifacts within the flat, fallow agricultural field. This scatter overlaps portions of both CA-SDI-4459 and CA-SDI-4455, linking the two together. The dispersed artifacts consisted of 100+ volcanic debitage, multiple volcanic cores, three ceramic sherds, a bifacially shaped handstone, and a shaped, bifacial milling stone fragment. This area has been highly dispersed by agricultural activity.

Because SHPO has confirmed that CA-SDI-4455 is NRHP eligible and because there is good chance that the site possesses significant subsurface components, the Project ADI was refined to avoid that resource. By avoiding CA-SDI-4455, the Project also avoided CA-SDI-4459. As such, Dudek did not conduct significance testing at CA-SDI-4459 and the Project will not impact the resource.

CA-SDI-11677; P-37-011677

CA-SDI-11677 is a prehistoric lithic scatter and bedrock milling station site originally located by Mooney Associates in 1990. The resource consists of two loci, one containing four bedrock milling slicks and the other is a dispersed lithic reduction station. A sparse lithic scatter connects the two loci. Mooney Associates conducted a surface collection of the entire site and excavated a 1 x 1 m test unit and four STPs. The excavations did not identify a subsurface component.

CA-SDI-11677 was located in a previous version of the Project ADI. Dudek resurveyed the project location in August 2018 and relocated the bedrock milling features. No artifacts were identified. Since Dudek revisited the site, the Project ADI has been refined and now avoids the resource. As such, Dudek did not conduct significance testing at CA-SDI-11677 and the Project will not impact the resource.

CA-SDI-11681; P-37-011681

CA-SDI-11681 was originally recorded as a lithic scatter/raw material procurement site by Mooney Associates in 1990. The resources consisted of a volcanic lithic reduction station with some retouched flakes, eight cores, and several simple flake stone tools. Mooney Associates conducted a surface collection of the entire site and excavated three STPs. The excavations did not identify a subsurface component.

CA-SDI-11681 was located in a previous version of the Project ADI. Dudek resurveyed the project location in August 2018 but was unable to identify any cultural material. Since Dudek revisited the site, the Project ADI has been refined and now avoids the resource. As such, Dudek did not conduct significance testing at CA-SDI-11681 and the Project will not impact the resource.

CA-SDI-21764; P-37-035224

CA-SDI-21764 is a prehistoric lithic scatter initially recorded by ASM Affiliates in 2013. The site consisted of one volcanic core, eight volcanic shatter and two volcanic interior flakes. The site was identified on a small terrace immediately adjacent to a graded dirt road.

CA-SDI-21764 was previously located within the project ADI so Dudek revisited the site in June 2019. Prior to Project refinements that removed the site from the ADI, Dudek resurveyed the area and identified one volcanic core, two volcanic shatter fragments, and three possible volcanic shatter fragments located within an ephemeral drainage immediately adjacent to a dirt road. The three shatter fragments did not exhibit formal flake structure and it is possible that these broken rocks may be non-cultural and the result of heavy machinery used during construction of the dirt road.

Dudek conducted a surface collection and excavated one STP at CA-SDI-21764. STP-01 was placed on a sandy bank of the ephemeral drainage in the center of the previously recorded site boundary. STP-01 produced a loosely compacted brown dry silt with 50% sub-angular gravel from the ground surface to 40 cmbs. The unit was terminated at 40 cmbs as it produced no cultural material.

It is possible that some of the lithic material identified at CA-SDI-21764 is non-cultural and that additional artifacts previously located there have been eroded away by the seasonal drainage. The negative excavation results and limited surface artifacts suggest that CA-SDI-21764 has a low potential for significant buried deposits or culturally sensitive materials.

CA-SDI-22728; P-37-038634

CA-SDI-22728 is a widely dispersed and sparse prehistoric lithic scatter measuring approximately 30 x 10 m located on either side of a narrow ephemeral drainage. The site was originally recorded by Dudek on 8/6/ 2018 and consist of a volcanic core, a tested cobble, and six volcanic flakes scattered along an undeveloped hillside bisected by ephemeral drainages. Since its recordation, the Project has been refined and the site is no longer located within the Project ADI. Because the Project will avoid impacts to CA-SDI-22728, Dudek did not conduct significance testing at the site.

CA-SDI-22730; P-37-038636

CA-SDI-22730 is a prehistoric bedrock milling station situated on a sloping hill above an ephemeral drainage. The milling station consists of a single vesicular basalt boulder feature with one milling slick. A granitic handstone was the only artifact identified at the site. The site was originally recorded by Dudek on 8/15/2018 along an undeveloped hillside bisected by ephemeral drainages. Since its recordation, the Project has been refined and the site is no longer located within the Project ADI. Because the Project will avoid impacts to CA-SDI-22730, Dudek did not conduct significance testing at the site.

CA-SDI-22731; P-37-038637

CA-SDI-22731 is a prehistoric artifact scatter located on a sloping hill above an ephemeral drainage. Two sparse concentrations of artifacts surrounding a basalt outcrop consist of volcanic and quartzite flakes and shatter. A basalt milling stone fragment was also identified with a milling slick measuring 15.5 x 10 cm. The site was originally recorded by Dudek on 8/14/2018 in an undeveloped area, though the piling of some of the lithic artifacts suggest recent disturbance. Since its recordation, the Project has been refined and the site is no longer located within the Project ADI. Because the Project will avoid impacts to CA-SDI-22731, Dudek did not conduct significance testing at the site.

CA-SDI-22732; P-37-038638

CA-SDI-22732 is a prehistoric bedrock milling station and sparse lithic scatter situated on the southern bank of an east/west trending ephemeral drainage. The milling station consists of a single vesicular basalt bedrock milling feature with one milling slick. The scatter consists of two volcanic flakes, a quartz shatter, and a granite milling stone fragment. The site was recorded by Dudek on 8/8/2018 along an undeveloped ephemeral drainages. Since its recordation, the Project has been refined and the site is no longer located within the Project ADI. Because the Project will avoid impacts to CA-SDI-22732, Dudek did not conduct significance testing at the site.

5.2 Project Artifact Recovery Summary

Table 5-2 summarizes the archaeological assemblages from all evaluated sites for the Project. Debitage dominates the assemblage, accounting for 75% of all artifacts by frequency. Brownware ceramic fragments are the next most numerous artifact representing 19% of the overall assemblage. Various other items are present only in small quantities. Various flaked stone implements, including cores, core tools, hammer stones, and edge modified flakes round out the flaked stone assemblage and represent opportunistic lithic raw material quarrying that typifies the region. Milling stones (n=15), hand stones (n=17) and other pieces of ground stone (n=3) are the most obvious artifacts due to their larger size and indicate that local subsistence focused on processing, probably vegetal foods. The 316 pieces of brownware ceramics recovered are also common assemblage constituents in the region. Brownware vessels were easily broken during use and transport, and deteriorate rapidly after deposition. While ceramic vessels were important for water and food storage, the elevated frequency of these items speaks less to intensive pottery use than it does to post depositional processes. Overall, the current assemblage is a small sample of items commonly found (and better documented) in other local archaeological assemblages. No unique or diagnostic artifacts were identified.

5.3 Summary of Cultural Resources Investigations in the JVR Project Area

The survey and evaluation program completed for the JVR Project identified 37 archaeological sites and 26 archaeological isolates. The JVR Project avoided highly sensitive cultural resources or significant portions of resources by adjusting the JVR ADI. Of the 37, five (5) previously recorded archaeological sites (CA-SDI-4455, CA-SDI-4459, CA-SDI-11677, CA-SDI-11681, and CA-SDI-21764) and four (4) newly recorded archaeological sites (CA-SDI-22728, CA-SDI-22730, CA-SDI-22731, and CA-SDI-22732) will be avoided due to refinements of the JVR ADI. Archival research revealed that six (6) previously recorded sites or portions of sites located within the JVR ADI were previously evaluated and found to have minimal or no subsurface components (CA-SDI-7054, CA-SDI- 11675, CA-SDI-11682, CA-SDI-11684, CA-SDI-11686, and CA-SDI-11688). The pedestrian survey revealed that five (5) previously recorded sites located within the JVR ADI were completely removed from the landscape by mass grading for an unrelated project (CA-SDI-11685, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, and CA-SDI- 19909). Dudek conducted archaeological testing of the remaining archaeological sites within the JVR ADI (CA- SDI-4457/H, CA-SDI-6741, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11676, CA-SDI-11689, CA-SDI- 19070,CA-SDI-19904, CA-SDI-19905, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733). Dudek also conducted archaeological testing of CA-SDI-21764 prior to Project design changes that removed the resource from the JVR ADI. Dudek did not identify any significant archaeological deposits within the Project ADI.

Table 5-2. Project Artifact Summary

Site	Total
CA-SDI-4457/H	
Body Sherd	12
Core	4
Debitage	114
Millingstone	1
Subtotal	*131*
CA-SDI-6741	
Body Sherd	33
Core	1
Debitage	189
Handstone	7
Millingstone	4
Other Battered Implement	1
Rim Sherd	2
Simple Flake Tool	1
Vertebrate Remains	4
Subtotal	*242*
CA-SDI-7056	
Can - Historic	3
Ceramic - Historic	1

Table 5-2. Project Artifact Summary

Site	Total
Debitage	301
Glass - Historic	6
Vertebrate Remains	3
Subtotal	*314*
CA-SDI-8072	
Body Sherd	224
Core	5
Core Tool	1
Debitage	309
Hammerstone	4
Handstone	8
Indeterminate Groundstone	1
Millingstone	5
Other Groundstone	1
Pestle	1
Rim Sherd	12
Simple Flake Tool	1
Vertebrate Remains	2
Subtotal	*574*
CA-SDI-8430	
Debitage	48
Subtotal	*48*
CA-SDI-11676	
Body Sherd	1
Core	1
Debitage	23
Subtotal	*25*
CA-SDI-11689	
Body Sherd	45
Core	3
Debitage	47
Handstone	1
Millingstone	4
Rim Sherd	1
Subtotal	*101*
CA-SDI-19070	
Core	1
Retouched Edge Tool	1
Subtotal	*2*
CA-SDI-19904	
Core	8

Table 5-2. Project Artifact Summary

Site	Total
Debitage	143
Subtotal	*151*
CA-SDI-19905	
Debitage	12
Simple Flake Tool	1
Subtotal	*13*
CA-SDI-19910	
Core	1
Debitage	11
Subtotal	*12*
CA-SDI-22725	
Ceramic - Historic	1
Core	1
Debitage	15
Other Battered Implement	1
Subtotal	*18*
CA-SDI-22726	
Debitage	1
Millingstone	1
Vertebrate Remains	1
Subtotal	*3*
CA-SDI-22727	
Core	1
Handstone	1
Indeterminate Groundstone	1
Subtotal	*3*
CA-SDI-22729	
Core	1
Subtotal	*1*
CA-SDI-22733	
Debitage	8
Subtotal	*8*
Grand Total	**1646**

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6.0 Interpretation of Resource Importance and Impact Identification

This section summarizes the results and interpretation of the inventory and evaluation of cultural resources for the JVR Project, provides eligibility recommendations for evaluated sites, and discusses potential impacts.

6.1 Resource Importance and Management Concerns

The current investigation identified 28 archaeological sites and 20 isolates within the JVR Project ADI. Archival research revealed that six (6) previously recorded sites or portions of sites located within the JVR ADI were previously evaluated and found to have minimal or no subsurface components (CA-SDI-7054, CA-SDI-11675, CA- SDI-11682, CA-SDI-11684, CA-SDI-11686, and CA-SDI-11688). The pedestrian survey revealed that five (5) previously recorded sites located within the JVR ADI were completely removed from the landscape by mass grading for an unrelated project (CA-SDI-11685, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, and CA-SDI- 19909). Dudek evaluated the remaining 17 cultural sites that consist of 13 prehistoric archaeological sites (CA- SDI-6741, CA-SDI-8072, CA-SDI-11676, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI- 19910, CA-SDI-21758, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733) and four sites with both

prehistoric and historic period assemblages (CA-SDI-4457/H, CA-SDI-7056, CA-SDI-8430, and CA-SDI-22725). An additional nine (9) archaeological sites were visited by Dudek but are now located outside of the Project ADI and avoided by project design (CA-SDI-4455, CA-SDI-4459, CA-SDI-11677, CA-SDI-11681, CA-SDI-21764, CA-SDI-

22728, CA-SDI-22730, CA-SDI-22731, and CA-SDI-22732). The 20 isolates identified within the ADI required no evaluation or avoidance measures as isolates are by definition not significant.

All cultural resources within the ADI have been evaluated for eligibility to the CRHR under CEQA Guidelines, as well as being evaluated for importance under the County Guidelines. While sites may be recommended as eligible or not eligible for listing on the CRHR, under the County Guidelines, all sites are considered "important." Although all sites are considered important under the County Guidelines, the "importance" of sites recommended as not eligible for listing on the CRHR can be exhausted through recordation, testing, the conveyance of artifacts (if recovered [curation/repatriation]), and grading monitoring.

Evaluation of significance requires the development of an understanding of each identified resource in such a way that its historical significance can be assessed. CEQA mandates the consideration of the historical significance of a resource in an effort to gauge whether it has the potential to be listed on the CRHR. Criteria 1–4 of CEQA are a set of standards for determining the eligibility of a resource to be considered a historical resource eligible for listing on the CRHR. These criteria were discussed in Chapters 1.0 and 2.0.

The following eligibility recommendations are based primarily on Criterion 4 of CEQA for archaeological values, since the data generated during the evaluation program can be used to judge whether a particular cultural resource has yielded or may be likely to yield information important in prehistory or history. Data potential is represented by general archaeological characteristics—i.e., assemblage integrity, size, diversity, defined chronology, and the potential for buried deposits. Eleven (11) multicomponent sites were identified within the Project Area, however, only three possessed

testable historic components located within the JVR ADI: CA-SDI-7056, CA-SDI-19904, and CA-SDI-22725. CA-SDI-19904 consists of a historical can and possible hearth feature located within the boundaries of a larger prehistoric lithic scatter. Dudek tested the possible hearth feature and found that it was burned modern refuse. CA-SDI-7056 and CA-SDI-22725 are associated with the adjacent Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex located within the western extent of the JVR ADI. Dudek evaluated this ranch complex for CRHR and County of San Diego designation criteria and recommends the property not eligible (Frank et al. 2020; Appendix D). CA-SDI-7056 consists of five concentrations of household and industrial refuse. This refuse deposit contained a low diversity of food cans and glass bottle fragments from common household consumables and glass milk bottle fragments linking it to the adjacent ranch complex. CA-SDI-22725 consists of a glass beverage bottle and brick fragment. None of the refuse contributes more or varied information about historic period occupation, but instead points to common household and industrial refuse dumped away from the place of residence. For these reasons, CA-SDI-7056, CA-SDI-19904, and CA-SDI-22725 are recommended not significant and not eligible for listing in the CRHR under Criterion 4. Additionally, as the refuse from CA-SDI-7056 and CA-SDI-22725 is associated with a complex that has been recommended not significant, these refuse assemblages are not recommended significant under CEQA criteria 1-3.

Based on the results of the current investigation, all evaluated prehistoric archaeological sites (or portions thereof) are recommended as not significant under CEQA, and as not eligible for listing in the CRHR or the local register under any significance criteria. None of the evaluated sites contained substantial or diverse archaeological deposits that could be used to develop or refine local or regional culture histories. Instead, evaluated sites produced low quantities of limited diversity chipped stone assemblages, primarily consisting of cortical and interior flakes, and rock shatter representing incipient tool production. Minor amounts of brownware aboriginal ceramic sherds indicate some transient occupation possibly taking advantage of seasonally available resources, but no evidence of longer term or more residentially stable occupation was identified in the ADI. Substantial archaeological deposits are located outside of the ADI and will not be impacted by the JVR Project. These sites, such as CA-SDI-4455 and a portion of CA-SDI-8430, contain some anthropogenic sediments and more diverse artifact assemblages. However, evaluated sites cannot be directly linked to nearby, unimpacted habitation sites because of the general character of artifact assemblages. Lithic chipping debris and ceramic fragments are the most common artifact types in the region and, given the transient nature of aboriginal occupation in this region for the last 10,000 years, no two archaeological sites can be socioeconomically linked absent fragments of the same artifact occurring at two different sites (a scenario that has not played out on the JVR Project). For these reasons, evaluated archaeological sites within the ADI are considered to have low information potential pursuant to significance under CEQA Criterion 4. Despite the recordation of the village of Hakum by Malcom Rogers, nothing was found at evaluated archaeological sites in the JVR ADI that could link them to this village, or indicate that they were chronologically contemporaries with the village of Hakum. No information exists to link evaluated archaeological sites with significance under any of the other CEQA significance criteria (1 through 3).

Considering the possibility that the current Project might impact a cultural landscape, Dudek considered the significance of the impacted sites in relationship to the larger cultural context. The resources identified within the proposed Project ADI consist of light density artifact scatters comprised of limited artifact types. These largely disturbed resources contain less artifact variability and integrity than other resources outside of the ADI. Considering the kinds and numbers of archaeological sites in the general Jacumba region, and in reviewing existing literature, none of the resources on the JVR Project present new or varied archaeological information. The diversity of the JVR sites are extremely low. The sites do not represent or convey the significant elements of character defining archaeological sites in the broader region. As such, the sites within the proposed Project ADI are not significant contributing elements to the larger cultural landscape.

6.1.1 Jacumba Valley Archaeological District (JVAD)

The JVAD was recently updated by Williams et al. (2014) to include all aboriginal archaeological sites that overlap volcanic landforms in the region and that are primarily characterized by lithic quarrying, with some sites having intensive habitation debris. The JVAD was defined by Williams et al. (2014) to include all sites of similar character regardless of whether formal significance evaluations had been completed. Some of the included sites overlap the current JVR Project Area, including CA-SDI-4455, CA-SDI-4457/H, CA-SDI-4459, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11677, CA-SDI-11681, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19904, CA-SDI-19905, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-21764 and P-37-030190. Individual sites or portions of larger sites included in the JVAD that overlap the current JVR ADI were subject to archaeological test excavations. No significant archaeological deposits were identified. Specifically, only small quantities of debitage and aboriginal ceramics were recovered with no midden soils or other evidence of habitation, or any organic datable materials. As a result, these evaluated sites or portions thereof that are herein recommended as not significant under CEQA and not eligible for listing in the CRHR or Local Register, are not considered contributors to the significance of the JVAD. Under Section 106, the JVR Project will have no adverse effect on historic properties individually, or to the JVAD because none of the character defining elements of the JVAD are adversely affected.

6.1.2 Integrity

Integrity is an important factor in the evaluation of historical resources. Integrity fundamentally affects associations that are critical for understanding behavioral relationships in site formation and design for prehistoric and historical archaeological sites. Integrity of evaluated prehistoric archaeological sites varies with some being more disturbed than others. Those in the alluvial plain have been pushed around for years by plowing and cultivation. Those deposits on adjacent rocky knolls fared better, as the distribution of artifacts on the surface is generally good.

Overall, the lack of buried deposits at evaluated prehistoric archaeological sites reduces the opportunity for drawing more meaningful or data-laden associations between assemblage constituents. Thus, integrity alone is not a determining factor when deciding historical significance of an archaeological resource.

Turning to historic period refuse deposits from CA-SDI-7056 and CA-SDI-22725, these sites have very little integrity with historic period artifacts found distributed over large areas away from their focal point of deposition due to natural and other post-depositional processes. The linear site boundaries for both of these sites tend to follow natural terrain contours revealing cans and other items have been transported downslope since their time of deposition. Refuse deposits lacked buried components; all artifacts are located on the surface or within 5 cm of it. The overall homogeneity of historic artifacts makes it even more difficult to identify the original point of deposition for these single-episode dumps. Considering the lack of historical archival records for the area to draw even tenuous associations with local inhabitants, and with little important data otherwise, the lack of spatial integrity at historic period refuse deposits is a strong signal precluding the consideration of these resources as historically significant.

6.1.3 Chronology

With strong integrity of archaeological deposits, chronological associations can add much value to archaeological interpretation. For this reason, archaeological sites that yield chronological information are typically held in higher

scientific value. It is not uncommon for topical evaluations of prehistoric sites to conclude that a particular deposit could be considered significant because of the presence of time-sensitive artifacts or the presence of archaeological deposits that carry the promise of producing radiocarbon dates. The rarity of intact, datable archaeological deposits has somewhat inflated the importance of chronological data when evaluating the historical significance of an archaeological site. Such deposits are critical to evaluation efforts; however, the ability to place a resource in time should not itself qualify the resource as significant.

Tizon Brownware is the predominant aboriginal ceramic type with insignificant frequencies of buffware from Imperial Valley. These types of ceramics are generally thought to be Late Prehistoric period time markers, although the wide time span marking the availability of these artifacts in the southern California and Baja Mexico regions reduces their ability to refine site-specific chronology. At best, these ceramics are thought to have been in use in the region after about AD 0, and became an economically significant aspect of the hunter-gatherer toolkit in southern San Diego and Imperial Counties sometime after AD 500 (Griset 1996; see also Hale 2009). Large amounts of ceramic sherds are common after approximately AD 1400, associated locally with the Cuyamaca Complex (see Hector 2006). Their commonality in the local vicinity of the JVR Project probably attests to a Late Prehistoric fluorescence of occupation; however, it could simply indicate that pottery was employed later in time for cooking and storage to draw more energy out of already intensive use of local resources. Regardless, aboriginal ceramic sherds were present, but not in abundance and can only speak to an occasional Late Prehistoric occupation.

Overall, age estimates for JVR Project sites based on time-sensitive artifacts (ceramic sherds) fit squarely within established chronological schemes for the region; none are capable of refining local prehistoric patterns. The ECO Substation project alone located several miles to the east, 26 radiocarbon dates were obtained from roasting pits ranging from nearly 7780 BC (9730 BP) years ago until contact times (Williams et al. 2014). The meager assemblages recovered from evaluated JVR Project sites does not help clarify the local and regional chronological scheme offered by the ECO Substation project.

Chronological information for historic period archaeological assemblages from CA-SDI-7056 and CA-SDI-22725 is limited to maker's marks on glass bottles and can typologies. Chronological placement of the historic period assemblage of CA-SDI-7056 is based on a cone-top beverage can. The Continental Can Company produced the first cone-top cans in 1935 (Clark 1977). By the late 1950's few cone-top cones were being produced. A glass artifact from CA-SDI-7056 has a cursive Duraglas logo that was used by the Owens Illinois Glass Company from 1941-1963 (Toulouse 1971). A green glass "7Up" bottle was identified at CA-SDI-22725 with an applied color label, a technique invented in the 1930s. The chronological data from both of these sites are concurrent with the dates of operation of the adjacent Mountain Meadow Dairy and Creamery's Sunshine Ranch Complex (Frank et al. 2020; Appendix D). The complex was opened in 1928 and operated, under varying names, until the early 1960s.

Historic period refuse deposits typically contain large amounts of artifacts that can be ascribed to a date of manufacture which is presumably close to the date of consumption and the ability to date such items at JVR Project sites is thus not unique. While the age of manufacture and possible consumption of goods is somewhat discernable, the date of deposition for each site is complicated by the fact that disposal of domestic refuse often occurred far away from the point of consumption, especially after the advent of the automobile when homesite cleanup efforts intensified and often combined materials of different ages into a single load dumped at a remote locale (Hale et al. 2010). Thus, the age ranges of artifacts at CA-SDI-7056 and CA-SDI-22725 adds little to the understanding of local historic period land use and are by no means unique in association with assemblage constituents.

6.1.4 Settlement and Site Function

As with any archaeological evaluation, research issues postulated in advance of fieldwork have mixed success in their applicability to the recovered assemblage, particularly in terms of the kinds of data that could be generated and attendant questions that can be addressed.

Many of the research issues put forth for the JVR Project were adapted from previous studies in the region, such as Williams et al. (2014) and Comeau and Hale (2015). None of these issues can be substantively addressed, especially settlement and site function, because very little information was produced from the test excavations which were focused on the ADI. The JVR Project was designed to avoid obviously significant archaeological sites that happened to be located on rocky areas determined to be less suitable for installation of solar arrays. Not surprisingly then, the remaining archaeological sites or portions of sites in the ADI consisted of low density scatters of debitage and ceramics with very few formal tools. At most, these sites represent short term stopovers to take advantage of seasonally available foods or while in transit to other areas, whether nearby or far.

6.2 Resource Importance and Evaluation of Tested Sites

Evaluated sites CA-SDI-7056, CA-SDI-8072, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733 consisted of highly dispersed artifact scatters or a single milling feature resource with little to no subsurface deposits. Due to their lack of data potential, these resources are recommended, in their entirety, as not significant, and not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines. Four additional sites were only partially evaluated: CA-SDI-4457/H, CA-SDI-6741, CA-SDI-8430, CA-SDI-11676. A portion of the originally recorded boundary of CA-SDI-6741 is currently located within a fenced airstrip that is not included in the Project ADI. Dudek evaluated the portion of CA-SDI-6741 outside of the fenced property and, due to a scant subsurface deposit and low data potential, recommends this this portion as not significant, and not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines. A visual inspection of the portion of CA-SDI-6741 within the fenced property showed evidence of extensive ground disturbance. However, Dudek does not have any recommendations for the significance of the fenced, unevaluated boundary of CA-SDI-11676. Dudek only evaluated a small portion of CA-SDI-11676 that intersects the JVR ADI and, due to a scant subsurface deposit and low data potential, recommends this this portion as not significant, and not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines. Dudek does not have any recommendations for the significance of the larger, unevaluated boundary of CA-SDI-11676. Sites CA-SDI-4457/H and CA-SDI-8430 are partially located within the current ADI and have been previously recommended eligible for listing in the NRHP and CRHR. The portions of the site within the current ADI were evaluated during the current study but no significant surface or subsurface deposits were identified. As such, these portions of these sites recommended not eligible for listing in the CRHR, or local register based on CEQA Criterion 4, and based on County Significance Guidelines. These portions of the site are therefore recommended as non-contributing elements to the overall eligibility of the resource. All sites are also recommended as not eligible for listing in the CRHR based on Criteria 1-3, as no site constituents are present which could connect the site through archival research to historically important persons or events, nor does the site embody distinctive characteristics of a type, period, region, or method of construction, or represent the work if an important individual, nor possess high artistic value. However, under the County guidelines all sites are considered "important." Although all sites are considered important under the County Guidelines the "importance" of the sites recommended as not eligible for listing in the CRHR will be considered mitigated through testing, documentation, disposition of archaeological materials (curation/repatriation), and archaeological monitoring of initial ground disturbance for the entire project area.

6.3 Impact Identification

The JVR Energy Project will grade the ground surface and trench to install buried utilities and conduit, in addition to construction of a solar field and associated facilities. In addition to impacting 20 archaeological isolates, JVR Project implementation will directly impact 28 archaeological sites (including portions of sites): CA-SDI-4457/H, CA-SDI- 6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11682, CA- SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI- 19905, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733. All sites or portions of sites located withing the JVR ADI will be subject to grading and leveling and the surface of the sites will be completely destroyed. All extant sites or portions of sites that will be impacted were evaluated and are considered not significant and not eligible for listing in the CRHR or local register, nor are any of them considered a significant resource under CEQA or under the County RPO. Considering the possibility that the proposed Project might impact a cultural landscape, Dudek considered the significance of the impacted sites in relationship to the larger cultural context. The sites do not represent or convey the significant elements of character defining archeological sites in the broader region. As such, impacts to each of these evaluated sites as a result of Project implementation will not be considered significant.

Some of the sites intersecting the JVR Project area were previously included in the Jacumba Valley Archaeological District (JVAD). Portions of these sites located within the JVR Project ADI were evaluated and are recommended as not significant under CEQA and not eligible for listing in the CRHR or Local Register. Though no federal nexus has been identified for the JVR Project as of the date of this report, significance recommendations under Section 106 of the National Historic Preservation Act (NHPA) are the same; none of the evaluated archaeological sites are recommended as significant and none are eligible for listing in the NRHP under any criteria. As a result, it is recommended here that implementation of the JVR Project will have No Adverse Effect to the JVAD because it will not impact archaeological deposits that convey the significance of the JVAD.

Though not considered eligible for listing on the CRHR or the NRHP, all cultural resources are considered important under County of San Diego Guidelines for Determining Significance (County of San Diego 2007). Together with the evaluations documented in this report, conveyance of archaeological assemblages and documentation, and monitoring of earth-disturbing activities in the area of each evaluated site will reduce the impacts to these resources to less than significant under County Guidelines.

Dudek also considered possible impacts to the setting of cultural resources located within the Jacumba Valley but not within the ADI. As setting is an aspect of site integrity, drastically changing the setting of resources within the Jacumba Valley could impact their eligibility for listing on the CRHR or the NRHP. The floor of the Jacumba Valley has been largely disturbed by prior agricultural use. A utility corridor also transects the northern portion of the Project site. The JVR ADI is contained largely within the footprint of previous agricultural development. Dudek also reviewed the site records for all resources located along the foothills of the Jacumba Valley. If the viewsheed from these sites contributed to their significance, the JVR Project might have an impact on the resource. However, the site records showed that these resources largely consists of artifact scatters with only one feature, a trail segment. As these sites suggest utilitarian function, the changing viewshed from an undeveloped field (previously disturbed) to a solar farm is not a significant change of setting for purposes of cultural or tribal cultural resources, based on the cultural analysis and tribal consultation.

6.4 Tribal Cultural Resources

Under California's Assembly Bill 52, TCRs are defined as archaeological resources that are eligible for or listed in the CRHR, or resources that the lead agency determines to be a TCR with a substantial burden of evidence. Notwithstanding the lack of information on TCRs received by the County to date, no significant archaeological sites eligible for or listed in the CRHR will be impacted by this project. Therefore, no TCRs have been identified that would be impacted by the project. County consultation on Assembly Bill 52 is ongoing.

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7.0 Management Considerations—Mitigation Measures and Design Considerations

7.1 Unavoidable Impacts

7.1.1 Mitigation Measures and Design Considerations

There are no unavoidable impacts associated with the current project design.

7.2 Mitigatable Impacts

7.2.1 Mitigation Measures and Design Considerations

All 28 sites (or portions of sites) identified within the JVR ADI during the current investigation are either no longer extant (CA-SDI-11685, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, and CA-SDI-19909) or have been evaluated and are recommended as not significant under CEQA, not eligible for listing in the CRHR or the local register, and as not significant under the County RPO (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-8430, CA-SDI-11675, CA-SDI-11676, CA-SDI-11682, CA-SDI-11684, CA-SDI-11686, CA-SDI-11688, CA- SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733) (County of San Diego 2007) (Table 7-1; Confidential Appendix C). However, under County guidelines, all archaeological sites are considered important. Impacts to the importance of the sites is mitigated through application of measures that include curation of all collected artifacts and documentation, and construction monitoring, along with erection of temporary fencing around unimpacted portions of CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11686, and CA-SDI-19910 to prevent direct and indirect impacts during project activities; temporary fencing along the MUP limits where sites are outside the project boundary should also occur for those sites (CA-SDI-11682, CA-SDI-20985, and CA-SDI-21757) that fall within 50 feet of the Project ADI. The artifacts collected during the current testing program will be curated at a San Diego County, Imperial County, or culturally affiliated Tribal curation facility or repatriated to a tribe of appropriate cultural affinity~~the San Diego Archaeological Center or alternatively may be repatriated to a culturally-affiliated tribe~~. Implementation of the following mitigation measures/conditions of approval will reduce impacts to these site to less than significant.

Archaeological Monitoring

- Pre-Construction
  - Pre-construction meeting to be attended by the Project Archaeologist and Kumeyaay Native American monitor(s) to explain the monitoring requirements.
- Construction
  - Temporary Fencing. Temporary orange construction fencing shall be installed around unimpacted portions of CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676,

CA-SDI-11686, and CA-SDI-19910 to prevent direct and indirect impacts during project activities. Temporary orange fencing shall also be placed along the MUP boundaries where cultural resources (CA-SDI-11682, CA-SDI-20985, and CA-SDI-21757) are within 50 feet of the Project ADI.

- Monitoring. Both the Project Archaeologist and Kumeyaay Native American monitor(s) are to be on site during earth disturbing activities. The frequency and location of monitoring of native soils will be determined by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s). Both the Project Archaeologist and Kumeyaay Native American monitor(s) will evaluate fill soils to ensure that they are negative for cultural resources
- If cultural resources are identified:
  - Both the Project Archaeologist and Kumeyaay Native American monitor(s) have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
  - The Project Archaeologist shall contact the County Archaeologist.
  - The Project Archaeologist in consultation with the County Archaeologist and Kumeyaay Native American monitor(s) shall determine the significance of discovered resources.
  - The Project Archaeologist shall notify the Campo Band of Mission Indians, Manzanita Band of Kumeyaay Nation, and Viejas Band of Kumeyaay Indians of the unanticipated discovery.
  - Should a potential TCR be identified, the Project Archeologist shall consult with consulting tribes for a final determination.
  - Construction activities will be allowed to resume after the County Archaeologist has concurred with the significance evaluation.
  - Isolates and non-significant deposits shall be minimally documented in the field. Should the isolates and non-significant deposits not be collected by the Project Archaeologist, the Kumeyaay Native American monitor(s) may collect the cultural material for transfer to a Tribal curation facility or repatriation program.
  - If cultural resources are determined to be significant, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the Kumeyaay Native American monitor(s) and approved by the County Archaeologist. The program shall include reasonable efforts to preserve (avoid) unique cultural resources of Sacred Sites; the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap if avoidance is infeasible; and data recovery for non-unique cultural resources. The preferred option is preservation (avoidance).
- Human Remains.
  - The Property Owner or their representative shall contact the County Coroner and the County Planning and Development Services (PDS) Staff Archaeologist.
  - Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. Should the human remains need to be taken offsite for evaluation, they shall be accompanied by a Kumeyaay Native American monitor.
  - If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the Native American Heritage Commission (NAHC), shall be contacted by the Property Owner or their representative in order to determine proper treatment and disposition of the remains.
  - The Project Archaeologist shall notify the Campo Band of Mission Indians, Manzanita Band of the Kumeyaay Nation, and Viejas Band of Kumeyaay Indians of the identification of human remains.

- The immediate vicinity where the Native American human remains are located is not to be damaged or disturbed by further development activity until consultation with the MLD regarding their recommendations as required by Public Resources Code Section 5097.98 has been conducted.
- Public Resources Code §5097.98, CEQA §15064.5 and Health & Safety Code §7050.5 shall be followed in the event that human remains are discovered.

- Rough Grading
  - Upon completion of Rough Grading, a monitoring report shall be prepared identifying whether resources were encountered. A copy of the monitoring report shall be provided to any culturally affiliated tribe who requests a copy.
- Final Grading
  - A final report shall be prepared substantiating that earth-disturbing activities are completed and whether cultural resources were encountered. A copy of the final report shall be submitted to the South Coastal Information Center, and any culturally affiliated tribe who requests a copy.
  - Cultural Material Conveyance
    - The final report shall include evidence that all prehistoric materials have been curated at a San Diego County, Imperial County, or a culturally affiliated Tribal curation facility that meets federal standards per 36 CFR Part 79, or alternatively have been repatriated to a culturally affiliated tribe.
    - The final report shall include evidence that all historic materials have been curated at a San Diego curation facility that meets federal standards per 36 CFR Part 79.

Cultural Resources Treatment Agreement and Preservation Plan

- Prior to the Approval of any Plan and Issuance of any Permit
  - Enter into a Cultural Resources Treatment Agreement and Preservation Plan with the Tribe.
    - A single Cultural Resources Treatment Agreement and Preservation Plan shall be prepared by the Project Archaeologist in coordination with consulting tribes and Kumeyaay Native American monitor(s).~~developed between the applicant or their representative and the Tribe~~. The Cultural Resources Treatment Agreement and Preservation Plan shall be reviewed and agreed to by the County prior to final signature and authorization. The Cultural Resources Treatment Agreement and Preservation Plan shall include but is not limited to the following:
      - Parties entering into the agreement and contact information.
      - Responsibilities of the Property Owner or their representative, Principal Investigator, archaeological monitors, Kumeyaay Native American monitors, and the Tribe.
      - Requirements of the Archaeological Monitoring Program including unanticipated discoveries. The requirements shall address grading and grubbing requirements including controlled grading and controlled vegetation removal in areas of cultural sensitivity, analysis of identified cultural materials (both in the field and lab settings), and onsite storage of cultural materials, as necessary and if required.
      - Treatment of identified Native American cultural materials.
      - Treatment of Native American human remains and associated grave goods.
      - Requirements for Temporary Fencing for 11 sites that partially intersect or are within 50 feet of the Project ADI (CA-SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-7056/H, CA-SDI-8430, CA-SDI-11676, CA-SDI-11682, CA-SDI-11686, CA-SDI-19910, CA-SDI-20985, and CA-SDI-21757).

- Confidentiality of cultural information including location and data.
- Negotiation of disagreements should they arise during the implementation of the Agreement and Preservation Plan.
- Regulations that apply to cultural resources that have been identified or may be identified during project construction.

Long-Term Preservation of Resources

All O&M and decommissioning activities will be performed within the Project ADI – no ground-disturbing activities shall occur outside the Project ADI. Employees and contractors performing O&M and decommissioning activities will receive training or instructions regarding the archaeological and cultural sensitivity of the Project Area to ensure no inadvertent impacts occur to the 11 potentially significant sites (or portions thereof) that are located within 50 feet of the Project ADI, including the eight sites that were fully or partially tested and the_three that were not evaluated). Temporary fencing will be installed during decommissioning activities to delineate the ADI.

7.3 Effects Found Not to be Significant

There are 31 archaeological sites that are located within the Project Area but are outside of the Project ADI (see Table 7-1). These sites will not be impacted by Project implementation. Avoided sites (CA-SDI-11682, CA-SDI-20985, CA-SDI-21757) within 50 feet of Project impact areas, or according to resource specific, predetermined buffers, will be protected by establishment of an ESA boundary and exclusionary fencing (orange construction fencing). Other sites (CA-SDI-4455, CA-SDI-4459, CA-SDI-7036, CA-SDI-7040, CA-SDI-7041, CA-SDI-7043, CA-SDI-7917, CA-SDI-11677, CA-SDI-11678, CA-SDI-11679, CA-SDI-11681, CA-SDI-11690, CA-SDI-11691, CA-SDI-11692, CA-SDI-11693, CA-SDI-11694, CA-SDI-19066, CA-SDI-19067, CA-SDI-19068, CA-SDI-19069, CA-SDI-19887, CA-SDI-21764, CA-SDI-21766, CA-SDI-22728, CA-SDI-22730, CA-SDI-22731, CA-SDI-22732, P-37-025680), located far outside of the ADI, will be avoided through established work boundaries. Therefore, no significant impacts will occur to avoided sites. The 20 isolates identified within the ADI required no evaluation or avoidance measures as isolates are by definition not significant (see Table 7-2). The seven additional isolates located within the Project Area but outside of the ADI will be avoided through established work boundaries. Notwithstanding the lack of information on TCRs received by the County to date, no significant archaeological sites eligible for or listed in the CRHR will be impacted by this project. Therefore, no TCRs have been identified that would be impacted by the project. County consultation on Assembly Bill 52 is ongoing.

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
CA-SDI-4455	Village	Prehistoric	**Previously Evaluated:** CEQA: Significant; County: Important; RPO: Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-4457/H Within ADI	Artifact Scatter	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant, Not Contributing Element to Overall Site Significance; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, and Monitoring	Less Than Significant
CA-SDI-4457/H Outside ADI	Artifact Scatter	Multicomponent	**Previously Evaluated:** CEQA: Significant; County: Important; RPO: Significance Assumed	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-4459	Artifact Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-6741 Within ADI	Artifact Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-6741 Outside ADI	Artifact Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-7036	Artifact Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-7040	Artifact Scatter; Historic	Multicomponent	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
	Refuse Scatter					
CA-SDI-7041	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-7043	Temporary Camp; Mining	Multicomponent	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-7054 Within ADI	Lithic Scatter; Historic Refuse Scatter	Multicomponent	**Previously Evaluated within ADI:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-7054 Outside ADI	Lithic Scatter; Historic Refuse Scatter	Multicomponent	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance; Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-7056/H Within ADI	Lithic Scatter	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-7056/H Outside ADI	Lithic Scatter	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-7917	Artifact Scatter; Historic Refuse	Multicomponent	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
	Scatter; Mining					
CA-SDI-8072	Temporary Camp	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-8430 Inside ADI	Artifact Scatter/ Quarry	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant, Not Contributing Element to Overall Site Significance; County: Important; RPO: Not Significant	Not significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-8430 Outside ADI	Artifact Scatter/ Quarry	Multicomponent	**Previously Evaluated:** CEQA: Significant; County: Important; RPO: Significance Assumed	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-11675	Artifact Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-11676 Within ADI	Artifact Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-11676 Outside ADI	Artifact Scatter	Prehistoric	**Previously Evaluated:** CEQA: Significant; County: Important; RPO: Significance Assumed	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-11677	Temporary Camp	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
CA-SDI-11678	Artifact Scatter/ Quarry	Prehistoric	**Previously Evaluated:** CEQA: Significant; County: Important; RPO: Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11679	Artifact Scatter/ Quarry	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11681	Artifact Scatter/ Quarry	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11682	Artifact Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-11684	Artifact Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-11685	Artifact Scatter	Prehistoric	**Previously Destroyed:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	No Significant Impact
CA-SDI-11686 Within ADI	Artifact Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-11686 Outside ADI	Artifact Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-11688	Temporary Camp	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County:	Not Significant	Recordation, Artifact Conveyance, Monitoring	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
			Important; RPO: Not Significant			
CA-SDI-11689	Temporary Camp	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-11690	Lithic Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11691	Lithic Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11692	Bedrock Milling	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11693	Lithic Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-11694	Lithic Scatter	Prehistoric	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-19066	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-19067	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed;	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
			County: Assumed Important; RPO: Significance Assumed			
CA-SDI-19068	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-19069	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-19070	Lithic Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-19887	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-19904	Lithic Scatter; Historic Isolate	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-19905	Artifact Scatter; Historic Isolate	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-19906	Artifact Scatter; Historic Refuse Scatter;	Multicomponent	**Previously Destroyed:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	No Significant Impact
CA-SDI-19907	Lithic Scatter	Prehistoric	**Previously Destroyed:** CEQA: Not Significant; County: Not	Not Significant	Recordation, Artifact Conveyance, Monitoring	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
			Important; RPO: Not Significant			
CA-SDI-19908	Lithic Scatter	Prehistoric	**Previously Destroyed:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	No Significant Impact
CA-SDI-19909	Artifact Scatter	Prehistoric	**Previously Destroyed:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	No Significant Impact
CA-SDI-19910 Within ADI	Lithic Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-19910 Outside ADI	Lithic Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-20985	Artifact Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-21757	Artifact Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: Temporary Fencing, Monitoring	No Significant Impact
CA-SDI-21758	Artifact Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
CA-SDI-21764	Lithic Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-21766	Temporary Camp	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-22725	Artifact Scatter	Multicomponent	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-22726	Artifact Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-22727	Artifact Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-22728	Artifact Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-22729	Artifact Scatter	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
CA-SDI-22730	Bedrock Milling	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

Table 7-1. Archaeological Site Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
CA-SDI-22731	Lithic Scatter	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-22732	Lithic Scatter; Bedrock Milling	Prehistoric	**Not Evaluated** CEQA: Significance Assumed; County: Assumed Important; RPO: Significance Assumed	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
CA-SDI-22733	Bedrock Milling	Prehistoric	**Dudek Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Not Significant	Recordation, Artifact Conveyance, Monitoring	Less Than Significant
P-37-025680	Railroad	Historic	**Previously Evaluated:** CEQA: Not Significant; County: Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

Table 7-2. Archaeological Isolate Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
CA-SDI-7037	Isolated lithics	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
P-37-030190	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant

Table 7-2. Archaeological Isolate Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
P-37-038609	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038610	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038611	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038612	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038613	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038614	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038615	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038616	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038617	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038618	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038619	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant

Table 7-2. Archaeological Isolate Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
P-37-038620	Isolated flake	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
P-37-038621	Isolated milling stone	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
P-37-038622	Isolated flake	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
P-37-038623	Isolated handstone	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
P-37-038624	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038625	Isolated flake	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact
P-37-038626	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038627	Isolated ceramic	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038628	Isolated flake	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant

Table 7-2. Archaeological Isolate Management Recommendations

Site Number	Site Type	Time Range	Significance/ Eligibility Status	Impact	Recommendations/ Mitigation Measures	Impact Significance After Mitigation
P-37-038629	Isolated tool	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038630	Isolated lithic tools	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038631	Isolated lithics	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038632	Isolated handstone	Prehistoric	**Isolate:** Not Significant; County: Not Important; RPO: Not Significant	Not significant	No further review required	Less Than Significant
P-37-038633	Isolated artifacts	Prehistoric	**Isolate:** CEQA: Not Significant; County: Not Important; RPO: Not Significant	Avoided	Avoidance: More than 50 feet outside of ADI	No Significant Impact

8.0 References

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9.0 List of Preparers and Persons and Organizations Contacted

Resumes of personnel are located in Appendix E.

Micah Hale (Dudek): Acted as Project Manager and approved the technical report.

Matthew DeCarlo (Dudek): Acted as Principal Investigator, Field Director, and authored the technical report.

Jessica Colston: Acted as Crew Chief and co-authored the technical report.

Patrick Hadel: Acted as Co-Crew Chief

Javier Hernandez, Makayla Murillo, David Faith, Courtney Davis, David Alexander, and James Turner (Dudek): Acted as field and laboratory crew.

Justin Linton, Daniel "Bobo" Linton, and Tushon Phoenix (Red Tail Environmental): Acted as Native American monitor during fieldwork.

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10.0 Resource Mitigation Measures

Impacted Archaeological Sites	
Site Numbers	*Mitigation Measures*
CA-SDI-7054, CA-SDI-7056, CA-SDI-8072, CA-SDI-11675, CA-SDI-11682, CA-SDI-11684, CA-SDI-11685, CA-SDI-11686, CA-SDI-11688, CA-SDI-11689, CA-SDI-19070, CA-SDI-19904, CA-SDI-19905, CA-SDI-19906, CA-SDI-19907, CA-SDI-19908, CA-SDI-19909, CA-SDI-19910, CA-SDI-21758, CA-SDI-22725, CA-SDI-22726, CA-SDI-22727, CA-SDI-22729, and CA-SDI-22733; and unavoided portions of CA-SDI-4457/H, CA-SDI-6741, CA-SDI-8430, and CA-SDI-11676	Recordation, Artifact Conveyance, Monitoring
Avoided Archaeological Sites	
Site Numbers	*Mitigation Measures*
CA-SDI-4455, CA-SDI-4459, CA-SDI-7036, CA-SDI-7040, CA-SDI-7041, CA-SDI-7043, CA-SDI-7917, CA-SDI- 11677, CA-SDI-11678, CA-SDI-11679, CA-SDI-11681, CA-SDI-11690, CA-SDI-11691, CA-SDI-11692, CA-SDI- 11693, CA-SDI-11694, CA-SDI-19066, CA-SDI-19067, CA-SDI-19068, CA-SDI-19069, CA-SDI-19887, CA-SDI- 20985, CA-SDI-21757, CA-SDI-21764, CA-SDI-21766, CA-SDI-22728, CA-SDI-22730, CA-SDI-22731, CA-SDI-22732, and P-37-025680, and avoided portions of CA- SDI-4457/H, CA-SDI-6741, CA-SDI-7054, CA-SDI-8430, and CA-SDI-11676	Avoidance – Monitoring, Temporary Fencing, or More than 50 feet outside of ADI

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