Appendix E.1

Cultural Resources Survey and Inventory

Cultural Resources Survey and Inventory for the Starlight Solar Project, San Diego County, California

Record ID Number: PDS2022-MUP-22-010
Environmental Log Number: PDS2022-ER-22-21-002

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NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

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Client:	Empire II, LLC
Report Date:	October 2024
Report Title:	Cultural Resources Survey and Inventory for the Starlight Solar Project, San Diego County, California
Type of Study:	Phase I Field Survey and Inventory
New Sites:	Sites P-37-040847 (CA-SDI-23552) through P-37-040872 (CA-SDI-23577); Isolates P-37-040811 through P-37-040825; P-37-040827 through P-37-040836; P-37-040838 through P-37-040846; and P-37-040898 through P-37-040901
Updated Sites:	P-37-010476 (CA-SDI-10476)/P-37-034159 (CA-SDI-21369), P-37-027350 (CA-SDI-17873), P-37-032037 (CA-SDI-20295), P-37-033279 (CA-SDI-20946), P-37-033310 (CA-SDI-23551), P-37-033497 (CA-SDI-21067)/P-37-033502/P-37-033503; Isolates P-37-033309, P-37-033501; and P-37-037612
U.S. Geological Survey Quadrangle:	Live Oak Springs and Tierra del Sol, California: 7.5-minute series (1:24,000)
Acreage:	Approximately 588 acres surveyed
Keywords:	Phase I Survey and Inventory; Boulevard, San Diego County; Prehistoric Resources; Bedrock Milling Site; Historical Resources

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ACRONYMS

AB	Assembly Bill
CEQA	California Environmental Quality Act
CHRIS	California Historical Resource Information System
CRHR	California Register of Historical Resources
CSDAC	County of San Diego Administrative Code
DPR	Department of Parks and Recreation
MLD	most likely descendant
MSH	Millingstone Horizon
MUP	Major Use Permit
MW	megawatt
NAHC	Native American Heritage Commission
NPS	National Park Service
NRHP	National Register of Historic Properties
PRC	Public Resources Code
PV	photovoltaic
RPO	Resource Protection Ordinance
SCIC	South Coastal Information Center
SDG&E	San Diego Gas and Electric
SWCA	SWCA Environmental Consultants
TCR	tribal cultural resource
USDA	U.S. Department of Agriculture

EXECUTIVE SUMMARY

Empire II, LLC (client or project proponent), retained SWCA Environmental Consultants (SWCA) to conduct a cultural resources evaluation in support of the proposed Starlight Solar Project. SWCA provided archaeological resource services and contracted with Urbana Planning and Preservation, LLC, to provide built environment resource services. The project is south of the unincorporated town of Manzanita within the southeastern portion of San Diego County, California. The client proposes to develop, finance, construct, and operate a renewable energy solar and battery storage project on 19 parcels. Within these parcels, the project would develop approximately 588 acres (project area). The following study was conducted to analyze any potential impacts this project may have on archaeological resources located in the project area for purposes of compliance with the California Environmental Quality Act (CEQA), including Assembly Bill 52 and relevant portions of Public Resources Code (PRC) Sections 5024.1, 15064.5, 21074, 21083.2, 21084.1, and 21084.2. The lead agency responsible for compliance with CEQA is the County of San Diego Planning and Development Services (County). This report documents the methods and results of a confidential records search of the California Historical Resources Information System, a Sacred Lands File search through the Native American Heritage Commission (NAHC), archival research, and a pedestrian field survey used to evaluate the presence or likelihood of the presence of cultural resources within the project area.

The pedestrian survey occurred February 15 through 22, 2022, January 23, 2023, February 1, 2, and 20 2023, March 10, 2023, and September 11 through 29, 2023. A records search conducted by the South Coastal Information Center identified 267 previously recorded resources within a 1.6-kilometer (1-mile) radius of the project area. Of these 267 resources, six are mapped within the project area and four are mapped adjacent to the project area. The search of the Sacred Lands File maintained by the NAHC was positive within the NAHC search area. The NAHC provided a contact list of 22 Native American individuals and tribal organizations that may have knowledge of cultural resources in or near the project area. This list was delivered to the client for the County's use in conducting tribal outreach.

SWCA archaeologists conducted an intensive-level pedestrian survey of the project area with Native American monitors from the Campo Band. Ground cover ranged from good to poor throughout the project area at the time of the survey and, therefore, vegetation may have obscured surface artifacts at the previously identified resource locations. As part of the fieldwork, SWCA archaeologists revisited the locations of all the previously recorded resources within the project area.

In total, 32 sites and 41 isolates were documented during the survey of the project area (Table ES-1). Of these, 26 are newly recorded sites and 38 are newly recorded isolates. One previously recorded isolate was relocated (P-37-037612), and two (P-37-033501 and P-37-033309) were not. As a result of the field survey, previously recorded sites P-37-010476 and P-37-034159 were combined into a single resource, as both updated site boundaries overlapped. Also combined were previously recorded resources P-37-033497, P-37-033502, and P-37-033503 due to their newly mapped overlapping locations and additional artifact discoveries; however, the isolated artifacts originally recorded as P-37-033502 and P-37-033503 were not identified by SWCA during the survey.

Resources P-37-027350 (CA-SDI-17873/W-293), P-37-032037 (CA-SDI-20295), P-37-033279 (CA-SDI-20946), P-37-033310, and P-37-037612 were relocated in the field. Previously recorded isolate P-37-033310 was also found to have additional artifacts; consequently, it was re-recorded as a site, given a trinomial (CA-SDI-23551), and the resource boundaries were expanded. P-37-032037 (CA-SDI-020295) and P-37-037612 were found to be in the same condition as when originally recorded. SWCA was unable to locate P-37-033309 and P-37-033501 during the survey.

Five of the previously recorded resources P-37-032037 (CA-SDI-20295), P-37-033279 (CA-SDI-20946), P-37-033309, P-37-033501, and P-37-037612 are recommended ineligible for the California Register of Historical Resources (CRHR)/County Register of Historical Resources (County Register) due to a lack of significance. One of these resources, P-37-033279 (CA-SDI-20946), was previously evaluated through Phase II testing and recommended as ineligible for the CRHR. Though SWCA located three artifacts within the surface of the site, nothing indicated that the evaluation status of the site should be reexamined. SWCA concurs with the recommendation of ineligible based on the previous Phase II efforts (Daniels 2014).

Five newly recorded sites, P-37-040853 (CA-SDI-23558), P-37-040856 (CA-SDI-23561), P-37-040860 (CA-SDI-23565), P-37-040868 (CA-SDI-23573), and P-37-040871 (CA-SDI-23576), are recommended ineligible for the CRHR/County Register. In addition, all 38 newly recorded isolates, P-37-040811 through P-37-040825, P-37-040827 through P-37-040836, P-37-040838 through P-37-040846, and P-37-040898 through P-37-040901, are recommended ineligible for the CRHR/County Register.

Resources P-37-010476/P-37-034159, P-37-027350 (CA-SDI-17873/W-293), P-37-033310 (CA-SDI-23551), P-37-033497/P-37-033502/P-37-033503, P-37-040847 (CA-SDI-23552), P-37-040848 (CA-SDI-23553), P-37-040850 (CA-SDI-23555), P-37-040851 (CA-SDI-23556), P-37-040857 (CA-SDI-23562), P-37-040858 (CA-SDI-23563), P-37-040859 (CA-SDI-23564), P-37-040861 (CA-SDI-23566), P-37-040862 (CA-SDI-23567), P-37-040863 (CA-SDI-23568), P-37-040864 (CA-SDI-23569), P-37-040865 (CA-SDI-23570), P-37-040866 (CA-SDI-23571), P-37-040867 (CA-SDI-23572), P-37-040869 (CA-SDI-23574), P-37-040870 (CA-SDI-23575), and P-37-040872 (CA-SDI-23577) are recommended assumed eligible for the CRHR/County Register. The project has been designed to avoid impacts to these resources by placing them within proposed dedicated open space easements. Given this, these resources are now adjacent to the development area. Although avoidance is planned, if impacts are unavoidable, SWCA recommends these resources be evaluated through Phase II Testing and Evaluation consisting of the creation of a thorough research design, fieldwork, laboratory analysis, reporting, and curation or reburial. If found significant, additional mitigation would be necessary.

Table ES-1. Resources Summary

Site Number	Brief Description	CRHR/County Eligibility Recommendation	Plan Location	Impacts	Recommendations
Previously Recorded Resources					
P-37-010476/ P-37-034159	Prehistoric habitation site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-027350 (CA-SDI-17873/W-293)	Multicomponent site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-032037 (CA-SDI-20295)	Historic trash scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-033279 (CA-SDI-20946)	Prehistoric lithic and ceramic scatter	Previously evaluated, ineligible	Inside	None	Archaeological and tribal monitoring. Campo requested that all artifacts collected during testing be reburied at the site. Artifacts have been curated at the San Diego Archaeological Center (Tierra del Sol Project – Collection #675). Return of the artifacts for on-site reburial will be a condition of approval.
P-37-033309	Prehistoric lithic isolate	Ineligible	Not relocated	None	Archaeological and tribal monitoring

Site Number	Brief Description	CRHR/County Eligibility Recommendation	Plan Location	Impacts	Recommendations
P-37-033310 (CA-SDI-23551)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-033497, P-37-033502, and P-37-033503	Prehistoric site with prehistoric ceramic and lithic scatters	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-033501	Prehistoric ceramic isolate	Ineligible	Not relocated	None	Archaeological and tribal monitoring
P-37-037612	Prehistoric lithic isolate	Ineligible	Inside	None	Archaeological and tribal monitoring
Newly Recorded Resources					
P-37-040847 (CA-SDI-23552)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040848 (CA-SDI-23553)	Prehistoric bedrock milling feature and lithic and ceramic scatters	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040849 (CA-SDI-23554)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040850 (CA-SDI-23555)	Multicomponent site of prehistoric lithic scatter, and historic-era refuse scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040851 (CA-SDI-23556)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040852 (CA-SDI-23557)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040853 (CA-SDI-23558)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040854 (CA-SDI-23559)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040855 (CA-SDI-23560)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040856 (CA-SDI-23561)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040857 (CA-SDI-23562)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040858 (CA-SDI-23563)	Prehistoric lithic and ceramic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040859 (CA-SDI-23564)	Prehistoric habitation site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

Site Number	Brief Description	CRHR/County Eligibility Recommendation	Plan Location	Impacts	Recommendations
P-37-040860 (CA-SDI-23565)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040861 (CA-SDI-23566)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040862 (CA-SDI-23567)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040863 (CA-SDI-23568)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040864 (CA-SDI-23569)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040865 (CA-SDI-23570)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040866 (CA-SDI-23571)	Prehistoric bedrock milling feature	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040867 (CA-SDI-23572)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040868 (CA-SDI-23573)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040869 (CA-SDI-23574)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040870 (CA-SDI-23575)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040871 (CA-SDI-23576)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040872 (CA-SDI-23577)	Prehistoric lithic and ceramic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

Resources P-37-040849 (CA-SDI-23554), P-37-040852 (CA-SDI-23557), P-37-040854 (CA-SDI-23559), and P-37-040855 (CA-SDI-23560) are completely outside of the redesigned project area. As they are outside of the project, no consideration of eligibility for the CRHR/County Register is included.

If previously unidentified cultural resources are exposed during ground disturbance, work in the immediate vicinity (designated as any area within 50 feet of the newly uncovered cultural resource) of the find must stop until a qualified archaeologist can evaluate the significance of the find according to the CRHR. Ground-disturbing activities may continue in areas more than 50 feet from the newly uncovered cultural resource. If the discovery proves significant under CEQA (Section 15064.5f; PRC 21082) and cannot be avoided by the project, additional work such as archaeological and Native American monitoring, archaeological testing, or data recovery excavation may be warranted. Should any prehistoric or historic-era Native American artifacts be encountered, additional consultation with NAHC-listed Native American tribal groups should be conducted.

If human remains are discovered, Section 7050.5 of the State of California Health and Safety Code states that no further disturbance shall occur until the San Diego County Coroner has made a determination of origin and disposition pursuant to PRC 5097.98. The San Diego County Coroner must be notified of the find immediately. If the human remains are determined to be Native American, the Coroner will notify the NAHC, which will designate and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

1 INTRODUCTION

Empire II, LLC (client or project proponent), retained SWCA Environmental Consultants (SWCA) to conduct an intensive archaeological pedestrian survey to assess the presence or absence of cultural resources in support of the proposed Starlight Solar Project (project). SWCA contracted with Urbana Planning and Preservation, LLC, to provide the built environment resource assessment portion of the study (Landa and Tinsley-Becker 2023). The project is located south of the unincorporated town of Boulevard within the southeastern portion of San Diego County, California (Figure 1). The client proposes to develop, finance, construct, and operate a renewable energy solar and battery storage project on 588 acres (project area). The following study was conducted to analyze any potential impacts this project may have on archaeological resources located in the project site for purposes of compliance with the California Environmental Quality Act (CEQA), including Assembly Bill (AB) 52 and relevant portions of Public Resources Code (PRC) Sections 5024.1, 15064.5, 21074, 21083.2, 21084.1, and 21084.2. Additionally, the report was written in accordance with the County of San Diego Guidelines for Determining Significance (County of San Diego 2007a), County of San Diego Report Format and Content Guidelines (County of San Diego 2007b), and the County of San Diego Resource Protection Ordinance (RPO).

For purposes of this undertaking, the County of San Diego Planning and Development Services (County) is the lead agency responsible for compliance with CEQA. This report documents the methods and results of a confidential records search of the California Historical Resources Information System (CHRIS), a Sacred Lands File search through the Native American Heritage Commission (NAHC), archival research, and a pedestrian field survey used to determine the presence of cultural resources within the project area.

SWCA cultural resources project manager Nicholas F. Hearth, M.A., Registered Professional Archaeologist (RPA), served as project manager for the project and is the lead author. Michelle Courtney, M.S., Elizabeth Davidson, M.A., RPA, and Julie Swift M.A., RPA, coauthored this report. E. Davidson, N. Hearth, Andres Berdeja, B.A., and Kurt Dilores, M.A., led the fieldwork efforts supported by Olivia Romansik, B.A., and Maia Matheu, B.A. Aramis Respall, B.A., geographic information system (GIS) specialist, prepared the figures. SWCA Principal Investigator Michael Bever, Ph.D., RPA reviewed this report for quality assurance/quality control. N. Hearth, M. Bever, and K. Dilores exceed the Secretary of the Interior's Professional Qualification Standards in Archaeology. M. Bever is listed on the County's CEQA consultant list for archaeology. Copies of the final report will be filed with the County, the project proponent, and the South Coastal Information Center (SCIC) at San Diego State University and will remain on file at SWCA's San Diego Office.

1.1 Project Description

The project proponent is requesting a Major Use Permit (MUP) from San Diego County to develop, finance, construct, and operate an uncrewed renewable energy solar and battery storage project in the southeastern region of the county. The County's General Plan designates the project area as Rural Lands 80 (RL-80) and the County's Zoning Ordinance identifies the site as General Rural (S92). The County's Zoning Ordinance states that solar power plant projects are considered Major Impact Service and Utility in all zones and thus require the approval of a MUP.

The project would use photovoltaic electric generation system technology to produce up to 100 megawatts (MW) of alternating current solar energy at the utility scale. The project would also include an 868-MW-per-hour (217-MW 4-hour batteries) battery energy storage system. The project area encompasses a total of approximately 588 acres within the Mountain Empire Subregional Plan area in unincorporated San Diego County (Figure 2). The project includes the MUP project site of approximately 581 acres, an off-site generation-tie line area of 7 acres, and an off-site vehicle turnaround area of 0.06 acre. As shown

in Figure 2, the project would also include an open space easement of 448 acres for biological resources. The project would be constructed in two phases. Phase I would encompass approximately 125 acres and generate 20 MW of solar energy and 17 MW of battery storage. Phase 2 would encompass approximately 456 acres and generate 80 MW of solar energy and 200 MW of battery storage.

1.1.1 Project Location

The project area encompasses approximately 588 acres in unincorporated San Diego County, south of the community of Boulevard and approximately 0.93 mile north of the U.S.–Mexico border (see Figure 1). The community of Boulevard encompasses approximately 4 square miles and includes the communities of Manzanita, Tierra del Sol, and Live Oak Springs. The project area lies within Sections 28, 29, 32, and 33, Township 17 South, Range 7 East, and Sections 4, 5, and 8, Township 18 South, Range 7 East, as depicted on the 1997 U.S. Geological Survey 7.5-minute quadrangles for Live Oak Springs and Tierra del Sol, California (see Figure 2).

The project area is located approximately 1 mile south of Interstate 8 and Old Highway 80, and east of Tierra Del Sol Road (Figure 3). Regional access to the project vicinity would be provided by State Route 94 and Interstate 8, respectively. Access to the project area would be provided by Jewel Valley Road, which runs north to south and connects to Old Highway 80 in the town of Boulevard. Additional emergency fire access would be provided via Tule Jim Lane which connects to Old Highway 80.

As depicted in Figure 3, the project area would be divided into eight solar array areas totaling approximately 581 acres. A 7-acre underground generation-tie line would be located on the east side of Tule Jim Lane and connect into the southeast corner of the Boulevard Substation. The project is spread over 14 Assessor's Parcel Numbers (APNs) (Table 1 and Figure 4). Please note the three parcels noted as Mitigation Parcels on Figure 4 are not a part of CEQA consideration.

Table 1. Starlight Solar Project Area Assessor's Parcel Numbers

Project Site	Generation-Tie Line Route	San Diego Gas and Electric Boulevard East Substation
612-082-12	612-090-59	612-092-64
612-110-02	612-090-68	
612-110-04		
612-110-17		
612-110-18		
612-110-19		
612-120-01		
659-020-01		
659-020-02		
659-020-05		
659-080-02		

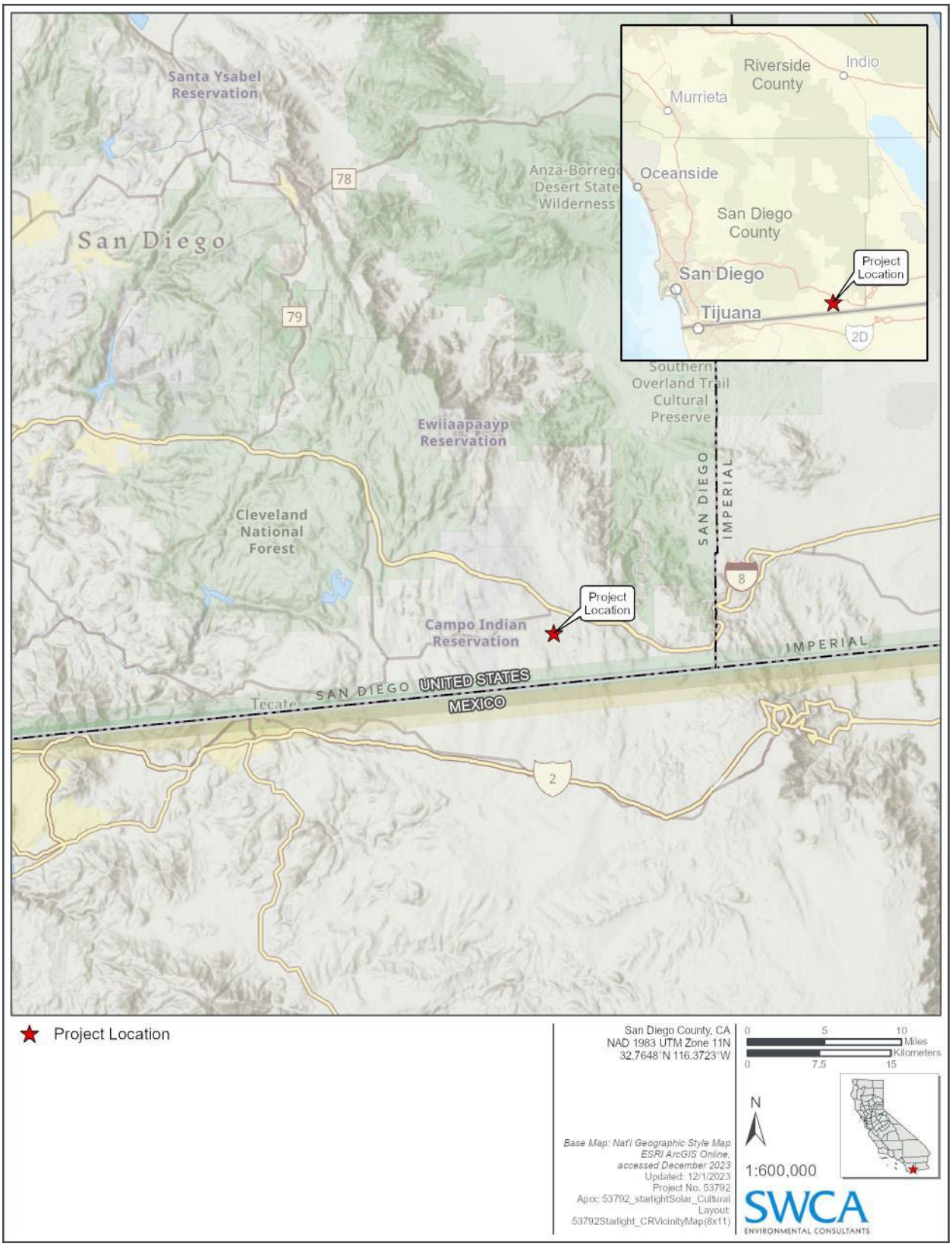

Figure 1. Project vicinity.

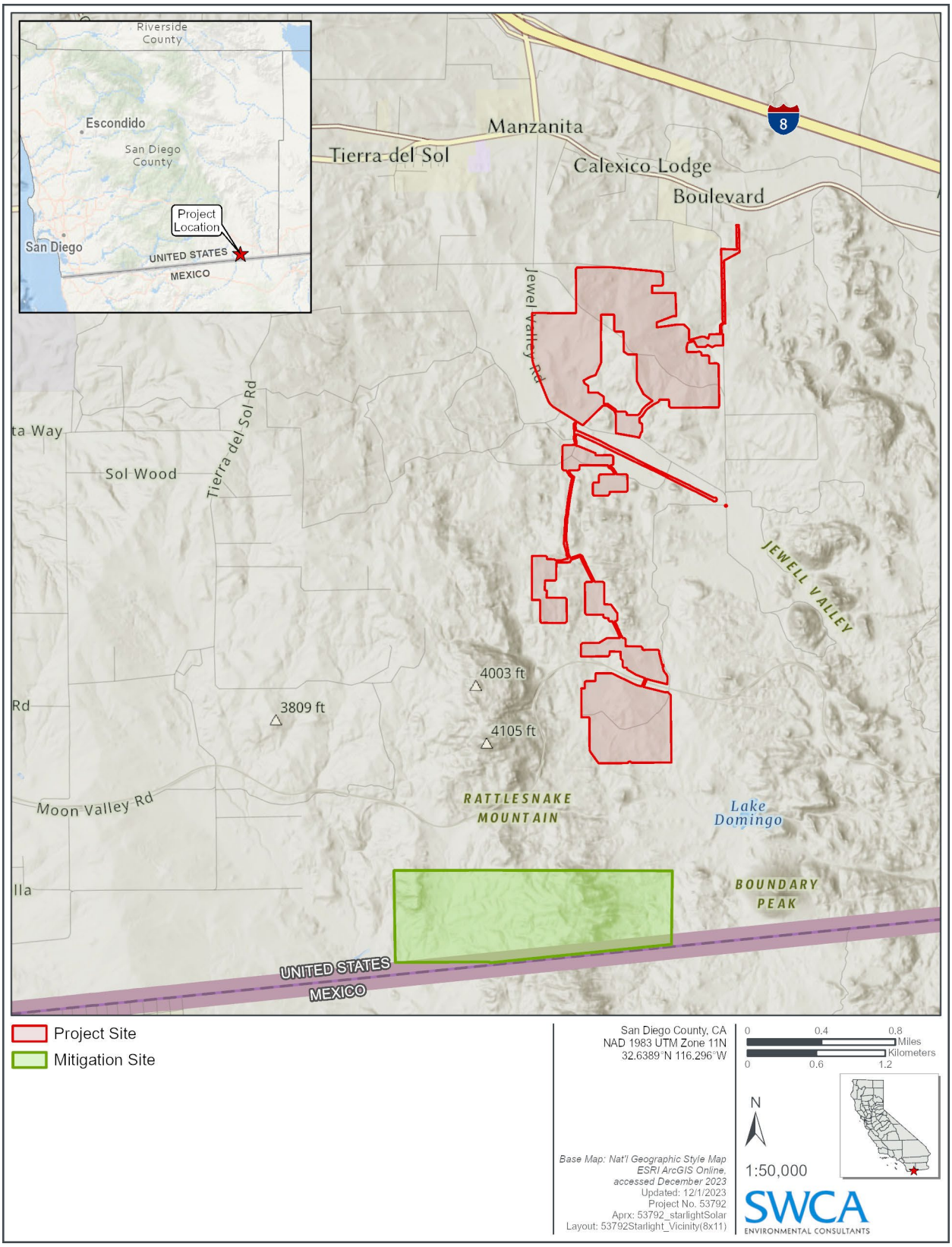

Figure 2. Project location.

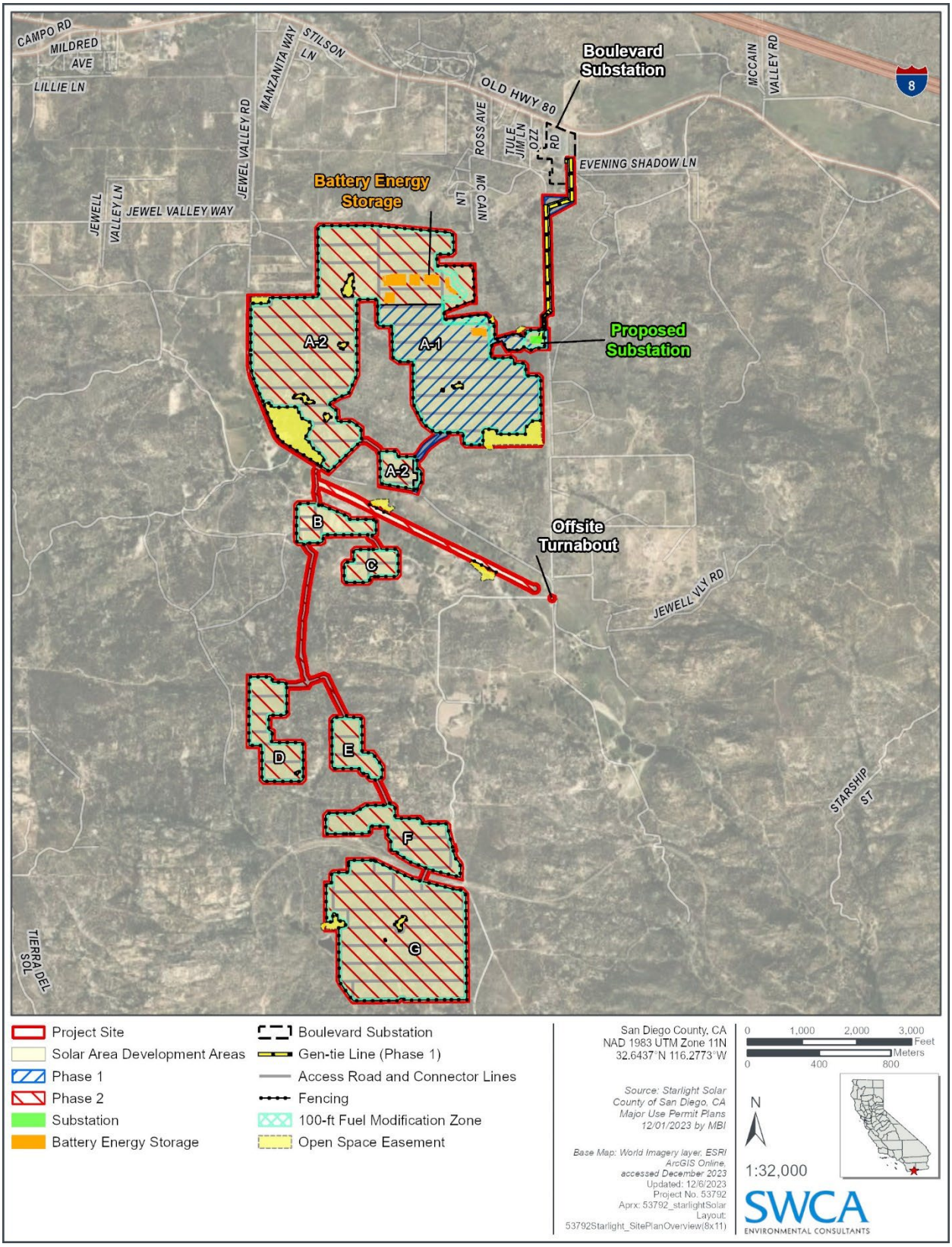

Figure 3. Project site plan.

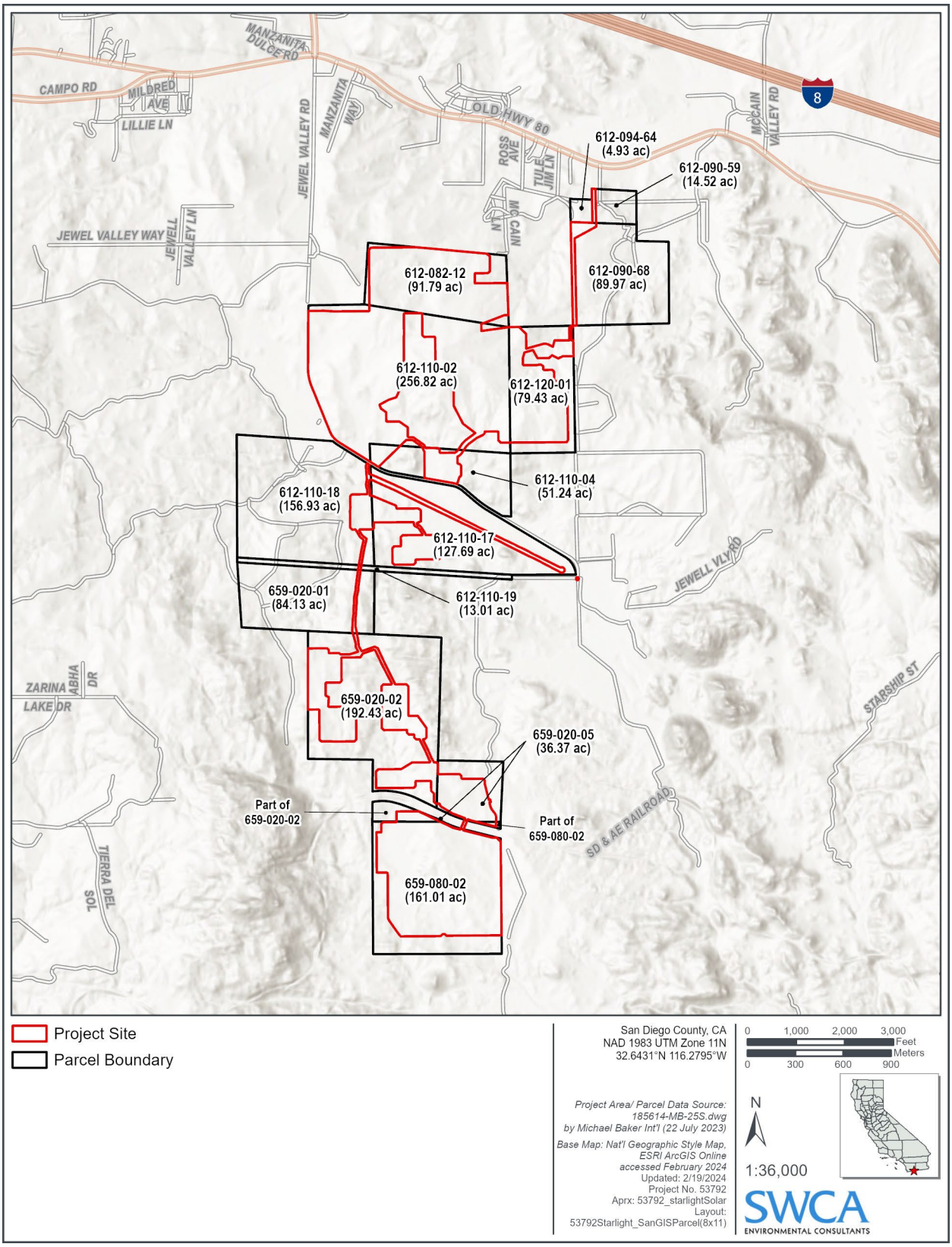

Figure 4. Project Assessor's Parcel Numbers.

1.2 Existing Conditions

This section includes the environmental and cultural setting, and the record search information.

1.2.1 Environmental Setting

1.2.1.1 GEOLOGY

California is divided into 11 geomorphic provinces, each naturally defined by unique geologic and geomorphic characteristics. The project area is in the Peninsular Ranges Geomorphic Province, which extends approximately 900 miles from the Transverse Ranges and the Los Angeles Basin south to the southern tip of Baja California. The width varies from approximately 30 to 100 miles wide. The Peninsular Ranges are distinguished by northwest-trending mountain ranges and valleys following faults branching from the San Andreas Fault. The Peninsular Ranges are the remnants of large igneous bodies that were emplaced approximately 180 million years ago (DeCourten 2010). The Peninsular Ranges are bound to the east by the Colorado Desert and extend north to the San Bernardino–Riverside County line (Norris and Webb 1976), west into the submarine continental shelf, and south to the California state line.

Rugged mountainous terrain on the east of the province is composed mostly of Mesozoic igneous and metamorphic rocks. This topography is compared to the relatively low-lying coastal terraces to the west of the province underlain by late Cretaceous-age, Tertiary-age, and Quaternary-age sedimentary units. Most of the coastal region of San Diego is underlain by sedimentary units. The subject site is located within the topographically dynamic eastern portion of the Peninsular Range Geomorphic Province. Specifically, the site is in an area underlain by early and late Cretaceous tonalite of the La Posta Formation (Todd 2004).

1.2.1.2 SOILS

Soils are important in archaeology as they can indicate the degree of integral condition of the soil (natural versus disturbed) and consequently, are an important consideration of the physical condition of the site. Soil scientists have defined three soil horizons of interest for this project and have labeled them “A-B-C” soil horizon sequence from top to bottom. Typically, A soil horizon(s) are at the surface and consist of the active soil growth horizon due to natural processes of microorganisms, as well as insect, arachnid, plant, and animal activity within the mineral soil constituent material. Consequently, these bioturbation processes deposit organic matter within A horizons. A horizons within the project consist of undisturbed A horizons or plow zone(s) (Ap), singularly or stratigraphically arranged. Ideally, cultural materials within A soils would likely retain physical integrity whereas those cultural materials found within Ap soils would likely have a higher degree of disturbance that would need to be determined on a case-by-case basis.

Subsurface B soil horizons are similarly constituted of the mineral material components but do not have or have very little of the active soil growth within them. Instead, rainwater moves various minerals, chemical compounds, clays, and oxides through the mineral material of the A horizon by a process called illuviation or leaching and deposits these within the B horizons. B horizons can also be active in terms of soil growth, but this growth does not have the in situ organic growth processes characterized in the A horizon(s). Multiple B horizons can exist within the column within a soil column. B horizons which contain cultural material are likely to be intact.

Subsurface C soil horizons are generally classified as the mineral parent material from which other soils grow, but the horizon itself lacks pedological development. C horizons generally are thought of as bedrock, though mineral materials deposited though alluviation or other means are considered to be C horizons. C horizon(s) are generally of minimal archaeological sensitivity as no cultural activity would logically be present within them.

Three soil series are mapped within the project area (Natural Resources Conservation Service 2022). The La Posta series, loamy coarse or rocky loamy coarse sands, 5 to 30 percent slopes, eroded to severely eroded, covers the majority of the project area. La Posta soils are moderately deep, well-drained soils that form in material weathered from basic igneous rocks and typically are located on mountainous uplands. Typically, they have two A horizons. An Ap horizon extends to 7 inches (approximately 18 centimeters [cm]), which is then followed by a natural A horizon to 12 inches (30 cm) beneath the surface. As many as three clay accumulated B horizons then follow down to 32 inches (81 cm) beneath the surface. C horizons of bedrock consisting of weathered gabbro then follow (U.S. Department of Agriculture [USDA] 1997).

Mottsville loamy coarse sand, 2 to 9 percent slopes, is the second most common soil series mapped in the project. Mottsville loamy coarse sand is a very deep, excessively drained soil that forms in alluvium derived from granitic rocks. Typical horizons consist of three natural A horizons to as deep as 18 inches (46 cm) followed by C horizons of gravelly coarse sand (USDA 2017).

Comparatively small areas of Tollhouse series are mapped in the project area. Tollhouse series is a rocky coarse sandy loam with 5 to 30 percent slopes and eroded. Like the La Posta soil series, Tollhouse soils form in material weathered from granite rocks, but differ in that they are shallower and somewhat or excessively drained. Typically, two A horizons down to 18 inches (46 cm) which are then followed by a quartz diorite bedrock C horizon (USDA 2001).

1.2.1.3 ECOLOGY/BIOTA

The project area is located near the Tecate divide in the southern peninsular ranges. The area is situated in a transitional ecoregion between the peninsular mountains and the Colorado Desert to the east. Vegetation consists of mountain chaparral, characterized by the dominant chaparral vegetation of the lowlands and deserts but lacking the hardwood and conifer woodland of some of the mountain regions around it. Vegetation is predominantly a mixed chaparral, including redshank, manzanita, oak trees, and chamise (Griffith et al. 2016).

1.2.2 Prehistory

Numerous chronological sequences have been developed for the prehistory of Southern California (e.g., Meighan 1954; Rogers 1929; Rogers 1945; True 1958, 1966, 1980; Warren 1967, 1968; see also Moratto 1984). Building on early studies and focusing on data synthesis, Wallace (1955, 1978) developed the first general synthesis of prehistoric chronology for the Southern California region, which is still widely used today within San Diego County and applicable from the coast to the inland areas. Four primary periods are presented in Wallace's prehistoric sequence: Horizon I (Early Man), Horizon II (Millingstone), Horizon III (Intermediate), and Horizon IV (Late Prehistoric) (Table 2). Although Wallace's (1955) synthesis initially lacked chronological precision due to a paucity of absolute dates (see Moratto 1984), this situation has been alleviated by the availability of thousands of radiocarbon dates that have been obtained by Southern California researchers in recent decades (Byrd and Raab 2007). In addition to Warren's (1968) redefinition of the Millingstone Horizon (MSH) as the Encinitas tradition in Southern California, several revisions have been made to Wallace's (1955) synthesis using radiocarbon dates and projectile point assemblages (e.g., Koerper and Drover 1983; Koerper et al. 2002; Mason and Peterson 1994; Sutton 2010). Currently, a general prehistoric chronology using Early, Middle, and Late Archaic and Late Prehistoric periods is often used (e.g., Reddy 2007; York 2005); though chronologies outlined by broad environmental periods, namely the Terminal Pleistocene, and Early, Middle, and Late Holocene are also employed (e.g., Byrd 2011; Byrd and Raab 2007; Gallegos 1992).

Table 2. Prehistoric Cultural Chronology for Southern California

Years Before Present	Calendar Age	Geologic Period	California Prehistory Periods	Horizons/Traditions
13,000 B.P.	11,000 B.C.	Terminal Pleistocene	Paleoindian ca. 13,000–8000 B.P.	Paleoindian
10,000 B.P.	8000 B.C.	Early Holocene	ca. 11,000–6000 B.C.	Horizon I / San Dieguito
			Archaic Period ca. 8000–1500 B.P. ca. 6000 B.C. to A.D. 500	Horizon II / MSH
7000 B.P.	5000 B.C.	Middle Holocene		Horizon III / Intermediate Horizon
3500 B.P.	1500 B.C.	Late Holocene		
1500 B.P.	A.D. 500		Emergent Period ca. 1,500 B.P. to Historic Contact	Horizon IV / Late Prehistoric
Historic Contact			ca. A.D. 500 to Historic Contact	

1.2.2.1 TERMINAL PLEISTOCENE – PALEOINDIAN TRADITION

Until recent decades, it was commonly believed that the first people in North America were Paleoindians that entered North America on foot, primarily focused on big game and terrestrial resources, and spreading out across the continent. These Paleoindians would have maintained a terrestrial adaptation and are generally characterized by their distinct fluted lithic technology used to produce Clovis and Folsom projectile points. Considerable evidence of Paleoindians using the Clovis toolkit has been found across the continent of North America though it is rather sparse in California specifically (Basgall 2007; Davis 1978; Riddell and Olsen 1969; see Graf et al. 2014). Fluted points have an uneven distribution in California, and none have been discovered along the coastal areas of Southern California. It was generally believed that Paleoindian groups had small populations and were highly mobile, living in small temporary camps located near permanent water sources, though the full nature of Paleoindian subsistence systems remains unknown. The scarcity of archaeological evidence for Paleoindians along the coast suggests that the coast was largely uninhabited until the beginning of the early Holocene (Byrd and Raab 2007).

1.2.2.2 EARLY HOLOCENE – SAN DIEGUITO COMPLEX

When Wallace (1955) defined the cultural horizons, including Horizon I (Early Man) in the mid-1950s, there was little evidence of human presence in Southern California prior to 8,000 B.P. (6000 B.C.). Archaeological work in the intervening decades, however, has identified hundreds of Early Holocene sites, both on the mainland coast, mountains and inland areas (e.g., Erlandson 1994; Erlandson and Colton 1991; Jones and Klar 2007; Kennett 2005; Moratto 1984). Sites along the California coast in Orange and San Diego Counties contain components dated up to ca. 10,000 years ago (Byrd and Raab 2007; Erlandson 1994; Erlandson and Colton 1991; Gallegos 2017; Macko 1998; Mason and Peterson 1994; Sawyer and Koerper 2006), suggesting populations primarily inhabited coastal Southern California during the Early Holocene.

The variety of sites along the Southern California coast, mountains, and deserts indicate a mobile settlement pattern with subsistence strategies focused primarily on coastal shellfish, mountain and inland game, and plant foods. Artifact assemblages from Southern California sites dated to the Early Holocene also include an increase in manos and metates that were likely used to process seeds and other plant foods. The focus on plant processing, which began during the latter part of the Early Holocene and continued through the

Middle Holocene, is what differentiates this period from the earlier Paleoindian period (Erlandson 1991, 1994; Moriarty 1966; Warren 1967).

Subsistence patterns shifted toward the end of the Early Holocene period, coincident with the gradual desiccation associated with the onset of the Altithermal (a warm and dry period that lasted for a couple thousand years) and the global stabilization of sea levels, as shorelines reached their current distribution and morphologies. It appears that people began to place a greater emphasis on a wider variety of plant foods and smaller animals following this climatic shift. Sites characterized as pertaining to the Millingstone Complex (described below) are common in both coastal and inland settings in coastal Southern California, dating to as early as 8,500 years ago.

San Dieguito complex sites in San Diego County date to as old as ca. 11,000 to 10,000 B.P. (Warren et al. 2008). This complex was first defined at the Harris site (CA-SDI-149), a multicomponent site located on the San Dieguito River that was tested by Malcolm Rogers in the late 1930s and later excavated by University of California Los Angeles archaeologists (Rogers 1939; Warren 1966, 1967; Warren and True 1961). The San Dieguito complex was marked by the presence of stemmed (e.g., Lake Mojave or Silver Lake) projectile points, crescents, an abundance of scrapers, a small number of milling tools, and the general use of volcanic lithic materials for the manufacture of flaked stone tools. Sites with components attributed to the San Dieguito Complex have been found along the Southern California coast and in Orange County (e.g., CA-ORA-64, the Irvine Site) (Drover et al. 1983; Macko 1998) and in northern San Diego County (e.g., CA-SDI-210, the Agua Hedionda Site) (Moriarty 1966). Archaeological assemblages attributed to the San Dieguito Complex have also been uncovered at inland sites including ancient Lake Cahuilla and Lake Perris (CA-RIV-6069 and CA-RIV-5086) (Horne and McDougall 2008; McDougall 2001). The San Dieguito complex likely originated ca. 10,000 B.P. in the deserts to the east with subsequent populations migrating to the coast as conditions deteriorated at the end of the Pleistocene (Kowta 1969:68; Warren and Pavesic 1963:420; Warren et al. 1961:28; see also Osborne 1958:48).

1.2.2.3 THE MIDDLE HOLOCENE – MILLINGSTONE HORIZON

In California, there is evidence for a gradual transition beginning roughly 8,000 years ago toward a broader array of subsistence patterns and lifeways (Byrd 2011). This period was originally termed the MSH by Wallace (1955) and subsequently renamed the Encinitas Tradition by Warren (1968; see also Sutton and Gardner 2010). The term “Pauma complex” has come to represent this culture expression at inland sites to this period and it essentially is the same as the coastal La Jolla complex without shellfish remains (True 1980; True and Beemer 1982). The Middle Holocene was also a time of cultural developments as formation of larger settlements increased, long-distance trade networks intensified including distinct cultural spheres throughout western North America, and the elaboration of art and personal aesthetics (e.g., shell and stone pendants and increasing variety of shell bead types and styles) (Erlandson and Glassow 1997; Glassow 1997; Howard and Raab 1993; Jenkins and Erlandson 1996; King 1990; Raab and Howard 2002; Vellanoweth 2001).

The MSH of Wallace (1955, 1978) and Encinitas Tradition of Warren (1967) extend from ca. 8,000 to 5,000 B.P. (6000–3000 B.C.) and are characterized by an ecological adaptation to collecting a wider variety of resources with subsistence strategies centered on the collection of plant foods and small animals. This horizon is also characterized by the dominance of the principal ground stone implements generally associated with the horizontal motion of grinding small seeds; namely, milling stones (metates, slabs) and hand stones (manos, mullers). Additional ground stone technologies such as the mortar and pestle, which are associated with the vertical motion of pounding foods such as acorns, were introduced during this phase but are not common. Milling stones begin to occur in large numbers toward the end of the Early Holocene and are even more numerous in the latter part of this complex, which extends into the Middle Holocene period. During these cultural phases, hammer stones and other chopper tools, a variety of scrapers including

scraper planes, and expedient flake cutting tools are abundant and generally made from locally available lithic materials. Kowta (1969) attributes the presence of numerous scraper-planes in MSH sites to the preparation of agave or yucca for food and/or fiber. More recent studies indicate that MSH food procurement strategies varied temporally and spatially and were able to support larger populations than previous periods (Byrd and Raab 2007; Glassow et al. 2007).

Recent radiocarbon dating of materials from classic MSH sites indicates this adaptation was in place by around 8,400 B.P. (e.g., Dallas 2004; Green and Fitzgerald 2019) arising during the end of the Early Holocene when global climate was beginning to slowly stabilize, and sea levels continued to encroach on coastlines. Set during the warmer and drier climatic regime of the Altithermal, this period is characterized by subsistence strategies centered on collecting a wide variety of plant foods and small animals. The importance of seed processing is apparent in the dominance of stone grinding implements (i.e., manos and metates) in archaeological assemblages (Erlandson 1991, 1994; Moriarty 1966; Warren 1967). In addition to the extensive use of milling stones and mullers, MSH assemblages are characterized by a general lack of finely crafted projectile points, though leaf-shaped points believed to be darts for atlatls are present. The variety of site types from this period indicate a mobile settlement pattern, and recent research indicates that food procurement strategies varied temporally and spatially, reflecting divergent and specific responses to varying localized coastal and inland environmental conditions through time (Byrd and Raab 2007).

The Middle Holocene along coastal San Diego County is generally characterized by a primary reliance on shellfish, fishing in rocky near-shore areas and kelp beds, heavy exploitation of lagoons, seed gathering, and some terrestrial hunting (Sutton and Gardner 2010). Animal bones tend to be rare at Middle Holocene sites, reinforcing Wallace (1955) and Warren's (1968) idea that hunting was not very important during this period. However, it is now understood that taphonomic (i.e., Gallegos and Kyle 1998) and other factors including archaeological testing protocols (i.e., screen size) (Sutton 1993) may be contributing to the perceived paucity of faunal bones in sites from this period and it is possible that hunting may have been more important than previously thought. Middle Holocene sites in coastal San Diego County are typically located on terraces around lagoons or bays, which are highly productive habitats for a variety of mollusks and fish species (e.g., Byrd and Raab 2007; Gallegos 1992, 2002; Masters and Gallegos 1997; Moratto 1984; Warren et al. 2008).

At inland San Diego County, site assemblages dated to the Middle Holocene are markedly different from those from the preceding San Dieguito complex, being more generally similar to the assemblages observed on the coast, except for shellfish remains, which are only rarely present at inland sites (True 1980; see also Warren et al. 2008). Middle Holocene components are documented in many areas of San Diego County (e.g., San Luis Rey River, Valley Center, Escondido, San Marcos, Green Valley, and Santa Margarita River), and exhibit similarity in artifact assemblages as well as environmental contexts, with a tendency for sites from this period to be situated in montane settings.

Middle Holocene sites in the interior of San Diego County are characterized by a high frequency of shaped manos, a predominance of basin metates over slab metates, and cobble tools, as well as occasional scrapers, discoidals, and stone balls (see Sutton and Gardner 2010; see also McCown 1955). Flaked stone artifacts (e.g., knives and projectile points) are relatively uncommon, and bedrock mortars, pottery, and small triangular projectile points are less common than would be expected (True and Beemer 1982; True and Pankey 1985; Warren et al. 1961).

Characteristic mortuary practices during the Middle Holocene period include extended and loosely flexed burials, some with red ochre and a few grave goods, like shell beads and milling stones, interred beneath cobble, or milling stone cairns that may include "killed" milling stones (i.e., containing holes). Reburials are common in sites attributed to Middle Holocene sites in the San Diego County area. Koerper and Drover (1983) suggest that millingstone sites represent evidence of migratory hunters and gatherers who used

marine resources in the winter and inland resources for the remainder of the year. Subsequent research indicates greater sedentism than previously recognized.

1.2.2.4 THE LATE HOLOCENE – LATE PREHISTORIC

The Late Holocene includes a proliferation of cultural traditions in Southern California. The earliest part of the Late Holocene archaeological record for California is generally defined by Horizon III or the Upper Archaic period, which extended from roughly 3,000 to 1,500 B.P. (1000 B.C. to A.D. 500), followed by Horizon IV or the Late Prehistoric period, which encompasses ca. 1,500 B.P. to the time of Historic Contact (A.D. 500 to Historic). Overall, the Late Holocene regional record is characterized by larger populations, and often high population densities, inhabiting larger and more permanent settlements, many of which were located along the Southern California coast including San Diego Bay, Mission Bay, Penasquitos Lagoon, San Elijo Lagoon, Santa Marguerita River (Byrd and Raab 2007), and inland areas.

During the latter part of the Late Holocene (ca. 1300 B.P. to historic contact), a material-culture pattern similar to that of ethnographic Native American groups likely developed. The economic pattern during this period appears to be one of more intensive and efficient exploitation of local resources that required more time and effort to acquire and process (Byrd and Raab 2007). The prosperity of these highly refined economic patterns is well evidenced by the numerous Kumeyaay habitation sites scattered throughout San Diego County, along with the ephemeral satellite sites representing short-term encampments for specialized subsistence pursuits (Byrd and Raab 2007). This increase in site density probably reflects both better preservation of the more-recent archaeological record and a gradual population increase within the region. Artifacts and cultural attributes reflecting this Late Holocene pattern include small projectile points, pottery, the establishment of permanent or semipermanent seasonal habitation sites, a proliferation of acorn-processing sites in the uplands, the presence of obsidian from Obsidian Butte, the Imperial Valley source, and interment by cremation. Late period cultural patterns were shared with groups along the northern and eastern periphery of San Diego County, specifically between Kamia, Cahuilla, Quechan, and Kumeyaay cultures.

A concomitant increase in the diversity and complexity of material culture during the Late Prehistoric is demonstrated by more classes of artifacts in use. The increased use of the bow and arrow rather than the atlatl (spear thrower) and dart for hunting is inferred from the high densities of small, finely crafted projectile points, usually stemless with convex or concave bases. The changes in material culture, burial practices, and subsistence strategies at the beginning of the Late Prehistoric period are considered the result of a migration to the coast of peoples from inland desert regions to the east.

In addition to the small triangular and triangular side-notched points similar to those found in the desert regions in the Great Basin and Lower Colorado River, Colorado River pottery and the introduction of cremation in the archaeological record are diagnostic of the Yuman Tradition in the San Diego region. This combination suggests a strong influence from the desert region. Their influence extended northward to about the Los Angeles–Ventura County line (excluding the Chumash) and southward to approximately Agua Hedionda Lagoon. South of that lagoon were Yuman-speaking people who were apparently not displaced by the Takic migration. There was also an increased emphasis on plant collecting and processing during this period, as well as an expansion of trade networks.

Mortar and pestle use continued and was critical to exploitation of the acorn as a food resource. Since large quantities of acorns were available, which could be stored for long periods of time, the impact on local populations was significant. The emphasis shifted from the immediate coastal regions to upland areas to the east containing the most favored oak species. This shift in emphasis was probably driven in part by changing environmental conditions. The rate of sea level increase had slowed dramatically, and the stable levels meant that lagoons and estuaries began to silt up and degrade marine resources previously exploited.

Thus, the change in emphasis from coastal to inland regions was probably driven not only by the appearance of a new technology such as pottery and the bow and arrow, but also by natural degradation of what had been staple resources.

Two different cultural complexes have been defined during the Late Prehistoric for San Diego County: the San Luis Rey complex in the north, and the Cuyamaca complex in the south (True 1966 True et al. 1974). Likely the Cuyamaca complex is associated with the Hokan-based, Yuman-speaking peoples (Kumeyaay) and the San Luis Rey complex is associated with the Takic Shoshonean-speaking peoples (Luiseño). The main distinguishing characteristics of the Cuyamaca complex, compared to the northern San Diego County San Luis Rey, are a wider range of ceramic forms, including specialized forms, a steatite object industry, cremations placed in urns, as well as higher frequencies of grinding implements, ceramics, flaked stone tools, Obsidian Butte obsidian, and side-notched projectile points. These features point to strong ties with the eastern Colorado River cultures (Pigniolo 1998).

1.2.3 Ethnographic Overview

The Native American people in project area at the time of European contact were the Kumeyaay, also referenced as Diegueño, Tipai, or Ipai (Kroeber 1925; Luomala 1978). This report uses Kumeyaay when referring specifically to the people from southern San Diego County.

1.2.3.1 LINGUISTICS SUMMARY

Linguistic studies have led to separation of the Kumeyaay into the Ipai and the Tipai groups (Carrico 1983). The boundary between these groups is the San Diego River, with the group north of the river referred to as the Ipai and the group south of the river as the Tipai. However, likely this boundary was more porous than Carrico (1983) argued, and the distinction between these two groups existed as a gradient rather than a clearly divided separation between cultural and political units (Hohenthal 2001).

The project area was inhabited by the Tipai, who spoke a language broadly designated Kumeyaay, which belongs to the Yuman language family. The Yuman family of languages is derived from the American Southwest, whereas the Takic family can be traced to the Great Basin area (Driver 1969). Linguistic analysis of the Luiseño, Cupeño, Cahuilla, and other Takic languages has suggested that these speakers settled between the Kumeyaay and Chumash sometime after 500 B.C. The implication is that the entire Southern California coastal region was once filled with these Chumashan and Yuman speakers who were gradually separated and displaced by Takic-speaking migrants from the Great Basin area (Kroeber 1925:578–579). The timing, extent, and impact on local societies of the migration has been debated, and any data related to it represent an important contribution to the understanding of Southern California prehistory, as summarized by Sutton (2009).

Approximately 10 aboriginal languages belonging to the Yuman linguistic family were spoken by the Kumeyaay, Cocopa, and Quechan groups of Southern California, western Arizona, and northern Baja California (Laylander et al. 2014). The Yuman linguistic branch is linked with the now-extinct Cochimi language family, which occurred in central Baja California. The Yuman linguistic family may have belonged to a Hokan phylum, which consists of language families across the perimeters of California and extends into western Mexico (Golla 2007; Laylander 1997, 2010).

Linguistic divisions within Kumeyaay use at least three distinct languages: Ipai in the north; Kumeyaay proper in the central and eastern portion; and Tipai in the south and within northern Baja California (Laylander et al. 2014). Use of the Kwatl language in the south, near Santa Catarina in Baja California, is distinct. In some cases, researchers have determined these variances within the Kumeyaay group as occurring at the level of dialects instead of languages (Laylander 2010).

1.2.3.2 SETTLEMENT AND DEMOGRAPHY

Traditional Kumeyaay territory stretched from the San Diego coast to just beyond the eastern edge of the Salton Basin. Kumeyaay in the Peninsular Range were often referred to as Southern or Eastern Kumeyaay; Kumeyaay within what is now Imperial Valley are the Kamia. These two groups were distinct, notably due to their ecological settings (Laylander 2010; Laylander et al. 2014).

The Kumeyaay inhabited the region along the Pacific coast from central San Diego County, around Agua Hedionda Lagoon, south to a point below Ensenada and Todos Santos Bay in Baja California, Mexico. Their territory stretched inland throughout the Cuyamaca and Laguna Mountains into the Yuha and Anza Borrego Deserts of Imperial County. Given this, they lived in varied environments, including mountain biomes, riparian environments, foothill grasslands, sagebrush chaparral, and desert ecosystems. They also had connections with other Yuman-speaking social groups along the Colorado River and into Baja California. The area around the Tijuana and San Diego Rivers provided some of the best resources within Kumeyaay lands, supporting population concentrations in southwestern San Diego County.

The Kumeyaay population was originally estimated at 3,000 in total, but as Luomala (1978:596) pointed out, this figure was derived from Franciscan mission records at San Diego that did not consider unbaptized persons nor those in Baja California who went to other missions; an estimate of roughly 9,000 people is more appropriate. The Kumeyaay inhabited the bulk of these lands and therefore accounted for the greater part of the population.

Populations east of the San Diego Mountains into Imperial County are referred to as Kamia (Carrico 2006; Laylander et al. 2014). The term Kumeyaay was originally adopted by Tipai, specifically in the Campo and La Posta region of eastern of San Diego County (Hedges 1975). The eastern Kumeyaay include those Native American groups that inhabit or at one time resided in southeastern San Diego County on the Campo, La Posta, Manzanita, Cuyapaipe, and La Laguna reservations (Van Wormer 1986).

Kroeber (1925) described the Kumeyaay as "…divided into exogamous patrilineal clans." He further stated that the local clan system was rudimentary, without totemic moieties or names. Kroeber identifies 12 clans in the Ipai area and 13 clans in the Tipai area. Each band or clan was autonomous and had a clan chief and at least one assistant chief. The chief was responsible for the bulk of intra-clan and inter-clan affairs. They directed ceremonies, gave advice about marriages, resolved disputes, hosted visitors, and appointed leaders for expeditions. At that time, the position of chief was hereditary to the eldest son, but could fall to brothers, or in rare cases a widow.

The *šimuł* or patrilineage (also sometimes referred to as a sib, clan, or band) has been recognized as the key social unit. *Šimułs* were named, patrilocal, exogamous, localized, land-owning entities with hereditary or elected *kwaipais* (headmen) (Gifford 1918, 1926; Hicks 1963; Luomala 1963, 1978; Meigs 1939, 1971, 1972; Michelsen 1991; Owen 1965; Shipek 1982; Spier 1923). However, community membership was fluid, with *šimułs* sometimes distributed in multiple communities and multiple *šimułs* sometimes sharing the same community territory (Laylander et al. 2014).

In contrast to the western Kumeyaay, the eastern Kumeyaay were organized into exogamous patrilineages that were not localized (Laylander et al. 2014). Many Kumeyaay living to the west were also members of these same lineages, leading Gifford (1918, 1931:301) to conclude that the Kamia were desert Kumeyaay who had assimilated many aspects of River Yuman culture. Lineage identification with specific locations was often related to the settlement preferences of individual families who moved as lineage segments, rather than indicative of lineage territoriality (Laylander et al. 2014). Each clan or *šimuł* was named after a plant, animal, or natural object, but this name was borne only by female members (Gifford 1918).

There were no clan leaders, and the clans did not have special ceremonial or sociopolitical functions. Clan members were not localized at specific rancherias, which instead contained members of several different clans. Each localized rancheria or band recognized a leader (*pi'pa taxa'n*) who was called on to settle disputes, be responsible for the social and economic welfare of his people, decide on seasonal moves, and determine when to relocate the entire rancheria. His position was achieved through dreaming, force of character, and demonstrated ability. Each tribal group also recognized a paramount chief (*kwoxot*).

Like the western Kumeyaay, eastern Kumeyaay groups expanded or contracted their band territories in the face of shifting food abundance or population size. They fused into larger, multi-band settlement groups or separated into dispersed living units when environmental conditions demanded, continuing within a system of clan-specific territories. Exogamous marriage rules permitted friendly accommodation if one clan experienced localized environmental stresses in response to basic ecological adaptations to horticulture along the Colorado River's shifting floodplain. Arable farmland shifted in size and location after each flood cycle, requiring more residential mobility and ability to move as needed within the larger tribal territory (Laylander et al. 2014). Eastern Kumeyaay managed the landscape, cultivating native grains, burning stubbles, and casting seeds well into the 1880s in inland mountain locations far removed from the mission establishments near the coast (Shipek 1993).

Summer settlements, though visited each year by the same families and clans, featured structures, like ramadas and windbreaks built against trees and rock shelters, that did not have to hold up for long periods or protect against inclement weather. When a summer settlement was within an oak grove or more frequently visited location, it would sometimes include granaries (Loumala 1978).

Dwellings in the more permanent winter villages were semi-subterranean and oval or circular in shape. They were made of a wooden pole framework covered with brush thatch of grass and earth. The floors were generally dug into the ground, and there were usually two low entrances to the structure, each placed in such a way as to avoid the wind and insulate the structure as much as possible. The main entrance was often gabled, had a mat covering to keep out the wind and ensure privacy, and ritually faced the east (Luomala 1978:597). A smoke hole was usually placed near the peak of the roof on the east side of the structure.

Other structures in a winter village consisted of granaries for each family, which most frequently were platform supported. Village members constructed ceremonial enclosures from brush or a rock wall to surround ceremonial and dance areas. Occasionally, these areas were rectangular, or even covered with a brush roof. Village members used semicircular enclosures for the keruk mourning ceremony. Sweat lodges were not common.

1.2.3.3 ETHNOBOTANY

The Kumeyaay territory is a geography of contrasts with a diversity of habitats and ecosystems. This diversity provided both opportunities and limitations for the indigenous inhabitants (Wilkin-Robertson 2018). Due to the availability of different resources during certain times of the year, the Kumeyaay moved between resource zones to take advantage of these seasonal shifts. Winter villages were in lowland areas such as sheltered valleys, near reliable sources of water, and housed an entire clan or more.

The Kumeyaay depended heavily on the acorns that had been gathered during the late summer and stored in the family and village granaries. During the late spring and summer, smaller groups would forage in favored spots, usually at progressively higher elevations, such as those found in the project area, as various floral resources ripened. In the early fall, people would move to mountain oak groves, then return to the lower elevation settlements prior to the onset of winter. The Kumeyaay exploited a wide variety of vegetal resources (Luomala 1978:601); see Appendix A (Bajacalifology 2014, as cited in Laylander et al. 2014).

Floodplain agriculture played an important role on the lower Colorado River and its southern delta, to the east of the project area, accounting for 30 percent or more of the aboriginal diet (Castetter and Bell 1951; Driver 1957). This agriculture focused primarily on corn (*Zea mays*), tepary beans (*Phaseolus acutifolius*), and squash (*Cucurbita* spp.), but it included other crops as well. According to Gifford (1931), the Kamia who lived on the flood channels extending west and northwest from the Colorado River also practiced pre-contact agriculture. The issue of possible Kumeyaay agriculture in the mountains, inland valleys, and coastal plains west of the Colorado Desert lowlands has been disputed. Gifford (1931:22) asserted that irrigation agriculture was practiced in Jacumba Valley, approximately 10 miles east of the project, independently of Hispanic influences up until the middle of the nineteenth century. Additional claims for aboriginal agriculture in western Yuman-speaking areas have been made by Forbes (1963), Bean and Lawton (1973), and Shipek (1989, 1993). However, the validity of the evidence for western Yuman agriculture has also been challenged (Laylander 1995).

1.2.3.4 ANIMAL RESOURCES

Animal resources also played prominent roles in Kumeyaay subsistence and material culture. Most men hunted, but only a select few were big game hunters (Luomala 1978:601). Hunting was highly ritualistic, with the aim of the rituals and observances being to ensure a successful hunt. From coastal locations resources could be gathered—fish, shellfish, and migratory birds coming into the estuaries, as well as small game along the mesas and foothills. Small game and seasonal herbs flourished in the valleys and canyons during the winter rainy season. Insects were gathered when available and served as an important source of protein. Significant large game animals included mule deer (*Odocoileus hemionus*), bighorn sheep (*Ovis canadensis*), and pronghorn (*Antilocapra americana*). Black-tailed jackrabbit (*Lepus californicus*), rabbit (*Sylvilagus* spp.), and woodrat (*Neotoma* sp.) were also important. The only domesticated animal, the dog (*Canis familiaris*), was used as a hunting aide (Laylander et al. 2014). Ethnographic accounts confirm the use of at least 16 species of land mammals, 13 species of birds, four reptile species, and two species of land invertebrates; see Appendix B (Bajacalifology 2014, as cited in Laylander et al. 2014).

Additional fish and fowl species are documented archaeologically from sites along the Lake Cahuilla shoreline (Gobalet and Wake 2000; Laylander 1994). Fish include bonytail (*Gila elegans*), razorback sucker (*Xyrauchen texanus*), Colorado pike minnow (*Ptychocheilus lucius*), machete (*Elops affinis*), and striped mullet (*Mugil cephalus*). Prominent migratory waterfowl include American coot or mudhen (*Fulica americana*), lesser scaup (*Aythya affinis*), and canvasback (*Aythya valisineria*) (Laylander et al. 2014).

1.2.3.5 OTHER ECONOMIC RESOURCES

Lithic and clay (ceramic) procurement strategies were also important to the Kumeyaay (Gifford 1931:24–25; Heizer and Treganza 1944; Hohenthal 1950, 2001; Laylander et al. 2014). Lithic material comprises the largest portion and most highly visible component of archaeological sites. Ceramics, ground stone tools and flake stone tools were very important aspects of food production (Shackley 1984). These highly visible data are virtually unreported in Kumeyaay ethnographies; however, the Kumeyaay were familiar with a wide range of lithic sources available throughout the territory (Shackley 1981). Lithic resources of quartz and volcanic rocks were commonly available. Other raw materials, such as obsidian, cryptocrystalline silica, and steatite occur in more localized areas. Pigments include manganese, hematite, white clay and possibly limonite, creating "a yellowish pigment" (Hohenthal 1950:13). Since Hohenthal's Kumeyaay informants were Peninsular Range residents, their ceramic classification system applied to residual clays, the material used in Tizon brownware. Although the Baja Kumeyaay recognized the sedimentary buffwares, there was no category for them (Hohenthal 1950:13).

Ceramic production was important to the Kumeyaay. The skill needed to make pottery allowed for part-time specialization by some women (Cuero 1970:36; Lee 1937). Pottery became a commodity explaining

the presence of buffwares constructed in the Colorado Desert that have been found in mountain and coastal sites (Shackley 1981; Shipek 1982). Rogers (1936:2) expressed the level of ceramic production among the Kumeyaay as follows: "In certain parts of the Yuman area, such as the western margin of the Colorado Desert, the per capita production of pottery at one time was equal to that of the Puebloan." Brownwares are characterized by their color, surface treatment, and manufacturing techniques. Archaeological evidence suggests that ceramics were widespread throughout the Southwest and adapted to local environmental conditions and resources (Panich and Wilken-Robertson 2013).

There are several ceramic types that have been identified in the area, but most occurrences in the area fall into two main types: Tizon brownware and Salton brownware. Tizon brownware was manufactured from residual clays originating from weathered granite from the surrounding Peninsular mountains (Hildebrand et al. 2002), and likely was the main ceramic type produced locally. Salton brownware was manufactured from clays that originate from the lower Colorado River region. Both brownwares were manufactured using both the paddle and anvil technique or coil method and look similar in appearance. Tempering agents for both types typically included local materials such as basalt, mica, granite, or other volcanic rock. Both brownwares were made into diverse vessel shapes, for both utilitarian and nonutilitarian purposes. Common vessel shapes included jars, bowls, cups, and canteens.

The clothing of the Kumeyaay was minimal. Men wore utilitarian belt sashes and pouches designed to hold tools and small game. Robes of rabbit, willow bark, or deerskin were worn in the winter and served as bedding. Women wore a one- or two-piece apron made of shredded bark, and a round, twined cap. Sandals woven from agave fibers were worn when traveling distances (Luomala 1978:599). Adornment was simple, but tattoos and pendants of various forms were used. Women had facial tattoos and frequently painted their faces with various red, black, and white designs, but male tattooing and facial painting may not have been common until after the arrival of Europeans (Luomala 1978:599).

1.2.3.6 RELIGION

Kumeyaay religion underwent rapid modification during the early historic era. The modifications resulted, in part, from the introduction of toloache customs arriving from the north. *Toloache* was a hallucinogen derived from the jimsonweed (*Datura* spp.) plant and was used in seeking visions or to develop latent skills. People considered some shamans to have been born as such, whereas others were trained. Shamans were involved in many aspects of daily life, including weather control and curing (Shipek 1985).

Kuchamaa, also known as Tecate Peak and located approximately 25 miles west of the project area, is of paramount religious importance to the Kumeyaay people of today as it was to those of the past (Robinson 2017). The mountain has significance to Native Americans from both Southern California and northern Baja California (Voigt 1990). The peak is a special place that marks the location for acquisition of knowledge and power by shamans. Oral tradition tells of important shamans who used *Kuchamaa* as a center to instruct their initiates (Robertson 1982, as cited by Shipek 1985). "Imbued with power by one of the Kumeyaay creator-gods, the mountain was and remains the site for important rites and rituals, including vision quests and purification ceremonies. Contemporary Native Americans most frequently use *Kuchamaa* during periods of full moon and equinoxes" (Shipek 1985).

1.2.3.7 RESERVATION SYSTEM

There are 13 federally recognized bands in the Kumeyaay Nation consisting of Barona, Campo, Capitan Grande (an unoccupied reservation that is part of the Barona Band), Ewiiaapaayp, Inaja Cosmit, Jamul, La Posta, Manzanita, Mesa Grande, San Pasqual, Santa Ysabel, Sycuan, and Viejas. There are also numerous Kumeyaay tribal organizations that are not federally recognized but are recognized by the State of

California. The indigenous coastal groups were heavily impacted by the Spanish conquest and were subject to control under the Spanish mission system.

Whereas Native Americans along California's coast came under control of the Spanish mission system, the eastern Kumeyaay remained more isolated from the Spaniards, who did not easily penetrate San Diego County's mountainous back country (Van Wormer 1986). During the 1870s, the U.S. government established reservations for Native Americans who had lived on the missions. However, the eastern Kumeyaay were not recognized by the federal government and were left on their own to deal with Euro-American encroachment of their homeland. Eventually, the Bureau of Indian Affairs created reservations for the eastern Kumeyaay during the early part of the twentieth century. Regardless, these groups still received less attention than those in western San Diego County. Although they experienced drastic acculturation, Native Americans of eastern San Diego County still retained their identity as a unique people (Van Wormer 1986).

1.2.4 Historic Overview

The post-contact history of California is divided into three periods: the Spanish (1769–1822), Mexican (1822–1848), and American (1848–present) periods. The Spanish period began with the establishment of a mission and presidio (fort) in San Diego in 1769. Twenty-one missions were constructed in California between 1769 and 1822. The Mexican period began with independence from Spain and ended with the signing of the Treaty of Guadalupe Hidalgo in 1848. The American period began with the end of the Mexican–American War and included California becoming a territory of the United States. The following sections provide a brief overview of each period.

1.2.4.1 SPANISH PERIOD (1769–1822)

Some of the first expeditions by Spanish explorers along the southern coast of California occurred between the mid-1500s and the mid-1700s. Juan Rodríquez Cabrílloo was searching for the legendary Northwest Passage when he landed in 1542 in what is known today as San Diego Bay. Although the first European contact occurred in 1542, it was not until 1769 that Franciscan missionary Father Junípero Serra established the Mission San Diego de Alcalá at Presidio Hill, following the directive of the King of Spain that the Franciscan Order would direct religious and colonial matters in the American territories. The Mission San Diego de Alcalá was the first of 21 missions established in Alta California between 1769 and 1822 (Pourade 1960–1967).

Captain Juan Bautista de Anza was the first to establish overland connections between California and Mexico. In 1774, he led a group of 34 padres, soldiers, and others across the Colorado River into the present-day Imperial Valley. Father Francisco Garcés charted the route in 1770 and led de Anza through present-day Imperial County along the Alamo River drainage. The expedition continued northwest, traveling into present-day Riverside County through the Cahuilla Valley, following the Santa Rosa Mountains and continuing through Coyote Canyon and San Jacinto Valley, eventually ending up in Monterey Bay. De Anza led another expedition along the same route in 1775 with a larger group and continued all the way to San Francisco Bay (Guerrero 2006; Pourade 1960–1967).

After the expeditions of de Anza, several missions were established in the 1770s as far north as San Francisco. The 21 missions were parallel to the California coastline between present-day San Diego and Sonoma, with the coastline positions easy to defend and supply by ships. The missions were also placed near large populations of Native Americans (potential converts). The roadway connecting the missions became known as "El Camino Real," with the current Interstate 5 and U.S. Route 101 generally following the old road's footprint. Only three fortified posts were established in Alta California in addition to the

Presidio of San Diego: the Presidio of Monterey was established in 1770, the Presidio of San Francisco in 1776, and the Presidio of Santa Barbara in 1782 (Pourade 1960–1967).

Following the establishment of the presidio at San Diego and the Mission San Diego de Alcalá, the conversion and physical removal of the Kumeyaay from their territory negatively impacted their lifeways and traditional subsistence strategies (Carrico 2006). Many of the native inhabitants of the valley eventually worked for the mission, but there was a feeling of federation seen among other Southern California native groups (Shipek 1987:5). This was dramatically expressed in a revolt against the Spanish soldiers and priests in A.D. 1775 when hundreds of warriors from a score of villages reaching from the Pacific Coast well into the Yuha Desert combined forces and coordinated a night attack. Afterward, the inland *kwaaypaay* jointly organized lookouts to warn of Spanish reprisal expeditions. There was also a *kuuchult kwaataay*, a leader who, when the need arose, was responsible for interaction with other tribes (Shipek 1982:301).

Unrest among the local Native Americans, the threat of foreign invasion, and political dissatisfaction kept local growth around the San Diego mission to a minimum until Mexico gained freedom from Spain in 1822. Only then did development occur beyond the walls of the presidio in the area known as Old Town. As the missionaries had civil as well as religious authority over their converts, title to the land passed from the clans to the priests to hold in trust until such time the missionaries felt the Indians had sufficiently learned Spanish European ways of living and governing themselves. Before repatriation might have occurred, however, the colonial population of Mexican California had grown and the settlers demanded more and more of the "mission" lands. Many Indian neophytes left the mission grounds when in 1825 the Mexican government freed the Native Americans from mission control. When the missions were fully secularized in 1834–1836, even more neophytes left for work on the large cattle ranchos being carved out of the mission lands.

1.2.4.2 MEXICAN PERIOD (1822–1848)

After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade and decreed California ports open to foreign merchants (Pourade 1960–1967).

Extensive land grants were established in the interior during the Mexican period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. The secularization of the missions following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos. On July 25, 1826, Governor José María Echeandía issued a decree beginning the secularization of the California missions (Engstrand and Ward 1995). However, because many Native Americans failed to leave the missions, Echeandía issued a second decree on January 6, 1831, encouraging the Native Americans to do so.

In August 1834 secularization became official under Governor Jose Figueroa. The loss of labor caused by secularization forced missions into a period of neglect and decline. This decline accelerated the transition to American control in the 1840s (Pourade 1960–1967).

During the peak of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary Southern California export, providing a commodity to trade for goods from the east and other areas in the United States and Mexico. The number of non-Native American inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of

diseases foreign to the Native American population, who had no associated immunities (Pourade 1960–1967).

1.2.4.3 AMERICAN PERIOD (1848–PRESENT)

War in 1846 between Mexico and the United States began at the Battle of Chino, a clash between resident Californios and Americans in present-day San Bernardino County, California. This battle was a defeat for the Americans and bolstered the Californios' resolve against American rule, emboldening them to continue the offensive in later battles at Dominguez Field and in San Gabriel. However, this early skirmish was not a sign of things to come, and the Americans were ultimately the victors of this 2-year war. The Mexican–American War officially ended with the Treaty of Guadalupe Hidalgo in 1848, which resulted in the annexation of California and much of the present-day Southwest, ushering California into its American period (Pourade 1960–1967; Rolle 1998).

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. territories. Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the Southern California economy through the 1850s. The Gold Rush began in 1848, and with the influx of people seeking gold, cattle were desired not only for their hides but also as a source of meat. During the 1850s cattle boom, rancho vaqueros drove large herds from Southern to Northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for Southern California as neighboring states and territories drove herds to Northern California at reduced prices. Flooding that began in the Central Valley of California in December 1861 was followed by 2 years of severe drought and played a role in ending the cattle boom. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 1941; Wade et al. 2009).

1.2.5 Records Search Results

On October 19, 2021, SWCA requested a confidential search of the CHRIS records at the SCIC, located on the campus of San Diego State University. The SCIC maintains records of previously documented cultural resources and technical studies; it also maintains copies of the Office of Historic Preservation's portion of the Historic Resources Inventory. The search included any previously recorded archaeological resources within the project area and surrounding 1-mile area. The purpose of the CHRIS records search is to identify whether any archaeological resources have been documented in the project area and assess the potential for undocumented resources to be present by comparison to adjacent areas. Confidential CHRIS results include specific information on the nature and location of sensitive archaeological sites, which should not be disclosed to the public or unauthorized persons and are exempt from the Freedom of Information Act. Appendix C contains a map of resources in the records search results.

1.2.5.1 PREVIOUS STUDIES

Results of the cultural resources records search at the SCIC indicate that 58 cultural resource studies have been conducted in and within the project area and 1-mile radius. Of these, 18 intersect some portion of the project area. Details of the reports are described below in Table 3.

Table 3. Previous Cultural Resources Studies

Report No.	Author / Affiliation	Year	Study Title	Relationship to Project Area
SD-00520	Cupples, Sue Ann / Advanced Planning & Research Associates	1977	Archaeological Survey Report for the Crosswhite Lot Split near McCain Valley, San Diego County	Outside
SD-00914	**Flower, Douglas M., Darcy Ike, and Linda Roth / Flower, Ike & Roth Archaeological Consultants**	**1980**	**Archaeological and Biological Investigations of the Westover Project Boulevard, California**	**Within**
SD-01001	**Fulmer, Scott / Advance Planning & Research Association**	**1977**	**Archaeological Reconnaissance of the Valley of the Jewells Campground**	**Within**
SD-01267	Johnson, Melissa J. / San Diego State University	1976	An Archaeological Inventory and Assessment of Corridor Segments 46 and 49, Preferred Southern Route, San Diego County	Outside
SD-01495	Ritter, Eric W. / Department of the Interior, Bureau of Land Management	1974	Boundary Peak Burn Archaeological Survey	Outside
SD-01500	Wade, Sue A. / Recon	1985	SDI-4470 Archaeological Assessment	Outside
SD-01588	Wirth Associates, Inc. / Wirth Associates, Inc.	1981	Miguel to Mountain Springs Grade (Jade) Archaeological Survey Report	Outside
SD-02268	Berryman, Judy, and Mary Lou Heuett / Qeact	1982	Archaeological Phase II Study on Seven Sites Located on the Halabu Parcel	Outside
SD-03068	Smith, Brian, and Stephen Burke / Brian F. Smith and Associates	1994	Results of an Archaeological Survey and Evaluation of Cultural Resources at the Immel Lot Split Project	Outside
SD-03836	Townsend, Jan / Wirth Environmental Services	1984	Southwest Powerlink Cultural Resources Management Plan	Outside
SD-04423	Wirth Associates, Inc. / Wirth Associates, Inc.	1982	Draft: SDI-4470 Data Recovery Program	Outside
SD-04573	McDonald, Meg / ASM Affiliates, Inc.	1997	Archaeological Survey of a Portion of Old US Highway 80/State Route 94 through Manzanita, San Diego County, California	Outside
SD-04748	Smith, Brian / Brian Smith & Associates	1994	Results of an Archaeological Survey and Evaluation of Cultural Resources at the Immel Lot Split Project	Outside
SD-05537	Wade, Sue / Sue Wade	1999	Archaeological Resources Review Erdman Tentative Parcel Map	Outside
SD-06497	Bureau Of Land Management / Bureau of Land Management, California Desert District		Archaeological Site SDI-4470 (includes SDI-4468 and SDI-5163)	Outside
SD-06758	Wirth Associates, Inc. / Wirth Associates, Inc.	1982	Draft-Data Recovery Program SDI-4470, 4468, 5163	Outside
SD-08282	Rosen, Martin / Lortie Frank	2001	Historic Property Survey Report for Old Highway 80, San Diego County, CA	Outside
SD-08422	Clifford, James, and Brian F. Smith / Brian F. Smith and Associates	2003	An Archaeological Survey for the Grizzle Project, McCain Valley TPM	Outside

Report No.	Author / Affiliation	Year	Study Title	Relationship to Project Area
SD-09980	Berryman, Stanley / Terramar International	1983	Cultural Resource Survey Report: Between Tierra Del Road and Jewell Valley Road	Outside
SD-10066	**Environmental Development Agency, County of San Diego / Impact Analysis Section, Environmental Development Agency**	**1975**	**Live Oak Springs Subregional Analysis and Draft Environmental Impact Report for TPM 10677, File No. 74-21-29201**	**Within**
SD-10551	**Arrington, Cindy / SWCA Environmental Consultants**	**2006**	**Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California**	**Within**
SD-10796	Smith, Brian F., and James Clifford / Brian F. Smith & Associates	2005	An Archaeological Survey and Testing Program for the Grizzle Project	Outside
SD-11373	Hector, Susan, Ken Moslak, and Drew Pallette / ASM Affiliates	2007	Archaeological Survey of Eastern San Diego County Roads, Trails, and Campgrounds	Outside
SD-11546	Rosenberg, Seth A., and Brian F. Smith / Brian F. Smith and Associates	2008	A Class III - Intensive Field Survey for the Gapfiller Project	Outside
SD-11741	Zepeda-Herman, Carmen / Recon	2008	Cultural Resources Survey of The ETS 7018, Wood to Steel Pole Tl6931, Boulevard Project, California	Outside
SD-11977	SWCA / SWCA	2008	Final Cultural Resources Survey of Alternatives for the Sunrise Powerlink Project in Imperial, Orange, Riverside, And San Diego Counties, California	Outside
SD-12421	Cook, John R., Deborah Huntley, and Sherri Andrews / ASM Affiliates, Inc.	2000	Final: A Cultural Resources Inventory of The Proposed AT&T / Pf. Net Fiber Optics Conduit Ocotillo to San Diego, California	Outside
SD-12711	Garcia-Herbst, Arleen, David Iversen, Don Laylander, and Brian Williams / ASM Affiliates	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	Outside
SD-13394	Clowery, Sara C. / HDR, Inc.	2011	ETS #21885, Cultural Resources Monitoring for the C-Truss Restoration, P41910, Boulevard Project, San Diego County, California (HDR #170400)	Outside
SD-13592	Rosenberg, Seth A. / E2M	2009	ETS #8150, Cultural Resources Survey of Three Prospective Remote Automated Weather Station (Raws) Projects on SDG&E Property, San Diego County	Outside
SD-14001	**Hale, Micah J. / ASM Affiliates**	**2011**	**Management Plan for Archaeological Monitoring, Post-Review Discovery, and Unanticipated Effects for the Tule Wind Project, McCain Valley, San Diego County, California**	**Within**

Report No.	Author / Affiliation	Year	Study Title	Relationship to Project Area
SD-14280	**Bowden-Renna, Cheryl / AECOM**	**2012**	**Letter Report: ETS 23794- Cultural Resources Survey for C445 Distribution Span, Jewell Valley Road, Boulevard, San Diego County, California - IO 7011102**	**Within**
SD-14412	Loftus, Shannon / Ace Environmental, Inc.	2012	Cultural Resource Records Search and Site Survey AT&T Site SD0717 Old Highway 80 41749 Old Highway 80 Boulevard, San Diego County, California 91905	Outside
SD-14926	**De Barros, Philip / Professional Archaeological Services**	**2014**	**A Forensic Cultural Resources Survey and Assessment of a 40-Acre Parcel South of Boulevard in Jewell Valley along Boundary Creek, San Diego County, California, APN 612-110-17 & 18**	**Within**
SD-15054	**Pigniolo, Andrew R., and Heather L. Kwiatkowski / Laguna Mountain Environmental, Inc.**	**2006**	**Cultural Resource Survey for the Elder Tentative Parcel Map Project, Boulevard, San Diego County, California**	**Within**
SD-16137	Price, Harry J., and Carmen Zepeda-Herman / Recon	2016	Draft Cultural Resources Survey Chapman Solar Ranch Project Boulevard, California	Outside
SD-16221	**Hale, Micah J., and Tony Quach / ASM Affiliates**	**2011**	**Final Addendum Class III Cultural Resources Inventory Report for the Tule Wind Project, McCain Valley, San Diego County, California**	**Within**
SD-16222	**Hale, Micah J., Brad Comeau, and Chad Willis / ASM Affiliates**	**2011**	**Final Class II and Class III Cultural Resources Inventory Report for the Tule Wind Project, McCain Valley, San Diego County, California**	**Within**
SD-16223	**Hale, Micah J. / ASM Affiliates**	**2011**	**Archaeological Testing and Evaluation of Site CA-SDI-4788, Tule Wind Project, McCain Valley, San Diego County, California**	**Within**
SD-16314	Cooley, Theodore G. / AECOM	2015	Letter Report: ETS 29980 - Cultural Resources Survey for Pole Replacement Activities for Pole P41146, West of the Community of Boulevard, San Diego County, California - IO 7074264	Outside
SD-16319	Cooley, Theodore G. / AECOM	2015	Letter Report: ETS 30103 - Cultural Resources Survey for Installation Activities for New Pole P254166, West of The Community of Boulevard, San Diego County, California - IO 7074264	Outside
SD-16443	Fulton, Phil / LSA Associates, Inc.	2015	Cultural Resource Assessment Class III Inventory Verizon Wireless Services Kumeyaay Facility, Community of Boulevard, County of San Diego, California	Outside
SD-16541	**Krintz, Jennifer, Shannon Davis, and Sinead Ni Ghabhlain / ASM Affiliates**	**2011**	**Draft Impacts Assessment for the SDG&E East County Substation Project, San Diego County, California**	**Within**

Report No.	Author / Affiliation	Year	Study Title	Relationship to Project Area
SD-16849	**Berryman, Judy, and Jim Whitaker / HDR**	**2010**	**Final Report Prehistoric Artifact Scatters, Bedrock Milling Stations and Tin Can Dumps: Results of a Cultural Resources Study for the SDG&E East County Substation Project San Diego County, California**	**Within**
SD-17594	**Williams, Brian, and Kent Manchen / ASM Affiliates, Inc.**	**2018**	**Archaeological Survey and Job Walk for the SDG&E 2017 C445 Firm Project, Section U, Campo, San Diego County, California (SDG&E ETS #35448 ASM Project #23004.32)**	**Within**
SD-17595	Manchen, Kent, and Brian Williams / ASM Affiliates, Inc.	2018	Archaeological Survey and Job Walk for the SDG&E 2017 C445 Firm Project, Section K, Campo, San Diego County, California (SDG&E ETS #35452 ASM Project #23004.24)	Outside
SD-17616	Leard, Daniel / HDR	2018	ETS 38132: Cultural Resources Monitoring Report for the QC Pole Replacement, P45068, Boulevard Project, San Diego County, California	Outside
SD-17659	**Scully, Pete / California Department of Forestry and Fire Protection**	**2018**	**Archaeological Survey Report Tule Jim Lane Fuel Break**	**Within**
SD-18290	**Hector, Susan, and Brian Williams / NWB Environmental Services; ASM Affiliates**	**2016**	**Historic Properties Management Plan/Historic Properties Treatment Plan for the Cleveland National Forest Master Special Use Permit and Permit to Construct Powerline Replacement Projects, Final Version**	**Within**
SD-18349	Leard, Daniel / HDR	2018	ETS #38155: Cultural Resources Monitoring Report for the QC, Pole Replacement, P45069, Boulevard Project, San Diego County, California	Outside
SD-18810	Manchen, Kent, and Michelle Dalope / ASM Affiliates	2020	Cultural Resources Survey for the San Diego Gas & Electric C444 Firm Project, Section B, Bankhead Springs, San Diego County, California (ETS # 40990, ASM Project #23007.06)	Outside
SD-18838	**Jordan, Amy / ASM Affiliates**	**2021**	**Archaeological Monitoring for TCM Access Roads, Annual Report 2020, San Diego County, California (ASM #23005.67)**	**Within**
SD-18863	Manchen, Kent, and Brian Williams / ASM Affiliates	2021	Cultural Resources Survey and Job Walk for the SDG&E C444 Firm Project, Section A, Bankhead Springs, San Diego County, California (SDG&E ETS #21682.06 ASM Project #23000.37)	Outside
SD-18926	Scully, Pete / California Department of Forestry and Fire Protection	2021	An Archaeological Survey Report for the Calexico Lodge Fuel Break Project, Noe, San Diego, California	Outside
SD-19076	Manchen, Kent, and Amy Jordan / ASM Affiliates	2021	Cultural Resources Survey for the San Diego Gas & Electric C445 Firm Project, Section L Covered Conductors Fast Track, Boulevard, San Diego County, California (SDG&E ETS #35456.03, ASM Project #33601.35)	Outside

Report No.	Author / Affiliation	Year	Study Title	Relationship to Project Area
SD-19077	Manchen, Kent / ASM Affiliates	2021	Cultural Resources Survey for the San Diego Gas & Electric C445 Firm Project, Section Q, Campo, San Diego County, California (SDG&E ETS #35444, ASM Project #23004.28)	Outside
SD-19092	Hector, Susan, and Joshua A. Tansey / NWB Environmental Services, LLC	2016	Archaeological Monitoring for the CMP Pole Replacement, P45511, Boulevard, San Diego County, California (SDG&E ETS #32146)	Outside
SD-19213	**Manchen, Kent, and Amy Jordan / ASM Affiliates**	**2021**	**Cultural Resources Survey for the San Diego Gas & Electric C445 Firm Project, Section D Covered Conductors Fast Track, Boulevard, San Diego County, California (SDG&E ETS #31243.02, ASM Project #33601.42)**	**Within**

Note: Bold rows indicate resources within the project area.

1.2.5.2 PREVIOUSLY RECORDED SITES IN THE SEARCH AREA

In total, 210 previously recorded cultural resources have been documented in and within the project area and 1-mile radius, twelve of which are located within the project area. Of the twelve resources, six are archaeological sites and six are isolated occurrences of cultural materials (isolates). These resources are summarized in Table 4.

Table 4. Previously Recorded Resources

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-027350	**CA-SDI-017873**	**Multicomponent**	**Mortar features and historic scatter**	**Museum of Man**	**2006**	**Within**
P-37-032037	**CA-SDI-020295**	**Historic**	**Historic trash scatter with cans and glass**	**ASM Affiliates**	**2011**	**Within**
P-37-033279	**CA-SDI-020946**	**Prehistoric**	**Lithic and ceramic scatter**	**Dudek**	**2013**	**Within**
P-37-033309	**N/A**	**Prehistoric**	**Lithic (isolate)**	**Dudek**	**2013**	**Within**
P-37-033501	**N/A**	**Prehistoric**	**Tizon brownware body sherd (isolate)**	**Professional Archaeological Services**	**2013**	**Within**
P-37-037612	**N/A**	**Prehistoric**	**One gray metavolcanic flake (isolate)**	**San Diego Gas and Electric**	**2018**	**Within**
P-37-010476	**CA-SDI-010476**	**Prehistoric**	**Dispersed lithic scatter**	**Archaeological Systems Management**	**1975**	**Within**
P-37-033310	**N/A**	**Prehistoric**	**Lithic (isolate)**	**Dudek**	**2013**	**Within**
P-37-033497	**CA-SDI-021067**	**Prehistoric**	**Ceramic and lithic scatter**	**Professional Archaeological Services**	**2013**	**Within**

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-033502	**N/A**	**Historic**	**Amethyst jar base (isolate)**	**Professional Archaeological Services**	**2013**	**Within**
P-37-033503	**N/A**	**Prehistoric**	**Basalt tertiary flake (isolate)**	**Professional Archaeological Services**	**2013**	**Within**
P-37-034159	**CA-SDI-021369**	**Prehistoric**	**Five milling features and lithic scatter**	**ASM Affiliates**	**2014**	**Within**
P-37-025680	N/A	Historic	Historic train tunnel / San Diego and Arizona (Eastern) Railroad	JRP Historical Consulting Services	2000	Outside
P-37-033280	CA-SDI-020948	Prehistoric	Lithic scatter	Dudek	2013	Outside
P-37-000087	CA-SDI-000087	Prehistoric	Seed and pottery scatter	ASM Affiliates	2012	Outside
P-37-000088	CA-SDI-000088	–	–	–	–	Outside
P-37-000089	CA-SDI-000089	–	–	–	–	Outside
P-37-004463	CA-SDI-004463	–	–	–	–	Outside
P-37-004466	CA-SDI-004466	–	–	–	–	Outside
P-37-004469	CA-SDI-004469	–	–	–	–	Outside
P-37-004471	CA-SDI-004471	–	–	–	–	Outside
P-37-004475	CA-SDI-004475	–	–	–	–	Outside
P-37-005558	CA-SDI-005558	Prehistoric	Lithic and ceramic scatter	ASM Affiliates	2021	Outside
P-37-005559	CA-SDI-005559	Prehistoric	Bedrock milling and small lithic scatter	ASM Affiliates	1959	Outside
P-37-005560	CA-SDI-005560	Prehistoric	Lithic and ceramic scatter	ASM Affiliates	1977	Outside
P-37-005561	CA-SDI-005561	Prehistoric	Milling station/tool manufacturing site	Dudek	2013	Outside
P-37-005562	CA-SDI-005562	Prehistoric	Lithic and ceramic scatter	ASM Affiliates	1959	Outside
P-37-005563	CA-SDI-005563	Prehistoric	Lithic scatter	ASM Affiliates	1959	Outside
P-37-005564	CA-SDI-005564	Prehistoric	Lithic and ceramic scatter	ASM Affiliates	1959	Outside
P-37-005933	CA-SDI-005933	Prehistoric	Milling station/tool manufacturing site	Paul G. Chace & Associates	1979	Outside
P-37-006894	CA-SDI-006894	Prehistoric	Diffuse lithic scatter	Paul G. Chace & Associates	1979	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-006895	CA-SDI-006895	Prehistoric	Bedrock milling features and lithic scatter	Paul G. Chace & Associates	1979	Outside
P-37-006896	CA-SDI-006896	Prehistoric	10 lithic flakes	Paul G. Chace & Associates	1979	Outside
P-37-006897	CA-SDI-006897	Prehistoric	Basalt and ceramic sherds	Paul G. Chace & Associates	1979	Outside
P-37-006898	CA-SDI-006898	Prehistoric	Three basalt flakes	Paul G. Chace & Associates	1979	Outside
P-37-006899	CA-SDI-006899	Prehistoric	Isolated milling slick	Paul G. Chace & Associates	1979	Outside
P-37-006900	CA-SDI-006900	Prehistoric	Bedrock with two mortars	Paul G. Chace & Associates	1979	Outside
P-37-006901	CA-SDI-006901	Prehistoric	Two basalt flakes and one brownware sherd	Paul G. Chace & Associates	1979	Outside
P-37-006902	CA-SDI-006902	Prehistoric	Milling site	Paul G. Chace & Associates	1979	Outside
P-37-006981	CA-SDI-006981	Historic	HP11 (engineering structure); HP19 (bridge); HP32 (rural open space); HP37 (highway/trail)	–	–	Outside
P-37-007004	CA-SDI-007004	–	–	–	–	Outside
P-37-007070	CA-SDI-007070	–	–	–	–	Outside
P-37-007072	CA-SDI-007072	Prehistoric	Lithic scatter	Burkenroad	1979	Outside
P-37-008217	CA-SDI-008217	Prehistoric	Lithic scatter	Ike	1980	Outside
P-37-008218	CA-SDI-008218	Prehistoric	Lithic scatter	Ike	1980	Outside
P-37-009175	CA-SDI-009175	Historic	Road grader	M. Donovan and A. Pierce	1975	Outside
P-37-010477	CA-SDI-010477	Prehistoric	Dispersed lithic scatter	Archaeological Systems Management	1975	Outside
P-37-017239	CA-SDI-015188	Historic	Historic dam	Heritage Resources	1999	Outside
P-37-017240	CA-SDI-015189	Unknown	Unknown	Heritage Resources	1999	Outside
P-37-017241	CA-SDI-015190	Unknown	Unknown	Heritage Resources	1999	Outside
P-37-025307	CA-SDI-016785	Unknown	Unknown	Brian F. Smith & Associates	2003	Outside
P-37-025308	CA-SDI-016786	Historic	Refuse scatter	Brian F. Smith & Associates	2003	Outside
P-37-025361	CA-SDI-016824	Historic	Foundation	Brian F. Smith & Associates	2003	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-025362	CA-SDI-016825	Unknown	Unknown	Brian F. Smith & Associates	2003	Outside
P-37-025363	CA-SDI-016826	Unknown	Unknown	Brian F. Smith & Associates	2003	Outside
P-37-025364	CA-SDI-016827	Historic	Refuse scatter	Brian F. Smith & Associates	2003	Outside
P-37-027110	CA-SDI-017731	Historic	Can scatter	Laguna Mountain Environmental Inc.	2006	Outside
P-37-027111	CA-SDI-017732	Historic	Can scatter	S. Wolf/ASM Affiliates	2013	Outside
P-37-027112	CA-SDI-017733	Historic	Can scatter	Laguna Mountain Environmental Inc.	2006	Outside
P-37-027113	N/A	Prehistoric	Isolate	Laguna Mountain Environmental Inc.	2006	Outside
P-37-027114	N/A	Prehistoric	Isolate	Laguna Mountain Environmental Inc.	2006	Outside
P-37-027343	CA-SDI-017867	–	–	Museum of Man	2006	Outside
P-37-027344	–	–	–	Museum of Man	2006	Outside
P-37-027345	CA-SDI-017868	–	–	Museum of Man	2006	Outside
P-37-029446	CA-SDI-018854	–	–	ECORP Consulting, Inc.	2008	Outside
P-37-029586	CA-SDI-018921	–	–	ARCADIS-US, Inc.	2008	Outside
P-37-030227	–	–	–	Gallegos & Associates	2008	Outside
P-37-030281	CA-SDI-019277	–	–	Gallegos & Associates	2008	Outside
P-37-030282	CA-SDI-019278	–	–	Gallegos & Associates	2008	Outside
P-37-031286	CA-SDI-019855	–	–	ASM Affiliates	2010	Outside
P-37-031287	CA-SDI-019856	–	–	ASM Affiliates	2010	Outside
P-37-031313	–	–	–	ASM Affiliates	2010	Outside
P-37-031338	CA-SDI-019901	–	–	ASM Affiliates	2010	Outside
P-37-031578	CA-SDI-020030	–	–	AECOM	2010	Outside
P-37-031579	–	–	–	AECOM	2010	Outside
P-37-031591	CA-SDI-020040	–	–	ASM Affiliates	2010	Outside
P-37-031592	–	–	–	ASM Affiliates	2010	Outside
P-37-031593	CA-SDI-020041	–	–	ASM Affiliates	2010	Outside
P-37-031594	–	–	–	ASM Affiliates	2010	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-031595	CA-SDI-020042	–	–	ASM Affiliates	2010	Outside
P-37-031603	CA-SDI-020049	–	–	ASM Affiliates	2010	Outside
P-37-031604	CA-SDI-020050	–	–	ASM Affiliates	2010	Outside
P-37-031932	–	–	–	ASM Affiliates	2011	Outside
P-37-032034	CA-SDI-020292	Prehistoric	Lithic scatter	ASM Affiliates	2011	Outside
P-37-032035	CA-SDI-020293	Historic	AH02 (foundations/structure pads); AH04 (privies/dumps/trash scatters)	ASM Affiliates	2011	Outside
P-37-032036	CA-SDI-020294	Historic	Historic trash scatter with cans and glass	ASM Affiliates	2011	Outside
P-37-032038	CA-SDI-020296	Multicomponent	Refuse scatter	ASM Affiliates	2011	Outside
P-37-032131	N/A	Historic	HP04 (ancillary building)	ASM Affiliates	2011	Outside
P-37-032132	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032133	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032134	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032135	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032136	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032137	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032138	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032139	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032140	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032141	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032142	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032143	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032144	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-032145	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032146	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032147	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032148	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032149	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032150	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032151	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032152	N/A	Historic	HP04 (ancillary building)	ASM Affiliates	2011	Outside
P-37-032155	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032156	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032157	N/A	Historic	HP02 (single-family property)	ASM Affiliates	2011	Outside
P-37-032158	N/A	Historic	HP06 (one- to three-story commercial building)	ASM Affiliates	2011	Outside
P-37-032159	N/A	Historic	HP02 (single-family property); HP04 (ancillary building)	ASM Affiliates	2011	Outside
P-37-032168	CA-SDI-020370	Prehistoric	Two bedrock milling features	Micah J. Hale/ASM Affiliates	2011	Outside
P-37-032280	CA-SDI-020461	Historic	AH04 (privies/dumps/trash scatters)	Brian Glenn	2012	Outside
P-37-032281	CA-SDI-020462	Historic	AH07 (roads/trails/railroad grades); HP37 (highway/trail)	Brian Glenn	2012	Outside
P-37-032427	CA-SDI-020575	Historic	AH05 (wells/cisterns)	Pacific West Archaeology, Inc.	2012	Outside
P-37-032431	CA-SDI-020579	Prehistoric	AP04 (bedrock milling feature)	Pacific West Archaeology, Inc.	2012	Outside
P-37-032433	N/A	Historic	AH16 (Other) – Highway "C" marker	Pacific West Archaeology, Inc.	2012	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-032434	CA-SDI-020581	Historic	AH02 (foundations/structure pads); AH04 (privies/dumps/trash scatters)	Pacific West Archaeology, Inc.	2012	Outside
P-37-032872	CA-SDI-020773	Historic	Historic trash scatter with cans and glass	ASM Affiliates	2012	Outside
P-37-032873	CA-SDI-020774	Prehistoric	Lithic and ceramic scatter	ASM Affiliates	2012	Outside
P-37-033278	CA-SDI-020945	Historic	AH04 (privies/dumps/trash scatters); AH07 (roads/trails/railroad grades)	Dudek	2013	Outside
P-37-033280	CA-SDI-020947	Prehistoric	Lithic scatter	Dudek	2013	Outside
P-37-033282	CA-SDI-020949	Multicomponent	AH07 (roads/trails/railroad grades); AH10 (machinery); AP02 (lithic scatter); AP04 (bedrock milling feature)	Dudek	2013	Outside
P-37-033283	CA-SDI-020950	Multicomponent	AH06 (water conveyance system); AH11 (walls/fences); AP02 (lithic scatter)	Dudek	2013	Outside
P-37-033284	CA-SDI-020951	Prehistoric	AP02 (lithic scatter); AP03 (ceramic scatter); AP04 (bedrock milling feature); AP15 (habitation debris)	Dudek	2013	Outside
P-37-033285	CA-SDI-020952	Prehistoric	AP02 (lithic scatter); AP14 (rock shelter/cave); AP15 (habitation debris)	Dudek	2013	Outside
P-37-033286	CA-SDI-020953	Historic	AH04 (privies/dumps/trash scatters)	Dudek	2013	Outside
P-37-033308	CA-SDI-020972	Prehistoric	AP02 (lithic scatter); AP03 (ceramic scatter)	Dudek	2013	Outside
P-37-033311	N/A	Prehistoric	Lithic scatter	Dudek	2013	Outside
P-37-033312	Unknown	Prehistoric	AP02 (lithic scatter); AP03 (ceramic scatter)	Dudek	2013	Outside
P-37-033313	N/A	Historic	1922 U.S. Government Land Office survey marker	Dudek	2013	Outside
P-37-033314	N/A	Prehistoric	Lithic scatter	Dudek	2013	Outside
P-37-033315	N/A	Prehistoric	AP02 (lithic scatter)	Dudek	2013	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-033316	N/A	Prehistoric	AP02 (lithic scatter)	Dudek	2013	Outside
P-37-033317	N/A	Prehistoric	AP03 (ceramic scatter)	Dudek	2013	Outside
P-37-033327	N/A	Prehistoric	Lithic scatter	Dudek	2013	Outside
P-37-033328	N/A	Prehistoric	Lithic scatter	Dudek	2013	Outside
P-37-033329	N/A	Prehistoric	AP02 (lithic scatter)	Dudek	2013	Outside
P-37-033330	N/A	Prehistoric	AP03 (ceramic scatter)	Dudek	2013	Outside
P-37-033495	N/A	Historic	Cement and cobble well	Professional Archaeological Services	2013	Outside
P-37-033496	N/A	Historic	Ruined historic shed with well inside	Professional Archaeological Services	2013	Outside
P-37-033498	CA-SDI-021068	Historic	Historic trash scatter with glass and ceramic	Professional Archaeological Services	2013	Outside
P-37-033499	N/A	Prehistoric	Quartz shatter	Professional Archaeological Services	2013	Outside
P-37-033500	N/A	Prehistoric	Tizon brownware body sherd	Professional Archaeological Services	2013	Outside
P-37-033504	N/A	Multicomponent	Whiteware cup rim sherd and green metavolcanic porphyritic secondary flake	Professional Archaeological Services	2013	Outside
P-37-033505	N/A	Multicomponent	Brownware jar rim sherd	Professional Archaeological Services	2013	Outside
P-37-033506	N/A	Prehistoric	Metavolcanic aphanitic probable core rejuvenation	Professional Archaeological Services	2013	Outside
P-37-033507	N/A	Prehistoric	Whiteware sherd	Professional Archaeological Services	2013	Outside
P-37-033508	N/A	Historic	Milk jar base shard	Professional Archaeological Services	2013	Outside
P-37-033509	N/A	Prehistoric	Tertiary quartz flake	Professional Archaeological Services	2013	Outside
P-37-033510	N/A	Prehistoric	Quartz core	Professional Archaeological Services	2013	Outside
P-37-033530	–	Prehistoric	AP02 (lithic scatter)	Pacific West Archaeology	2014	Outside
P-37-033531	–	Prehistoric	AP02 (lithic scatter)	Pacific West Archaeology	2014	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-033532	CA-SDI-021077	Multicomponent	AH04 (privies/ dumps/trash scatters); AH16 (other); AP04 (bedrock milling feature)	Pacific West Archaeology	2014	Outside
P-37-033882	CA-SDI-021280	Prehistoric	AP02 (lithic scatter)	Affinis	2014	Outside
P-37-033883	CA-SDI-021281	Prehistoric	AP02 (lithic scatter)	Affinis	2014	Outside
P-37-033884	N/A	Prehistoric	AP16 (other) – isolate	Affinis	2014	Outside
P-37-033885	N/A	Prehistoric	AP16 (other) – isolate	Affinis	2014	Outside
P-37-033886	N/A	Prehistoric	AP16 (other) – isolate	Affinis	2014	Outside
P-37-033887	N/A	Prehistoric	AP16 (other) – isolate	Affinis	2014	Outside
P-37-033888	N/A	Prehistoric	AP16 (other) – isolate	Affinis	2014	Outside
P-37-033889	N/A	Prehistoric	AP16 (other) – isolate	Affinis	2014	Outside
P-37-034107	–	–	–	–	–	Outside
P-37-034109	N/A	Prehistoric	Brownware rim sherd	ASM Affiliates	2013	Outside
P-37-034110	N/A	Historic	Amethyst glass sherd	ASM Affiliates	2013	Outside
P-37-034111	N/A	Historic	Amethyst glass sherd	ASM Affiliates	2013	Outside
P-37-034118	–	–	–	–	–	Outside
P-37-034120	–	–	–	–	–	Outside
P-37-034121	–	–	–	–	–	Outside
P-37-034160	CA-SDI-021370	Prehistoric	Lithic and ceramic scatter	ASM Affiliates	2014	Outside
P-37-034794	CA-SDI-021650	–	–	–	–	Outside
P-37-034795	CA-SDI-021651	–	–	–	–	Outside
P-37-034796	–	–	–	–	–	Outside
P-37-034797	CA-SDI-021652	–	–	–	–	Outside
P-37-034798	CA-SDI-021653	–	–	–	–	Outside
P-37-034799	CA-SDI-021654	–	–	–	–	Outside
P-37-034800	CA-SDI-021655	–	–	–	–	Outside
P-37-034801	–	–	–	–	–	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-034802	–	–	–	–	–	Outside
P-37-034803	–	–	–	–	–	Outside
P-37-034804	–	–	–	–	–	Outside
P-37-034805	–	–	–	–	–	Outside
P-37-034806	–	–	–	–	–	Outside
P-37-034807	–	–	–	–	–	Outside
P-37-034808	CA-SDI-021656	–	–	–	–	Outside
P-37-034809	CA-SDI-021657	–	–	–	–	Outside
P-37-034810	CA-SDI-021658	–	–	–	–	Outside
P-37-034811	CA-SDI-021659	–	–	–	–	Outside
P-37-034812	CA-SDI-021660	–	–	–	–	Outside
P-37-034813	CA-SDI-021661	–	–	–	–	Outside
P-37-034814	CA-SDI-021662	–	–	–	–	Outside
P-37-034815	CA-SDI-021663	–	–	–	–	Outside
P-37-034816	–	–	–	–	–	Outside
P-37-034817	CA-SDI-021664	–	–	–	–	Outside
P-37-036679	–	Historic	AH04 (privies/dumps/trash scatters)	ASM Affiliates	2016	Outside
P-37-036680	–	Historic	AH04 (privies/dumps/trash scatters)	ASM Affiliates	2016	Outside
P-37-036683	CA-SDI-022166	Prehistoric	AP02 (lithic scatter)	ASM Affiliates	2016	Outside
P-37-037618	N/A	Prehistoric	AP02 (lithic scatter) – volcanic interior flake	ASM Affiliates	2018	Outside
P-37-037619	CA-SDI-022455	Prehistoric	AP02 (lithic scatter); AP03 (ceramic scatter); AP04 (bedrock milling feature)	ASM Affiliates	2018	Outside
P-37-037620	CA-SDI-022456	Prehistoric	AP04 (bedrock milling feature)	ASM Affiliates	2018	Outside
P-37-037621	CA-SDI-022457	Multicomponent	AH15 (standing structures); AP02 (lithic scatter); AP04 (bedrock milling feature)	ASM Affiliates	2018	Outside

Primary Number	Trinomial	Period	Resource Description	Recorded by/ Affiliation	Year	Relationship to Project Area
P-37-037622	CA-SDI-022458	Prehistoric	AP02 (lithic scatter)	ASM Affiliates	2018	Outside
P-37-037623	–	Historic	AH05 (wells/cisterns)	ASM Affiliates	2017	Outside
P-37-037793	CA-SDI-022507	Prehistoric	Three lithic flakes	California Department of Forestry and Fire Protection	2018	Outside
P-37-037794	CA-SDI-022508	Prehistoric	19 lithic flakes	California Department of Forestry and Fire Protection	2018	Outside
P-37-039426	–	–	–	–	–	Outside
P-37-039427	CA-SDI-023068	–	–	–	–	Outside

Note: Bold rows indicate resources within the project area.

1.3 Applicable Regulations

Cultural resources regulations that apply to the project area consist of CEQA (including modification from AB 52), provisions of the California Register of Historical Resources (CRHR), portions of the Health and Safety Code and PRC pertaining to human remains, the County of San Diego RPO, and the San Diego County Local Register of Historical Resources (County Register). Within this framework, historic and archaeological districts and sites 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. Several criteria are used in demonstrating resource importance and are discussed below.

1.3.1 State Level Regulations

1.3.1.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

CEQA is legislation that requires a lead agency to evaluate whether a proposed project would have a significant adverse effect on the environment, including historical resources. The CEQA Guidelines (Title 14 California Code of Regulations Section 15064.5) govern implementation of CEQA. The guidelines pertaining to historical resources (Section 15064.5(b)(1)) state, "A substantial adverse change in the significance of a 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."

According to CEQA (Section 15064.5a), the term "historical resource" includes the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR. Section 4850 et seq.).
2. A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements of section 5024.1(g) of the Public Resources Code, shall be presumed to be

historically of culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14, Section 4852) including the following:
    a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    b. Is associated with the lives of persons important in our past;
    c. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
    d. Has yielded, or may be likely to yield, information important in prehistory or history
4. The fact that a resource is not listed in, or determined eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resource Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code section 5020.1(j) or 5024.1.

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

5. 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.
6. The significance of an historical resource is materially impaired when a project:
    a. 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 California Register of Historical Resources; or
    b. 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
    c. 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 California Register of Historical Resources 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:

1. 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).
2. 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.
3. 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.
4. 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:

a. 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:
    i. 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).
    ii. The requirement of CEQA and the Coastal Act.

1.3.1.2 CALIFORNIA REGISTER OF HISTORICAL RESOURCES

The CRHR is the state-maintained list of cultural resources found to be historically significant. The CRHR is maintained by the California Department of Parks and Recreation and has four major criteria that a cultural resource must meet to be eligible for inclusion on the list:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history.

To be considered eligible for the CRHR, a historical resource should also possess integrity, which is defined as the ability of a historical resource to convey its significance. All cultural resources must be evaluated under the four criteria for CEQA.

CEQA requires the lead agency to consider whether a project will significantly affect unique archaeological resources that may be eligible for listing in the CRHR and to avoid these unique archaeological resources when possible or mitigate any effects to less than significant levels (PRC Section 21083.2). As stated by CEQA, a unique archaeological resource means an archaeological artifact, object, or site that clearly demonstrates with a high probability that it meets, without merely adding to the current body of knowledge, any of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines specify that a "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" (CEQA Guidelines Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes "those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion" or eligibility for the National Register of Historic Places (NRHP), CRHR, or local register. In addition, pursuant to CEQA Guidelines Section 15126.2, the "direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects."

The following guidelines and requirements are of particular relevance to this study's analysis of indirect impacts to historic resources. Pursuant to CEQA Guidelines (Section 15378), study of a project under CEQA requires consideration of "the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment." CEQA Guidelines (Section 15064(d)) further define direct and indirect impacts as follows:

1. A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project.
2. An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.
3. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

Lastly, California Administrative Code, Title 14, Section 4307 states that "no person shall remove, injure, deface or destroy any object of paleontological, archeological or historical interest or value."

Integrity

In addition to meeting these criteria, a property must retain historic integrity, which is defined in National Register Bulletin 15 as the "ability of a property to convey its significance" (National Park Service [NPS] 1997). To assess integrity, the NPS recognizes seven aspects or qualities that, considered together, define

historic integrity. To retain integrity, a property must possess several, if not all, of these seven qualities, which are defined in the following manner in National Register Bulletin 15:

Location: the place where the historic property was constructed or the place where the historic event occurred;

Design: the combination of elements that create the form, plan, space, structure, and style of a property;

Setting: the physical environment of a historic property;

Materials: the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property;

Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory;

Feeling: a property's expression of the aesthetic or historic sense of a particular period of time; and/or

Association: the direct link between an important historic event or person and a historic property.

1.3.1.3 CALIFORNIA GOVERNMENT CODE

Sections 6254(r) and 6254.10 of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency."

1.3.1.4 CALIFORNIA STATE ASSEMBLY BILL 52

California State AB 52 requires public agencies to consult with tribes during the CEQA process. As of 2015, CEQA established 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" (PRC Section 21084.2). To be considered a tribal cultural resource (TCR), a resource must be either listed, or determined to be eligible for listing, in the national, state, or local register of historic resources; or a resource that the lead agency chooses, in its discretion, to treat as a TCR.

To help determine whether a project may have such an effect, the lead agency must consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. If a lead agency determines that a project may cause a substantial adverse change to TCRs, the lead agency must consider measures to mitigate that impact. PRC Section 20184.3 (b)(2) provides examples of mitigation measures that lead agencies may consider to avoid or minimize impacts to TCRs.

PRC Section 21074 defines TCRs as follows:

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 Historical Resources.

b. Included in a local register of historical 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. A cultural landscape that meets the criteria of subdivision (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.

    b. A historical resource described in §21084.1, a unique archaeological resource as defined in subdivision (g) of §21083.2, or a "nonunique archaeological resource" as defined in subdivision (h) of §21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

The Governor's Office of Planning and Research (2017) defines what constitutes *substantial evidence* as follows:

> Evidence that may support such a finding could include elder testimony, oral history, tribal government archival information, testimony of a qualified archaeologist certified by the relevant tribe, testimony of an expert certified by the tribal government, official tribal government declarations or resolutions, formal statements from a certified Tribal Historic Preservation Officer, or historical/anthropological records. Governor's Office of Planning and Research (2017)

PRC Section 5097.5 states that no person shall "knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." Violation of this section is a misdemeanor. As defined in this section, "public lands" means "lands owned by, or under the jurisdiction of, the state, or any city, county, district, authority, or public corporation, or any agency thereof."

1.3.1.5 NATIVE AMERICAN HUMAN REMAINS

Sites that may contain human remains important to Native Americans must be identified and treated in a sensitive manner, consistent with state law (i.e., Health and Safety Code Section 7050.5 and PRC Section 5097.98), as outlined below:

If potential human bone or human remains are encountered during project development, and in accordance with Health and Safety Code Section 7050.5, the county coroner must be notified. The coroner will then determine within 2 working days of being notified whether the remains are subject to his or her authority. If the coroner recognizes the remains to be Native American, he or she shall contact the NAHC by phone within 24 hours, in accordance with PRC Section 5097.98. The NAHC will then designate an MLD with respect to the human remains. The MLD then has the opportunity to recommend to the property owner or the person responsible for the excavation work the means for treating or disposing, with appropriate dignity, the human remains and associated grave goods.

1.3.2 Local Regulations

1.3.2.1 COUNTY OF SAN DIEGO RESOURCE PROTECTION ORDINANCE

The County of San Diego RPO protects significant cultural resources. The RPO defines "Significant Prehistoric or Historic Sites" as follows:

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 NRHP; 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; or
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.

The RPO does not allow nonexempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation. 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. Noncompliance would result in a project that does not meet the County standards.

1.3.2.2 SAN DIEGO COUNTY LOCAL REGISTER OF HISTORICAL RESOURCES

The County of San Diego Administrative Code (CSDAC) establishes the County Register (Section 396.7). The term *historical resource* is used in the County Register for all types of individual cultural resources (historic and prehistoric) and historic districts for a collectively related group of historical resources within a contiguous geographic area. CSDAC states the purpose of the County Register as "an authoritative listing and guide to be used by local agencies, private groups, and citizens in identifying historical resources within the County. In addition, the listing shall also be used as a management tool for planning, and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (Section 396.7(b)).

The term *historical resources* is defined in the County Register as "an object, building, structure, site, landmark, area or place that is significant in terms of architectural, engineering, scientific, economic, agricultural, educational, social, political, archaeological, military or cultural history" (CSDAC 396.7(c)).

The criteria established in CSDAC for listing as a historical resource are as follows (Section 396.7(e)(2)):

1. Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and culture heritage;
2. Is associated with the lives of persons important to the history of San Diego County or its communities; tr5U&

3. Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded or may be likely to yield, information important in prehistory or history.

In addition to the criteria above, a resource must also retain integrity to be eligible for listing in the County Register. CSDAC addresses the issue of integrity as follows (Section 396.7(e)(3)):

- Integrity is defined as the authenticity of an historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Historical resources eligible for listing in the Local Register must meet one of the criteria of significance described in subsection (e)(2), above, and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.
- Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. It must also be judged with reference to the particular criteria under which a resource is proposed for eligibility. Alterations over time to a resource or changes in its use may themselves have historical, cultural, or architectural significance.

Districts are significant resources if they are composed of integral parts of the environment not as individual elements, but collectively 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. 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.

2 GUIDELINES FOR DETERMINING SIGNIFICANCE

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 Section 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 the Interior's Standards.
2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to Section 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 by PRC Section 21074 of the State CEQA Statute.

The 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 MLD 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 only exemption 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 Section 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 (Section 87.429). Noncompliance would result in a project that is inconsistent with County standards.

3 SURVEY-LEVEL RESEARCH DESIGN

The primary purpose of this report is to identify potential cultural resources that may be impacted by the proposed project. Therefore, the research design and resulting methodologies focus on research using various archives, outreach to Native American groups, and pedestrian survey of the project area to identify and document cultural resources.

At the theoretical level, archaeological investigations are based on partial and fragmented remnants of material items from past cultures. Because these cultural items are material, the basic model of study is Cultural Materialism. The premise of Cultural Materialism links materials, as represented by those items in the archaeological record, to the patterned action of human behavior within specific environments (culture) (Harris 1968:659). We consider Cultural Materialism a basic premise encompassing all other assumptions.

The project is subject to CEQA which requires that agencies, in this case the County, consider impacts to cultural resources that are potentially eligible for the CRHR.

Basic research questions include:

1. Are cultural resources or historic properties located in the project area?
    a. Are the conditions conducive to cultural resources within the project area?
    b. What is the sensitivity of the project location for cultural resources?
    c. What is the level of prior disturbance to the property?
    d. Are there cultural resources that may be impacted by the project?
    e. What is the potential for buried cultural resources?

2. Should any cultural resources be considered potential historical resources/historic properties for the purposes of CEQA/National Historic Preservation Act? Are they potentially significant and possess integrity?
3. What impacts will the proposed project have on any potential historical resources/historic properties?
4. What avoidance and/or mitigation measures can be implemented to decrease the level of impact to any potential historical resources/historic properties?

4 ANALYSIS OF PROJECT EFFECTS

4.1 Methods

This section describes the techniques employed to identify and evaluate archaeological resources within the project area during the intensive pedestrian survey.

4.1.1 Survey Methods

SWCA conducted an intensive-level archaeological survey of the 588-acre project area from February 15 through 22, 2022, and from September 11 through 29, 2023. Subsequent project and resource familiarization visits were conducted by SWCA on January 23, February 1, 2, and 20, and March 10, 2023. Due to interest and the sensitivity of the project area for resources of concern to Native Americans, SWCA, the applicant, Loveless and Linton, and Campo Band conducted site visits for purposes of identifying resources of tribal concern from July 24 through 26, 2023. Lastly a follow-up intensive archaeological survey with Campo Band tribal participation occurred from September 11 through 29, 2023.

The intensive-level survey consisted of systematic surface inspection of all areas with transects walked, where possible, at 15-meter (m) intervals or less to ensure that any surface-exposed artifacts and sites could be identified. SWCA examined the ground surface for the presence of prehistoric artifacts (e.g., flaked stone tools, tool-making debris, or stone milling tools); historic-era artifacts (e.g., metal, glass, or ceramics); sediment discoloration that might indicate the presence of a cultural midden; roads and trails; and depressions and other features that might indicate the former presence of structures or buildings (e.g., post holes or foundations).

A reconnaissance-level survey was undertaken of any areas deemed inaccessible (e.g., steep slopes or thick vegetation); professional judgment was used to assess whether areas were safe for pedestrian survey. In areas that were inaccessible, the reconnaissance survey consisted of inspecting the area from a safe distance, looking for indications that cultural resources were present. The project area was photographed using a digital camera and resource data were recorded with a handheld tablet with a submeter-accurate GPS antenna using the Collector for ArcGIS application. Newly identified resources were documented on appropriate California Department of Parks and Recreation Series 523 forms, and all previously recorded resources were updated. All records will be filed with the SCIC. All field notes, photographs, and records related to the current study are on file at the SWCA San Diego, California, office. For the purposes of this project, a prehistoric archaeology site was defined as four or more artifacts within 30 m from one artifact to another, or a prehistoric archaeological feature with or without additional artifact or artifacts. Three or fewer prehistoric artifacts within the same distance were recorded as isolates. The same rules apply for historic archaeology sites except 10 or more artifacts were needed to define a site.

4.1.2 Archival Research

SWCA reviewed available historical U.S. Geological Survey topographic maps and aerial imagery of the project area. Historical topographic maps show most of the property as undeveloped and unused from the mid-1900s. The earliest topographic map available for the project area is the 1939 Campo, California, 15-minute quadrangle. The 1950 San Diego 7.5-minute quadrangle displays an increase in private ranch lands around the general project area. The 1959 Tierra del Sol 7.5-minute quadrangle map shows undeveloped land. The 1975 Live Oak Springs 7.5-minute quadrangle map shows portions of the project area being used as agricultural farmland. The 1997 Live Oak Springs 7.5-minute quadrangle map illustrates that no new development occurred.

The 1953 aerial photograph displays the north end of the project area, and it is essentially undeveloped (Framefinder 1953). Later imagery from 1984 shows low levels of development and portions of the project area potentially used for grazing or agriculture (NETROnline 1984). The most current aerial photograph from December 2023 shows the project area unchanged from these earlier aerial photographs (Google Earth Pro 2023). Most of the project area is undeveloped.

4.1.3 Native American Participation

The Native American Heritage Commission (NAHC) was contacted to request a search of their Sacred Lands Files on February 4, 2022. The NAHC responded on March 30, 2022, indicating a positive result of the Sacred Lands File and recommended contacting the Ewiiaapaayp Band of Kumeyaay Indians and the Manzanita Band of Kumeyaay Nation for more information. A total of 14 tribal organizations were listed with the NAHC, including the two above as well as Barona Group of the Capitan Grande, Campo Band of Diegueno Mission Indians, Iipay Nation of Santa Ysabel, Inaja-Cosmit Band of Indians, Jamul Indian Village, Kwaaymii Laguna Band of Mission Indians, La Posta Band of Diegueno Mission Indians, Mesa Grande Band of Diegueno Mission Indians, Quechan Tribe of the Fort Yuma Reservation, San Pasqual Band of Diegueno Mission Indians, Sycuan Band of the Kumeyaay Nation, and the Viejas Band of Kumeyaay Indians.

SWCA sent information-gathering letters via certified mail and email to 23 individuals from these 14 tribes and included the Sacred Lands File results for the two above-mentioned Tribes on January 17, 2024. Follow-up phone calls to the 23 parties from the 14 tribes occurred on February 5, 2024, and voicemails were left with contact information if the tribes wanted to reach out. Responses were received from seven of the 23 tribal parties. In summary, six of the seven responding tribes including the Ewiiaapaayp Band of Kumeyaay Indians, Jamul Indian Village, Quechan Tribe of the Fort Yuma Reservation, San Pasqual Band of Diegueno Mission Indians, Sycuan Band of the Kumeyaay Nation, and Viejas Band of Kumeyaay Indians stated they wished to defer consultation to tribes nearer to the project area. The Sycuan Band of the Kumeyaay Nation also requested a copy of the cultural and tribal cultural resources technical study. Campo Band requested consultation with the County. SWCA also conducted information gathering through Loveless and Linton, who provided Kumeyaay Cultural Committee feedback on the initial intensive survey. Campo Band provided Tribal monitoring during the pedestrian survey from September 11 through 29, 2023. Appendix D includes a detailed summary of the outreach and tribal consultation efforts, along with copies of the notification letters and original correspondence.

4.2 Results

The intensive pedestrian field surveys covered the full 588-acre project area. Visibility over the whole project area varied between poor (0–25 percent) and good (60–80 percent) (Figure 5–Figure 8). Sediments consist of light brown sand to sandy loam formed from alluvial deposits. Vegetation consists of desert

scrub, manzanita, cholla, pricklypear, and seasonal grasses. All built environment historical resource results are detailed in a report prepared by Urbana Planning and Preservation (Landa and Tinsley Becker 2023).

Figure 5. Overview of survey area in northern portion of project area, facing northeast, 02/15/2022, Frame #P2154324.

Figure 6. Overview of survey area in northwestern portion of project area, facing east, 02/18/2022, Frame #P2184562.

Figure 7. Overview of survey area in central portion of project area, facing west, 02/20/2022, Frame #P2204680.

Figure 8. Overview of survey area in southern portion of project area, facing east, 02/21/2022, Frame #P2214790.

In total, 32 sites and 41 isolates were documented through survey of the project area. Twelve archaeological resources were previously recorded within or near the project area: P-37-010476, P-37-034159, P-37-027350 (CA-SDI-17873/W-293), P-37-032037 (CA-SDI-20295), P-37-033279 (CA-SDI-20946), P-37-033309, P-37-033310 (CA-SDI- 23551), P-37-033497, P-37-033501, P-37-033502, P-37-033503, and P-37-037612. During fieldwork, two sites, P-37-033502 and P-37-033503, were documented to be overlapped by a continuous artifact scatter associated with P-37-033497. All three were combined into a single site. Furthermore, two resources, P-37-033309 and P-37-033501, were not located during the survey. Thirty-eight new isolates and 26 new archaeological sites were also identified and recorded (see maps in Appendix E). These resources are described in detail below. Appendix F includes Department of Parks and Recreation (DPR) 523 resource records for all resources described in this section.

Previously Documented Resources

Of the 12 previously documented resources determined to be in or adjacent to the current project, four were prehistoric isolates (P-37-033309, P-37-033310, P-37-033501, and P-37-037612), two are multicomponent sites (P-37-027350, P-37-033497), one is a historic site (P-37-032037), and three are prehistoric sites (P-37-010476, P-37-034159, P-37-033279).

Ten of the resources (P-37-010476, P-37-034159, P-37-027350, P-37-032037, P-37-033279, P-37-033310, P-37-033497, P-37-033502, P-37-033503, and P-37-037612) were identified during the survey effort. Resources P-37-010476 and P-37-034159 were found to be different identifying numbers for the same resource, and given this, will be combined. One historic isolate (P-37-033502) and one prehistoric isolate (P-37-033503) were documented in the records search as outside of the project area, but survey results showed a continuous artifact scatter that overlapped with the newly defined site boundary for the prehistoric site P-37-033497 so these three resources were combined into one. P-37-003310 was previously recorded as an isolate, but during the current effort, additional artifacts were found, and it was updated with a trinomial, CA-SDI-23551.

Two isolates (P-37-033309 and P-37-033501) were not located during the survey. Factors likely impacting the effort to locate the previously recorded resources include possible mis-plotting of the resources during original documentation and changes due to natural erosional processes. Growth of surface grasses and similar vegetation also obscure the natural ground surface, making identification of resources difficult. Below is a detailed list of resources previously documented within the project area.

4.2.1.1 P-37-010476/P-37-034159

SWCA surveyed the mapped locations of P-37-010476 and P-37-034159 and observed that the recorded site descriptions and locations were similar and that the artifacts and features noted in the field overlapped. Therefore, the records for the sites will be combined under P-37-010476/P-37-034159. Originally recorded in 1985 by Archaeological Systems Management, prehistoric site P-37-010476 was described as containing a debitage scatter, ground stone fragments, a prehistoric ceramic scatter, stone circles, and one granite outcrop with one mortar and one milling slick. Recorded by ASM Affiliates in 2014 (Lambert 2014), P-37-034159 was described as a prehistoric resource with five bedrock milling features, nearly 50 pieces of debitage, three flake tools, four ceramic sherds, and a ground stone.

Based on the results of the current survey, P-37-010476/P-37-034159 measures 346 m (NW–SE) × 181 m (NE–SW). Features consist of three bedrock outcrops with milling features and two lithic flake and shatter concentrations. Bedrock Outcrop 1 has five milling features (Figure 9), Bedrock Outcrop 2 has five milling features, and Bedrock Outcrop 3 has one milling feature. Concentration 1 has 29 flakes and shatter and Concentration 2 has 81 flakes and shatter. The stone circles originally recorded by Gonzalez (1985) were not relocated. In the current effort, 220 lithic flakes and shatter outside of the artifact concentrations were

also observed. A fragment of a Monterey Formation chert biface, a metavolcanic flake core, a metate blank broken in manufacture, four ground stone tools, a metavolcanic flake tool/scraper, and a low-density scatter of ceramic sherds were also observed and recorded.

Figure 9. Site P-37-034159 overview of Bedrock Outcrop 1, view facing west, Frame #P1230031.

4.2.1.2 P-37-027350 (CA-SDI-17873/W-293)

No author and no recorded date are included on the original site record form for this resource. The original site record describes the site as a camp around a spring and among granite boulders. The site form provides no additional information regarding specific cultural constituents, specific site boundaries, or feature descriptions. The site was revisited by SWCA archaeologists and resurveyed. The site consists of both a historic and prehistoric component. In this re-recording, P-37-027350 (CA-SDI-17873/W-293) measures 145 m (475 feet) (N–SE) × 62 m (203 feet) (NE–NW). The prehistoric component of the site consists of one bedrock outcrop with two milling features and a lithic and ceramic scatter. Artifacts identified included one metavolcanic biface measuring 6 × 3.25 × 1.5 cm, one unifacial granitic mano measuring 11 × 8.5 × 5 cm, and one quartz cobble scraper/hammerstone. The quartz cobble has one flake scar removed with nibbling along the sharpened edge and crushing on the opposite end. The site also contains one secondary metavolcanic flake, three Santiago Peak metavolcanic tertiary flakes, one Santiago Peak metavolcanic secondary flake, one Santiago Peak metavolcanic primary flake, three quartz tertiary flakes, 11 pieces of quartz shatter, four Tizon brownware body sherds, and two Tizon brownware rim sherds.

The historic component of the site includes one clear bottle base with an Owen's Illinois Pacific Coast Co. maker's mark, dated ca. 1932 to 1943 (Society for Historical Archaeology 2018), five concentrations of metal can fragments, one ribbed purple glass neck and rim fragment, three clear glass fragment concentrations including a mason jar rim, one concentration of 10+ yellow glass bottle fragments, one concentration of six amber glass bottle fragments, one concentration of 15+ green glass bottle fragments, one concentration of 8+ yellow crockery fragments, and one concentration of 5+ blue crockery fragments.

The site also includes a historic granite quarry feature consisting of a large granite outcrop with visible bore holes along the upper face and bore holes and iron rods along the lower face. The quarry area along the granite outcrop measures 41 feet (NW–SE) × 25 feet (NW–SW). The historic-era refuse and the quarrying activities appear to be associated. The site is situated adjacent to a seasonal wash and the artifacts, both prehistoric and historic, have been disturbed and redeposited in and around the seasonal wash.

4.2.1.3 P-37-032037 (CA-SDI-20295)

Originally recorded in 2011 by ASM Affiliates (Daniels 2011), the site represents a single-episode historic-era refuse scatter consisting of approximately 20 sanitary cans and a small scatter of bottle fragments near the intersection of Tule Jim Road and Tule Jim Lane. The site was revisited by SWCA archaeologists and found to be in the same condition, location, cultural constituents (at least 15 tin cans and two broken glass bottles), and area (approximately 14 × 10 m) as originally recorded in 2011.

4.2.1.4 P-37-033279 (CA-SDI-20946)

Site P-37-033279 (CA-SDI-20946) was originally recorded as a light, dispersed prehistoric lithic and ceramic scatter (Comeau and Hough 2013) in an area mapped as approximately 1,706 square meters. The site underwent Phase II testing and evaluation and was recommended as ineligible for the CRHR (Daniels 2013 and see below). During the previous testing, six pieces of quartz debitage and one ceramic sherd were collected. Six shovel test probes and one surface scrape unit were excavated and screened with negative results. SWCA resurveyed the site and observed three flakes in an area measuring approximately 113 square meters (Figure 10).

Figure 10. Site P-37-033279, view facing west, Frame #P1230011.

4.2.1.5 P-37-033309

P-37-033309 was originally recorded as a prehistoric isolate consisting of a quartz tested cobble measuring 6.2 × 5.2 × 4.6 cm (Comeau 2013a). SWCA was unable to locate this isolate during the survey (Figure 11).

Figure 11. Overview of mapped location for P-37-033309, facing west, Frame #P1230001.

4.2.1.6 P-37-033310 (CA-SDI-23551)

P-37-033310 was originally recorded as a prehistoric isolate consisting of a quartz core measuring 8.5 × 5.0 × 6 cm (Comeau 2013b). SWCA located the core and found it to be in the same condition and location as previously observed (Figure 12). Additional artifacts were observed in the vicinity of the core during the September 2023 survey and the resource was determined to be an archaeological site. Additional artifacts observed included one quartz primary flake, three quartz secondary flakes, one quartz tertiary flake, two tested quartz cores, and four pieces of quartz shatter. The expanded site boundaries now measure 6 m (20 feet) (N–S) × 61 m (200 feet) (E–W).

Figure 12. P-37-033310, view facing north, Frame #P1230017.

4.2.1.7 P-37-033497/P-37-033502/P-37-033503

Originally recorded as three separate resources by Professional Archaeological Services in 2013 (de Barros 2013a, 2013b, 2013c), P-37-033497 (CA-SDI-21067)/P-37-033502/P-37-033503 were combined into a single multicomponent resource consisting of a prehistoric lithic and ceramic scatter and one historic glass jar base situated along the edge of the Boundary Creek drainage. P-37-033497 was previously recorded as containing two quartz flakes, one porphyritic metavolcanic flake, a cluster of three pieces of Tizon brownware, and a piece of fire-affected rock (de Barros 2013a). SWCA revisited the mapped location of the site and observed and recorded additional artifacts in the vicinity, resulting in the site boundaries being extended over the mapped locations of nearby isolates P-37-033502 and P-37-033503, though the cultural material of these resources was not relocated due to poor visibility due to seasonal grasses. Isolate P-37-033502 was previously recorded as an amethyst-colored historic jar base dating between 1880 and 1925 (de Barros 2013b). Isolate P-37-033503 previously consisted of a prehistoric black basalt tertiary flake (de Barros 2013c). Consequently, due to overlapping resource boundaries P-37-033497, P-37-033502, and P-37-033503 have been combined.

4.2.1.8 P-37-033501

P-37-033501 was originally recorded in 2013 by Professional Archaeological Services as a prehistoric isolate consisting of one Tizon brownware body sherd (de Barros 2013d). During the current survey, SWCA revisited the mapped location of the isolate, but the artifact could not be located, likely due to poor visibility given the presence of seasonal grasses.

4.2.1.9 P-37-037612

P-37-037612 was originally recorded in 2017 by San Diego Gas and Electric Environmental Services as a prehistoric isolate consisting of one gray volcanic flaked scraper tool (Bosque 2017). During the current

survey, SWCA revisited the mapped location of the isolate and found it to be in the same condition and location as when it was previously recorded (Figure 13). No additional artifacts or features were identified.

Figure 13. P-37-037612 overview, facing northeast, 02/15/2022, Frame #P2154324.

4.2.2 Newly Documented Resources

SWCA identified 26 new sites, including 16 prehistoric sites, one multicomponent site, and nine historic-era sites. Thirty-eight isolates were also identified and recorded, including 32 prehistoric isolates and six historic-era isolates. The resources are described below.

4.2.2.1 P-37-040847 (CA-SDI-23552)

P-37-040847/CA-SDI-23552 (SWCA-53792-S-001) was recorded by SWCA archaeologists as a low-density prehistoric lithic scatter consisting of four metavolcanic flakes observed within an area measuring 23 m (75 feet) (NW–SE) × 17 m (56 feet) (E–W) (Figure 14). The four flakes were likely part of lithic reduction activity. The site is situated on a slight slope (approximately 2 to 5 degrees) within a colluvial environment with aspect to the north. Ground surface visibility during the survey was fair at approximately 50 percent visibility due to moderate vegetation coverage. Vegetation consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

Figure 14. P-37-040847 (CA-SDI-23552) overview, facing southeast, 02/15/2022, Frame #P2154323.

4.2.2.2 P-37-040848 (CA-SDI-23553)

P-37-040847/CA-SDI-23552 (SWCA-53792-S-002) was recorded on by SWCA archaeologists as a prehistoric site consisting of a lithic scatter, a ceramic scatter, and two bedrock milling features (Figure 15 and Figure 16). The lithic scatter consists of one jasper flake and three metavolcanic flakes. The ceramic scatter consists of two Tizon brownware bowl rim sherds and 13 brownware body sherds. The bedrock milling features are located on a granite boulder situated within a bedrock outcrop in the east–central portion of the site. The site measures 48 m (158 feet) (NE–SW) × 20 m (66 feet) (NW–SE).

The bedrock milling features consist of a saucer mortar and a conical mortar. The saucer mortar (Milling Surface #1) measures 20 cm in diameter and 8 cm in depth. The conical mortar (Milling Surface #2) measures 16 cm in diameter and was observed filled with decomposed granite so an accurate depth could not be obtained.

The site is situated on a slight south-facing slope (<5 degrees) within a granite bedrock outcrop adjacent to a dry wash to the east. Ground surface visibility during the survey ranged from 40 to 100 percent due to moderate vegetation coverage in some portions of the site. Vegetation consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

Figure 15. P-37-040848 (CA-SDI-23553) overview, facing east, 02/15/2022, Frame #P2154362.

Figure 16. P-37-040848 (CA-SDI-23553) overview of bedrock milling features, detail view, 02/15/2022, Frame #P2154353.

4.2.2.3 P-37-040849 (CA-SDI-23554)

P-37-040849/CA-SDI-23554 (SWCA-53792-S-003) was recorded by SWCA archaeologists as a historic-era refuse scatter consisting of 16 metal cans, 33 glass fragments, one ceramic jar spout, one nail, and two pieces of scrap metal (Figure 17). Through design the site will be outside the project area. The cans consist of six church key–opened cans, five cut-around cans, one paint can, and four crushed cans. The glass consists of two blue fragments, four green fragments, one amber fragment, 16 aqua fragments, and 10 colorless fragments. The site measures 18 m (60 feet) (N–S) × 23 m (75 feet) (E–W). The refuse scatter was likely from roadside toss from the use of nearby roads. The site is situated on a slight slope (approximately 2 degrees). Ground surface visibility during the survey was fair at approximately 60 to 70 percent visibility due to moderate to dense vegetation coverage. Vegetation consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

Figure 17. P-37-040849 (CA-SDI-23554) overview, facing north, 02/15/2022, Frame #P2154409.

4.2.2.4 P-37-040850 (CA-SDI-23555)

P-37-040850/CA-SDI-23555 (SWCA-53792-S-004) was recorded by SWCA archaeologists as a multicomponent site. The historic period component is a moderate-density historic-era refuse scatter consisting of metal cans, one Glass Container Corp. colorless glass bottle, one Owens-Illinois colorless glass bottle base, one Owens-Illinois colorless glass tube, and colorless glass bottle fragments (Figure 18). The refuse scatter likely reflects household refuse or roadside toss from the use of nearby roads. The prehistoric component consists of a sparse lithic scatter including one retouched quartz flake, two tertiary chert flakes, and two tertiary quartz flakes. The site measures 36 m (118 feet) (NE–SW) × 141 m (43 feet) (E–W). The site is situated on a slight slope (approximately 2 degrees). Ground surface visibility during the survey was poor at approximately 10 to 30 percent visibility due to dense vegetation coverage. Vegetation

consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

Figure 18. P-37-040850 (CA-SDI-23555) overview, facing northeast, 02/16/2022, Frame #P2164434.

4.2.2.5 P-37-040851 (CA-SDI-23556)

P-37-040851/CA-SDI-23556 (SWCA-53792-S-005) was recorded by SWCA as a sparse lithic scatter composed of five quartz flakes and three metavolcanic flakes (Figure 19). The flakes were observed within an area measuring 32 m (105 feet) (N–S) × 17 m (55 feet) (E–W). The lithic scatter was the result of stone reduction activity. The site is situated on a slight slope (approximately 2 degrees) within a colluvial environment with aspect to the north. Ground surface visibility during the survey was very good at approximately 80 to 90 percent visibility. Vegetation consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

4.2.2.6 P-37-040852 (CA-SDI-23557)

P-37-040852/CA-SDI-23557 (SWCA-53792-S-006) was recorded on February 18, 2022, by SWCA as a low-density historic-era refuse scatter composed of eight aqua glass fragments, four amber glass fragments, four crushed metal cans, and five can fragments (Figure 20). Diagnostic cans consist of one crushed hole-in-top sanitary can and one crushed church key–opened sanitary can. The site measures 14 m (45 feet) (N–S) × 12 m (40 feet) (E–W). The metal and glass artifacts are likely from household refuse. Through design the site will be outside the project area. The site is situated on a slight slope (approximately 2 degrees) within a colluvial environment. Ground surface visibility during the survey was fair at approximately 30 to 50 percent visibility due to moderate vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 19. P-37-040851 (CA-SDI-23556) overview, facing northeast, 02/16/2022, Frame #P2164471.

Figure 20. P-37-040852 (CA-SDI-23557) overview, facing northeast, 02/18/2022, Frame #P2184508.

4.2.2.7 P-37-040853 (CA-SDI-23558)

P-37-040853/CA-SDI-23558 (SWCA-53792-S-007) was recorded by SWCA as a moderate- to high-density historic-era refuse scatter composed of 56 crushed/fragmented metal cans, 12 ceramic fragments, 101 glass fragments, eight metal fragments, and one nail (Figure 21). The glass fragments include body fragments of various colors and four bottle base fragments with Kerr Glass Mfg. Co. maker's marks, indicating they were manufactured in Sand Springs, Oklahoma, from 1903 to the 1920s (Society for Historical Archaeology 2016). The metal and glass artifacts are likely from household refuse. The site measures 27 m (87 feet) (N–S) × 20 m (65 feet) (E–W). The site is situated on a slight west-facing slope (approximately 10 to 20 degrees) within a colluvial environment. Ground surface visibility during the survey was good at approximately 60 to 80 percent visibility due to moderate vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 21. SWCA-53792-S-007 overview, facing northwest, 02/18/2022, Frame #P2184560.

4.2.2.8 P-37-040854 (CA-SDI-23559)

P-37-040854/CA-SDI-23559 (SWCA-53792-S-009) was recorded by SWCA as a moderate-density historic-era refuse scatter composed of 14 church key–opened beverage cans, six rotary opened food cans, one screw top oil can, seven scalloped ceramic fragments, 36 glass bottle fragments, three whole glass bottles with diagnostic maker's marks, and one small jar (Figure 22) within an area measuring 18 m (60 feet) (N–S) × 9 m (30 feet) (E–W). Through design the site will be outside the project area. The glass fragments include green, amber, and colorless body fragments. The quartz-size colorless glass bottle contains a Glass Container Co. maker's mark indicating it was manufactured from 1934 to ca. 1968. The amber Purex glass bottle contains a Latchford-Marble Glass Co. maker's mark indicating it was manufactured from 1937 to 1957. The colorless glass jar contains a maker's mark that reads, "10-206 / 6 35." The green Duraglas glass bottle contains an Owens-Illinois Glass Co. maker's mark indicating it was

manufactured from 1929 to ca. 1960 (Society for Historical Archaeology 2018). The artifacts are likely from household refuse. The site is situated on a slight west-facing slope (approximately 10 to 20 degrees) within a colluvial environment. Ground surface visibility during the survey was good at approximately 60 to 80 percent visibility due to moderate vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 22. P-37-040854 (CA-SDI-23559) overview, facing southwest, 02/18/2022, Frame #P218.4617.

4.2.2.9 P-37-040855 (CA-SDI-23560)

P-37-040855/CA-SDI-23560 (SWCA-53792-S-010) was recorded by SWCA as a low-density historic-era refuse scatter composed of four metal cans: two crushed vent-hole milk cans with 3-inch diameters, one "Quaker State" oil can with a 4-inch diameter, and one whole knife-opened vent-hole milk can measuring $3^{15}/_{16}$ inches in height and 3 inches in diameter (Figure 23) The site is within an area measuring 14.3 m (47 feet) (N–S) × 17.1 m (56 feet) (E–W). The artifacts are likely from household refuse or roadside toss. The site is situated on a slight 2-degree slope with an open aspect. Ground surface visibility during the survey was fair at approximately 40 to 60 percent visibility due to moderate vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam. Through design the site will be outside the project area.

Figure 23. P-37-040855 (CA-SDI-23560) overview, facing southeast, 02/19/2022, Frame #P2184647.

4.2.2.10 P-37-040856 (CA-SDI-23561)

P-37-040856 /CA-SDI-23561 (SWCA-53792-S-013) was recorded by SWCA as a low-density historic-era refuse scatter composed of 29 sanitary, vent-hole, and aerosol metal cans dispersed within an area measuring 31 m (102 feet) (N–S) × 21 m (68 feet) (E–W) (Figure 24). The artifacts are likely from household refuse or roadside toss. The site is situated on a slight, less than 2-degree slope with an open aspect. Ground surface visibility during the survey was fair at approximately 40 to 60 percent visibility due to moderate vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.11 P-37-040857 (CA-SDI-23562)

SWCA recorded P-37-040857/CA-SDI-23562 (SWCA-53792-S-014) as a prehistoric quartz quarry site measuring 117 m (384 feet) (N–S) × 51 m (167 feet) (E–W) (Figure 25). The artifacts consist of an estimated 60 quartz primary, secondary, and tertiary flakes and 300 pieces of shatter. An exposure of quartz bedrock was observed in the southern portion of the site and the total area of it measured approximately 44.9 m (147 feet) (N–S) × 44.1 m (132 feet) (E–W). Ground surface visibility was fair at approximately 60 percent. Vegetation consisted of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 24. P-37-040856 (CA-SDI-23561) overview, facing north, 02/21/2022, Frame #P2214788.

Figure 25. P-37-040857 (CA-SDI-23562) site overview, facing northeast, Frame #P2203657.

4.2.2.12 P-37-040858 (CA-SDI-23563)

SWCA recorded P-37-040858/CA-SDI-23563 (SWCA-53792-S-015) as a prehistoric artifact scatter consisting of one metavolcanic bifacial mano, two mano fragments, two metavolcanic flakes, and one ceramic sherd in an area measuring 12.5 m (41 feet) (N–S) × 9.1 m (30 feet) (E–W) (Figure 26). Ground surface visibility during the survey was poor at approximately 30 percent, indicating that additional artifacts may be present. Vegetation in the surrounding area consisted of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 26. P-37-040858 (CA-SDI-23563) site overview, facing northwest, Frame #P2204993.

4.2.2.13 P-37-040859 (CA-SDI-23564)

SWCA archaeologists discovered and recorded P-37-040859/CA-SDI-23564 (SWCA-53792-S-016), a prehistoric habitation site consisting of hundreds of scattered artifacts, six artifact concentrations, and five granite outcrops with milling features. Two looter's piles of surface artifacts were also present. The site measures 173 m (569 feet) (N–S) × 179 m (588 feet) (E–W). Ground surface visibility during the survey was fair at approximately 60 percent (Figure 27). Vegetation in the surrounding area consisted of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam. SWCA observed an active spring bisecting the site during the fieldwork. Hundreds of artifacts connected all the concentrations. Artifacts scattered throughout the surrounding surface include debitage, ground stone fragments, and ceramic fragments.

Concentrations 1 and 2 are high-density ceramic sherd scatters with low quantities of additional artifacts. Concentration 1 consists of 28 Tizon brownware body sherds and two Tizon brownware rim sherds. One size Class 3 metavolcanic tertiary flake was also identified within the concentration. The concentration measures 19 m (62 feet) (N–S) × 17 m (56 feet) (E–W) and is situated next to granite bedrock outcrops on top of a hill with aspect to the south. Concentration 2 is a high-density ceramic scatter composed of

approximately 100 Tizon brownware body sherds and three Tizon brownware rim sherds in an area measuring 18 m (60 feet) (E–W) × 15 m (49 feet) (N–S) situated on a slight 2-degree slope with open aspect.

Figure 27. P-37-040859 (CA-SDI-23564) site overview, facing southwest, Frame #P2204760.

Bedrock Outcrop 1 consists of five saucer mortars, one mortar, and one milling slick on a single granite outcrop which measures 1.76 m (N–S) × 1.20 m (E–W) × 0.05 m high and is in moderate condition. Bedrock Outcrop 2 consists of six milling slicks and two saucer mortars (Figure 28) on a granite outcrop which measures 10.70 m (N–S) × 6.95 m (E–W) × 0.85 m high. Bedrock Outcrop 3 includes four milling slicks on a granite outcrop which measures 15.60 m (N–S) × 9.40 m (E–W) × 2.40 m high. Outcrop 4 consists of twelve cupules on a single granite boulder which measures 1.14 m (N–S) × 1.23 m (E–W) × 0.62 m high (Figure 29). Outcrop 5 consists of one conical mortar and two mortars. No sediments were observed within the mortars or milling features.

Concentration 3 is a low-density ceramic scatter composed of 11 Tizon brownware body sherds within an area measuring 7 m (22 feet) (N–S) × 6 m (20 feet) (E–W). Concentration 4 has moderate density and is composed of 50+ body sherds and two Tizon brownware rim sherds. One crystal quartz tertiary flake was observed within it. The artifact concentration was observed within an area measuring 13 m (42 feet) (N–S) × 6 m (20 feet) (E–W). Concentration 5 is a moderate-density prehistoric ceramic scatter and a low-density debitage scatter composed of 20+ prehistoric ceramics, five metavolcanic flakes, five quartz flakes, and a single slate pendant. The slate pendant measured 4.1 × 1.4 × 0.4 cm. The artifact concentration was observed within an area measuring 7 m (24 feet) (E–W) × 7 m (23 feet) (N–S). Concentration 6 is a low- to moderate-density debitage scatter composed of approximately nine metavolcanic tertiary flakes, four quartz tertiary flakes, two metavolcanic secondary flakes, one Monterey chert tertiary flake, and one Rainbow Rock source secondary flake. Also, a low- to moderate-density prehistoric ceramic scatter was observed with approximately 17 Tizon brownware body sherds. The artifact concentration was observed within an area measuring 14 m (46 feet) (E–W) × 14 m (46 feet) (N–S).

Figure 28. P-37-040859 (CA-SDI-23564) Bedrock Outcrop 2 overview, facing south, Frame #P2020062.

Figure 29. P-37-040859 (CA-SDI-23564) Bedrock Outcrop 4 detail view, facing down/east, Frame #P2020084.

Looter's Pile 1 consists of three Tizon brownware rim sherds, 17 Tizon brownware body sherds, eight metavolcanic tertiary flakes, and five metavolcanic secondary flakes. These artifacts appeared to have been recently collected and placed on top of Bedrock Outcrop 1. Modern trash was found nearby. Looter's Pile 2 includes one quartz tertiary flake, two metavolcanic secondary flakes, three metavolcanic tertiary flakes, one metavolcanic utilized flake, three Tizon brownware rim sherds, and 10 Tizon brownware body sherds. Like Looter's Pile 1, these artifacts appeared to have been recently collected and placed together.

4.2.2.14 P-37-040860 (CA-SDI-23565)

SWCA archaeologists discovered and recorded P-37-040860/CA-SDI-23565 (SWCA-53792-S-018) and it is a 1970s historic-era trash scatter consisting of three church key–opened sanitary cans, one pull tab soda can, two paint cans, 20+ amber glass fragments, one amber beer bottle, one bed spring, two piles of asphalt roofing tiles, one metal decorative hinge, one rubber tire, and one fence post pile with an associated barbed-wire and bailing wire pile. The site measures 14 m (46 feet) (N–S) × 3 m (10 feet) (E–W) (Figure 30). Ground surface visibility during the survey was poor at approximately 40 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 30. P-37-040860 (CA-SDI-23565) site overview, facing northwest, Frame #SWCA-53792-S-18-004.

4.2.2.15 P-37-040861 (CA-SDI-23566)

SWCA archaeologists discovered and recorded P-37-040861/CA-SDI-23566 (SWCA-53792-S-019) and this site consists of a lithic scatter with two milky quartz cores, one tertiary milky quartz flake, one piece of quartz shatter, one tertiary and one secondary fine-grained porphyritic metavolcanic flake, one metate fragment, and one quartz scraper measuring 6 × 4 × 2 cm with bifacial flaking and use wear along one edge. The site is situated on a knoll top and measures 31 m (101 feet) (N–S) × 20 m (65 feet) (E–W) (Figure 31). Ground surface visibility during the survey was good at approximately 70 percent. Vegetation in the

surrounding area consisted of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 31. P-37-040861 (CA-SDI-23566) site overview, facing northeast, Frame #SWCA-53792-S-19-003.

4.2.2.16 P-37-040862 (CA-SDI-23567)

SWCA archaeologists discovered and recorded P-37-040862/CA-SDI-23567 (SWCA-53792-S-020) and this resource is a prehistoric lithic scatter consisting of one metavolcanic expended core with some use wear along one edge, one milky quartz scraper with two bifacial flakes removed from one edge with crushing along the flaked edge. The site also contains eight quartz flakes, consisting of one primary, four secondary, and three tertiary flakes, and an additional 23 pieces of quartz shatter. The site area measures 85 m (278 feet) (N–S) × 142 m (466 feet) (E–W) and is situated in a low-lying area along a seasonal stream (Figure 32). Ground surface visibility during the survey was poor at approximately 30 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

4.2.2.17 P-37-040863 (CA-SDI-23568)

SWCA archaeologists discovered and recorded P-37-040863/CA-SDI-23568 (SWCA-53792-S-021) and this resource is a sparse lithic scatter consisting of five quartz flakes consisting of one tertiary and four secondary flakes and two fire-affected rocks. The site area measures 74 m (243 feet) (N–S) × 54 m (177 feet) (E–W) and is situated in a knoll top overlooking a low-lying area along a seasonal stream and marsh area (Figure 33). Ground surface visibility during the survey was fair at approximately 50 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 32. P-37-040862 (CA-SDI-23567) site overview, facing southwest, Frame #SWCA-53792-S-20-004.

Figure 33. P-37-040863 (CA-SDI-23568) site overview, facing northeast, Frame #SWCA-53792-S-21-008.

4.2.2.18 P-37-040864 (CA-SDI-23569)

SWCA archaeologists discovered and recorded P-37-040864/CA-SDI-23569 (SWCA-53792-S-022) and this resource is a sparse quartz lithic scatter consisting of four quartz secondary flakes. The site area measures 2 m (7 feet) (N–S) × 2 m (7 feet) (E–W) and is situated in a flat area along the edge of a seasonal marsh area (Figure 34). Ground surface visibility during the survey was poor at approximately 30 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 34. P-37-040864 (CA-SDI-23569) site overview, facing northwest, Frame #SWCA-53792-S-22-005.

4.2.2.19 P-37-040865 (CA-SDI-23570)

SWCA archaeologists discovered and recorded P-37-040865/CA-SDI-23570 (SWCA-53792-S-023), and this resource is a prehistoric lithic scatter consisting of two metavolcanic cores, nine metavolcanic tertiary flakes, and five metavolcanic secondary flakes. The site also contained five Santiago Peak metavolcanic tertiary flakes, four quartz tertiary flakes, two quartz secondary flakes, and one granitic tertiary flake. The site area measures 107 m (351 feet) (N–S) × 170 m (558 feet) (E–W) and is situated along a slight slope (10 percent) along a seasonal stream (Figure 35). Ground surface visibility during the survey was fair at approximately 60 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 35. P-37-040865 (CA-SDI-23570) site overview, facing northwest, Frame #SWCA-53792-S-23-007.

4.2.2.20 P-37-040866 (CA-SDI-23571)

SWCA archaeologists discovered and recorded P-37-040866/CA-SDI-23571 (SWCA-53792-S-024) and this resource is a prehistoric bedrock milling feature with one oval mortar. No artifacts were observed in the area. The outcrop measures 6.5 m (21 feet) (N–S) × 3 m (10 feet) (E–W) (Figure 36). The mortar is highly weathered and contains decomposing granite and measures 43 × 30 × 10 cm (deep). The site is situated along a ridge on a slight slope (approximately 2 percent) overlooking a seasonal stream. Ground surface visibility during the survey was fair at approximately 60 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

4.2.2.21 P-37-040867 (CA-SDI-23572)

SWCA archaeologists discovered and recorded P-37-040867/CA-SDI-23572 (SWCA-53792-S-025) and this resource is a prehistoric quartz lithic quarry with associated flake scatter of approximately 30 artifacts which measures 7 m (23 feet) (N–S) × 6 m (20 feet) (E–W) (Figure 37). The site contains quartz lithics in various stages of reduction and one quartz scraper, unifacially retouched, measuring 7 × 5 × 4 cm. The site area measures 25 m (82 feet) (N–S) × 44 m (144 feet) (E–W) and is situated on a flat area. Ground surface visibility during the survey was fair at approximately 60 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 36. P-37-040866 (CA-SDI-23571) site overview, facing northwest, Frame #SWCA-53792-S-24-002.

Figure 37. P-37-040867 (CA-SDI-23572) site overview, facing west, Frame #SWCA-53792-S-25-003.

4.2.2.22 P-37-040868 (CA-SDI-23573)

SWCA archaeologists discovered and recorded P-37-040868/CA-SDI-23573 (SWCA-53792-S-026) and this resource is a low-density historic-era scatter consisting of 10 fragments of aqua glass, one gas can, and one reused can (possibly for gas) with bailing wire used as a makeshift handle. The site area measures 9 m (30 feet) (NW–SE) × 9 m (30 feet) (E–W) (Figure 38). The site is situated on a flat area adjacent to a dirt road. Ground surface visibility during the survey was fair at approximately 60 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 38. P-37-040868 (CA-SDI-23573) site overview, facing northwest, Frame #SWCA-53792-S-26-004.

4.2.2.23 P-37-040869 (CA-SDI-23574)

SWCA archaeologists discovered and recorded P-37-040869/CA-SDI-23574 (SWCA-53792-S-027) and this resource is a low-density prehistoric lithic quartz scatter consisting of flakes and cores. The scatter contains three quartz cores, 11 tertiary flakes, and eight secondary flakes within an area measuring 45 m (148 feet) (NW–SE) × 104 m (341 feet) (E–W) (Figure 39). The site is situated in a flat area. Ground surface visibility during the survey was fair at approximately 50 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 39. P-37-040869 (CA-SDI-23574) quartz core detail view, Frame #SWCA-53792-S-27-002.

4.2.2.24 P-37-040870 (CA-SDI-23575)

SWCA archaeologists discovered and recorded P-37-040870/CA-SDI-23575 (SWCA-53792-S-028) and this resource is a low-density prehistoric lithic scatter consisting of quartz flakes and one quartz core. The scatter contains two tertiary and one secondary flake and nine pieces of shatter. The quartz core measures 6 × 3 × 2 cm. The scatter was observed within an area measuring 20 m (66 feet) (NW–SE) × 20 m (66 feet) (E–W) (Figure 40). Ground surface visibility during the survey was fair at approximately 60 percent. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 40. P-37-040870 (CA-SDI-23575) site overview, facing north, Frame #SWCA-53792-S-28-001.

4.2.2.25 P-37-040871 (CA-SDI-23576)

SWCA archaeologists discovered and recorded P-37-040871/CA-SDI-23576 (SWCA-53792-S-029) and this resource is a historic-era refuse scatter (Figure 41) with approximate artifact counts of 150 ferrous metal fragments, 20 sanitary can fragments, 10 rotary opened sanitary can fragments, five slashed can fragments, 10 ferrous metal industrial fragments, one enameled metal fragment, 100 clear glass fragments, including three medicine bottle bases and one wide-mouth jar base, and one bedspring measuring 20 × 40 inches.

Five of the solder dot can fragments were manufactured between 1930 to 1975 (Society for Historical Archaeology 2016) (Figure 42). The clear glass jar base has a "Kerr Mfg. Co. Aug. 31, San Springs, Okla.," maker's mark, indicating it was manufactured from 1912 to 1946 (Toulouse 1972). The site area measures 15 m (49 feet) (NW–SE) × 13 m (43 feet) (E–W). The artifacts represent a household refuse deposit dating between 1930 and 1946. The site is situated on a flat area. Ground surface visibility during the survey was good at approximately 50 percent visibility. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 41. P-37-040871 (CA-SDI-23576) site overview, facing north, Frame #SWCA-53792-S-29-001.

Figure 42. P-37-040871 (CA-SDI-23576) can detail view, Frame #SWCA-53792-S-29-002.

4.2.2.26 P-37-040872 (CA-SDI-23577)

SWCA archaeologists discovered and recorded P-37-040872/CA-SDI-23577 (SWCA-53792-S-030) and this resource is a low-density prehistoric lithic and ceramic scatter consisting of two Tizon brownware sherds, one quartz primary flake, one quartz secondary flake, two quartz tertiary flakes, and one metavolcanic tertiary flake. The site area measures 37 m (120 feet) (NW–SE) × 35 m (115 feet) (E–W) (Figure 43). The site is situated on a flat area with a large granite boulder outcrop. Ground surface visibility during the survey was good at approximately 70 percent visibility. Vegetation in the surrounding area consisted of desert scrub, manzanita, redshank, cholla, oak trees, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 43. P-37-040872 (CA-SDI-23577) Tizon brownware pottery fragment detail view, Frame #SWCA-53792-S-30-002.

4.2.2.27 P-37-040811

Historic-era isolate P-37-040811 (SWCA-53792-I-001) was recorded by SWCA archaeologists. This isolate consists of two historic cans (Figure 44). The soil is a light yellowish-brown sand to sandy loam. Vegetation includes desert scrub, manzanita, cholla, and seasonal grasses. Ground visibility is approximately 20 to 30 percent.

4.2.2.28 P-37-040812

Historic-era isolate P-37-040812 (SWCA-53792-I-002) was recorded by SWCA archaeologists. This isolate consists of one church key–opened can and two crushed sanitary cans (Figure 45). The resource is situated on an open aspect with less than 2 degrees of slope. The soil is a light yellowish-brown sand to sandy loam. Vegetation includes desert scrub, manzanita, cholla, and seasonal grasses. Ground visibility is approximately 20 to 30 percent.

Figure 44. Isolate P-37-040811 detail view, Frame #P2154294.

Figure 45. Isolate P-37-040812 detail view, Frame #P2154327.

4.2.2.29 P-37-040813

Prehistoric isolate P-37-040813 (SWCA-53792-I-004) was recorded by SWCA archaeologists. This isolate consists of one metavolcanic flake (Figure 46). The resource is situated on a slight slope (approximately 2 to 5 degrees). Ground surface visibility during the survey was good at approximately 70 to 80 percent visibility. Vegetation consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

Figure 46. Isolate P-37-040813 metavolcanic flake, plan view, Frame #P2164476.

4.2.2.30 P-37-040814

Prehistoric isolate P-37-040814 (SWCA-53792-I-005) was recorded by SWCA archaeologists. This isolate consists of one small metavolcanic flake (Figure 47). The resource is situated on a slight slope (approximately 2 to 5 degrees) in a colluvial environment southwest of a large granite bedrock outcrop. Ground surface visibility during the survey was very poor at approximately 0 to 30 percent visibility due to dense vegetation coverage. Vegetation consisted of desert scrub, manzanita, cholla, and dispersed grasses. Sediments within the site consist of light yellowish-brown sand to sandy loam.

4.2.2.31 P-37-040815

Historic-era isolate P-37-040815 (SWCA-53792-I-006) was recorded by SWCA archaeologists. This isolated object consists of one McCormick-Deering 123-SP tractor manufactured in 1942 (Figure 48). Ground surface visibility during the survey was poor at approximately 20 to 30 percent visibility due to moderate to dense vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 47. Isolate P-37-040814 metavolcanic flake, detail view, Frame #P2164476.

Figure 48. Overview of farm equipment P-37-040815, Frame #P2174490.

4.2.2.32 P-37-040816

Prehistoric isolate P-37-040816 (SWCA-53792-I-007) was recorded by SWCA archaeologists. This isolate consists of one metavolcanic lithic flake (Figure 49). The resource was observed on the top of a hill with aspect to the west. Ground surface visibility during the survey was poor at approximately 20 to 30 percent visibility due to moderate to dense vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 49. Isolate P-37-040816 metavolcanic flake, detail view, Frame #P2184565.

4.2.2.33 P-37-040817

Prehistoric isolate P-37-040817 (SWCA-53792-I-009) was recorded by SWCA archaeologists. This isolate consists of one metavolcanic lithic flake (Figure 50). The resource was observed with an open aspect. Ground surface visibility during the survey was poor at approximately 30 to 50 percent visibility due to moderate to dense vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.34 P-37-040818

Historic-era isolate P-37-040818 (SWCA-53792-I-010) was recorded by SWCA archaeologists. This isolate consists of six historic ceramic sherds (Figure 51). The resource was observed with a south-facing open aspect and a 2- to 5-degree slope. Ground surface visibility during the survey was good, approximately 40 to 60 percent visibility due to moderate vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 50. Isolate P-37-040817 metavolcanic flake, detail view, Frame #P2194630.

Figure 51. Ceramic fragment from isolate P-37-040818, detail view, Frame #P2194649.

4.2.2.35 P-37-040819

Historic-era isolate P-37-040819 (SWCA-53792-I-011) was recorded by SWCA archaeologists. This isolate consists of one glass bottle, four glass sherds, and one ceramic sherd (Figure 52). The resource was observed with an open aspect and virtually no slope as it is within a plowed crop field. Ground surface visibility during the survey was excellent at approximately 100 percent due to recent plowing/tilling. Vegetation in the surrounding area consists of some seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 52. Isolate P-37-040819 historic bottle, detail view, Frame #P2204659.

4.2.2.36 P-37-040820

SWCA archaeologists identified and recorded prehistoric-era isolate P-37-040820 (SWCA-53792-I-013), which consists of one quartz tertiary flake measuring 2.9 × 2.1 × 0.8 cm (Figure 53). Ground surface visibility during the survey was poor at approximately 30 percent due to vegetation which consisted of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consisted of light yellowish-brown sand to sandy loam.

4.2.2.37 P-37-040821

SWCA archaeologists identified and documented historic-era isolate P-37-040821 (SWCA-53792-I-016). The isolate consists of one transfer ware porcelain plate fragment (Figure 54). Ground surface visibility during the survey was fair at approximately 50 percent due to dense vegetation. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 53. Isolate P-37-040820 quartz flake, detail view, Frame #P2203721.

Figure 54. Isolate P-37-040821 plate fragment, detail view, Frame #P-37-040821-001.

4.2.2.38 P-37-040822

SWCA archaeologists identified and documented prehistoric isolate P-37-040822 (SWCA-53792-I-017). The isolate consists of one quartz hammer stone with two flake scars (Figure 55). The hammerstone measures 6.5 × 5.5 × 4.5 cm. Ground surface visibility during the survey was fair at approximately 50 percent due to dense vegetation. Sediments consisted of light yellowish-brown sand to sandy loam.

Figure 55. Isolate P-37-040822 quartz hammerstone, detail view, Frame #SWCA-53792-I-017-001.

4.2.2.39 P-37-040823

SWCA archaeologists identified and documented prehistoric isolate P-37-040823 (SWCA-53792-I-018). The isolate consists of one metavolcanic flake. Ground surface visibility during the survey was poor at approximately 40 percent due to dense vegetation. Sediments consisted of light yellowish-brown sand to sandy loam.

4.2.2.40 P-37-040824

Prehistoric isolate P-37-040824 (SWCA-53792-I-019) was identified and recorded by SWCA archaeologists. The isolate consists of a piece of quartz shatter measuring 2 × 2 cm. Vegetation includes desert scrub, manzanita, cholla, oak trees, and seasonal grasses. Ground visibility was fair approximately 20 to 30 percent. The soil is a light yellowish-brown sand to sandy loam.

4.2.2.41 P-37-040825

Prehistoric isolate P-37-040825 (SWCA-53792-I-021) was recorded by SWCA archaeologists. This isolate consists of one milky quartz core measuring 9.5 × 8 × 7 cm (Figure 56). Ground surface visibility during the survey was poor at approximately 30 to 50 percent visibility due to moderate to dense vegetation

coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consists of light yellowish-brown sand to sandy loam.

Figure 56. Isolate P-37-040825 quartz core, detail view, Frame #SWCA-53792-I-021-001.

4.2.2.42 P-37-040827

Prehistoric isolate P-37-040827 (SWCA-53792-I-030) was recorded by SWCA archaeologists. This isolate consists of two pieces of quartz shatter. Ground surface visibility during the survey was poor at approximately 30 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.43 P-37-040828

Prehistoric isolate P-37-040828 (SWCA-53792-I-031) was recorded by SWCA archaeologists. This isolate consists of a piece of quartz shatter. Ground surface visibility during the survey was poor at approximately 30 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.44 P-37-040829

Prehistoric isolate P-37-040829 (SWCA-53792-I-032) was recorded by SWCA archaeologists. This isolate consists of one piece of quartz shatter measuring 4.0 × 3.2 × 1.75 cm. Ground surface visibility during the survey was poor at approximately 30 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.45 P-37-040830

Prehistoric isolate P-37-040830 (SWCA-53792-I-033) was recorded by SWCA archaeologists. This isolate consists of three pieces of shatter and one quartz core measuring 11 × 6 × 11 cm. Ground surface visibility during the survey was poor at approximately 25 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.46 P-37-040831

Prehistoric isolate P-37-040831 (SWCA-53792-I-034) was recorded by SWCA archaeologists. This isolate consists of one piece of metavolcanic shatter measuring 2.5 × 2 × 1.25 cm (Figure 57). Ground surface visibility during the survey was poor at approximately 25 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 57. Isolate P-37-040831, metavolcanic flake, detail view, Frame #P-37-040831-001.

4.2.2.47 P-37-040832

Prehistoric isolate P-37-040832 (SWCA-53792-I-035) was recorded by SWCA archaeologists. This isolate consists of two pieces of quartz shatter. Ground surface visibility during the survey was poor at approximately 25 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.48 P-37-040833

Prehistoric isolate P-37-040833 (SWCA-53792-I-040) was recorded by SWCA archaeologists. This isolate consists of one metavolcanic secondary flake measuring 4.5 × 4.0 × 1.0 cm (Figure 58). Ground surface visibility during the survey was poor at approximately 25 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 58. Isolate P-37-040833, metavolcanic flake detail view, Frame #P-37-040833-001.

4.2.2.49 P-37-040834

Prehistoric isolate P-37-040834 (SWCA-53792-I-041) was recorded by SWCA archaeologists. This isolate consists of one bifacially flaked secondary quartz flake measuring 2.5 × 1.5 × 0.5 cm. Ground surface visibility during the survey was poor at approximately 25 to 40 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.50 P-37-040835

Prehistoric isolate P-37-040835 (SWCA-53792-I-042) was recorded by SWCA archaeologists. This isolate consists of one piece of quartz shatter. Ground surface visibility during the survey was poor at approximately 15 to 25 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.51 P-37-040836

Prehistoric isolate P-37-040836 (SWCA-53792-I-044) was recorded by SWCA archaeologists. This isolate consists of one quartz core with three negative flake scars. The core measures 10 × 7.5 × 3.5 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.52 P-37-040838

Prehistoric isolate P-37-040838 (SWCA-53792-I-058) was recorded by SWCA archaeologists. This isolate consists of one secondary quartz flake which measures 4.25 × 2.5 × 0.75 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.53 P-37-040839

Prehistoric isolate P-37-040839 (SWCA-53792-I-072) was recorded by SWCA archaeologists. This isolate consists of one metavolcanic flake which measures 2.5 × 1.5 × 1.5 cm (Figure 58**Error! Reference source not found.**). Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 59. Isolate P-37-040839, metavolcanic flake, detail view, Frame #P-37-040839-001.

4.2.2.54 P-37-040840

Prehistoric isolate P-37-040840 (SWCA-53792-I-073) was recorded by SWCA archaeologists. This isolate consists of one secondary quartz flake which measures 3.5 × 2.5 × 1 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.55 P-37-040841

Prehistoric isolate P-37-040841 (SWCA-53792-I-074) was recorded by SWCA archaeologists. This isolate consists of one piece of quartz debitage. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.56 P-37-040842

Prehistoric isolate P-37-040842 (SWCA-53792-I-077) was recorded by SWCA archaeologists. This isolate consists of one secondary quartz flake which measures 2.5 × 1.5 × 0.5 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.57 P-37-040843

Prehistoric isolate P-37-040843 (SWCA-53792-I-079) was recorded by SWCA archaeologists. This isolate consists of one retouched secondary quartz flake which measures 5 × 4 × 2 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.58 P-37-040844

Prehistoric isolate P-37-040844 (SWCA-53792-I-080) was recorded by SWCA archaeologists. This isolate consists of one fire-affected metavolcanic scraper or chopper fragment which measures 7 × 6 × 3 cm (Figure 58**Error! Reference source not found.**). Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.59 P-37-040845

Prehistoric-era isolate P-37-040845 (SWCA-53792-I-081) was recorded by SWCA archaeologists. This isolate consists of one secondary quartz flake which measures 4 × 3 × 1 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

Figure 60. Isolate P-37-040844, metavolcanic scraper, detail view, Frame #P-37-040844-001.

4.2.2.60 P-37-040846

Prehistoric isolate P-37-040846 (SWCA-53792-I-082) was recorded by SWCA archaeologists. This isolate consists of one piece of quartz debitage. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.61 P-37-040898

Prehistoric isolate P-37-040898 (SWCA-53792-I-020) was recorded by SWCA archaeologists. This isolate consists of a piece of quartz shatter measuring 3 × 2.5 × 0.5 cm. Ground surface visibility during the survey was poor at approximately 30 to 50 percent visibility due to moderate to dense vegetation coverage. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.62 P-37-040899

Prehistoric isolate P-37-040899 (SWCA-53792-I-022) was recorded by SWCA archaeologists. This isolate consists of one quartz shatter measuring 4.2 × 3 × 2 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent visibility. Vegetation in the surrounding area consists of desert scrub, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.63 P-37-040900

Prehistoric isolate P-37-040900 (SWCA-53792-I-023) was recorded on September 11, 2023, by SWCA archaeologists. This isolate consists of one quartz shatter measuring 4 × 3.5 × 1.5 cm. Ground surface

visibility during the survey was fair at approximately 60 percent visibility. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

4.2.2.64 P-37-040901

Prehistoric isolate P-37-040901 (SWCA-53792-I-043) was recorded by SWCA archaeologists. This isolate consists of one quartz interior flake which measures 2.5 × 2 × 1 cm. Ground surface visibility during the survey was fair at approximately 50 to 60 percent. Vegetation in the surrounding area consists of desert scrub, oak trees, manzanita, cholla, and seasonal grasses. Sediments consist of light yellowish-brown sand to sandy loam.

5 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

This section describes the significance evaluations of archaeological resources. After the initial surveys in February 2022, and subsequent site visits and surveys in January through March 2023, July 2023, and September 2023, the project was designed to avoid impacts to cultural resources that would have been (based on existing data) or may have been (pending further study) recommended as significant or potentially significant. For the purposes of this project, these resources have been assumed to be eligible for listing in the CRHR and County Register, and given this, are assumed significant under CEQA. Project redesign excluded areas previously surveyed by SWCA from the project development area and added areas of open space that contain these resources. As a result of this design, this inventory includes descriptions of previously documented and newly discovered resources that are no longer located within the project development area.

5.1 Resource Importance

The CRHR is the state-maintained list of cultural resources found to be historically significant. The CRHR is maintained by the California Department of Parks and Recreation. The CRHR has four major criteria that a cultural resource must meet to be eligible for inclusion in the list:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual or possesses high artistic values; or,
4. Has yielded, or may be likely to yield, information important in prehistory or history.

The County requires that resource importance be assessed not only at the state level as required by CEQA, but at the local level as well. If a resource meets any one of the following criteria as outlined in the County Register, it will be considered an important resource.

1. Is associated with events that have made a significant contribution to the broad patterns of San Diego County's history and cultural heritage;
2. Is associated with the lives of persons important to the history of San Diego County or its communities;

3. Embodies the distinctive characteristics of a type, period, San Diego County region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Please note that none of the resources have been assessed for RPO listing because any that might qualify for listing have been assumed eligible for the CRHR and County Register and will be placed in a dedicated open space easement to ensure avoidance.

Tribal Cultural Resources

Under California's AB 52, TCRs are defined as resources that are eligible for or listed in the CRHR, or resources that the lead agency determines to be a TCR with substantial evidence. TCRs include the following:

1. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or
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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

5.1.1 Evaluation of P-37-010476/P-37-034159 Update

P-37-010476/P-37-034159 is a is a prehistoric habitation site which measures 346 m (NW–SE) × 181 m (NE–SW) and has three bedrock outcrops with milling features and two lithic flake and shatter concentrations. SWCA recommends P-37-010476/P-37-034159 ineligible for the CRHR and County Register under Criterion 1, as the site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in history or prehistory.

SWCA recommends P-37-010476/P-37-034159 ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the resource is not linked to specific people.

SWCA recommends P-37-010476/P-37-034159 ineligible for the CRHR or County Register under Criterion 3, as the site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends the resource P-37-010476/P-37-034159 to be assumed eligible for listing in the CRHR and County Register under Criterion 4, as it represents a prehistoric habitation site location which has a wide variety of artifacts and features and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.2 Evaluation of P-37-027350 (CA-SDI-17873/W-293) Update

P-37-027350 (CA-SDI-17873/W-293) is a multicomponent site consisting of one bedrock outcrop with two milling features and a lithic and a ceramic scatter from the prehistoric component whereas the historic

component consists of a diffuse scatter of various glass fragments, five concentrations of metal can fragments, six glass fragment concentrations, and two concentrations of crockery fragments. The site also includes a historic granite quarry. SWCA recommends both components of P-37-027350 (CA-SDI-17873/W-293) ineligible for the CRHR or County Register under Criterion 1, as neither component is associated with local or regional history or the cultural heritage of California or the United States, and there are no known ethnographic or historic data that support the linking of this site to an event important in history or prehistory.

SWCA recommends both components of P-37-027350 (CA-SDI-17873/W-293) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic or historic data that support the association of this site with the lives of persons significant in our past; the multicomponent site is not linked to specific people.

SWCA recommends both components of P-37-027350 (CA-SDI-17873/W-293) ineligible for the CRHR or County Register under Criterion 3, as the multicomponent site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends the prehistoric component of P-37-027350 (CA-SDI-17873/W-293) may be eligible for listing in the CRHR and County Register under Criterion 4, as it represents a prehistoric site location that has a wide variety of artifacts and features, and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

SWCA recommends the historic-era component of P-37-027350 (CA-SDI-17873/W-293) ineligible for the CRHR and County Register under Criterion 4. The historic component of the site is a surficial metal, can, and glass scatter with a granite quarry feature and the current recording effort has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a surficial metal can and glass scatter—suggest the potential for a significant buried historic-era component is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.3 Evaluation of P-37-032037 (CA-SDI-20295)

P-37-032037 represents a single-episode historic-era refuse scatter consisting of approximately 20 sanitary cans and a small scatter of bottle fragments near the intersection of Tule Jim Road and Tule Jim Lane. SWCA recommends P-37-032037(CA-SDI-020295) ineligible for the CRHR or County Register under Criterion 1, as the historic trash scatter is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known historic data that support the linking of this trash scatter to an event important in history. As a historic-era trash scatter lacking historic features or intra-site patterning, this site cannot be reasonably associated with events in history.

SWCA recommends P-37-032037(CA-SDI-020295) ineligible for the CRHR or County Register under Criterion 2, as there are no known archival data that support the association of this site with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-032037(CA-SDI-020295) ineligible for the CRHR or County Register under Criterion 3, as the trash scatter does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values; rather, it is an unstructured trash scatter.

SWCA recommends P-37-032037(CA-SDI-020295) ineligible for the CRHR under Criterion 4 or County Register. The site is a surficial can and bottle scatter and the current recording has captured its information value. Although the potential for subsurface deposits may exist in this location, field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a surficial can and glass scatter—suggest the potential for a significant buried component is low. The site does not have the potential to yield additional information important to the history of the local area, California, or the nation.

5.1.4 Evaluation of P-37-033279 (CA-SDI-20946)

Site P-37-033279 was originally recorded as a light, dispersed prehistoric lithic and ceramic scatter. SWCA concurs with the previous recommendation (Daniels 2013) for P-37-033279 (CA-SDI-20946) as ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this component to an event important in prehistory.

SWCA recommends concurrence with the previous recommendations (Daniels 2013) for P-37-033279 (CA-SDI-20946) as ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends concurrence with the previous recommendations (Daniels 2013) for P-37-033279 (CA-SDI-20946) as ineligible for the CRHR or County Register under Criterion 3, as the prehistoric lithic and ceramic scatter does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends concurrence with the previous recommendations (Daniels 2013) for P-37-033279 (CA-SDI-20946) as ineligible for the CRHR or County Register under Criterion 4. Archaeological test excavation has shown that the site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.5 Evaluation of P-37-033309

P-37-033309 was originally recorded as a prehistoric isolate consisting of a quartz tested cobble but it was not relocated during the current survey effort. SWCA recommends P-37-033309 ineligible for the CRHR or County Register under Criterion 1, as the isolated artifact was not relocated and is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this isolate to an event important in prehistory or history. As an isolated artifact it lacks features or intra-site patterning; therefore, this isolate cannot be reasonably associated with events in history.

SWCA recommends P-37-033309 ineligible for the CRHR or County Register under Criterion 2, as the isolated artifact was not relocated and there are no known ethnographic data that support the association of this isolate with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-033309 ineligible for the CRHR or County Register under Criterion 3, as the isolated artifact was not relocated and consequently does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-033309 ineligible for the CRHR or County Register under Criterion 4. As the isolate was not relocated, it does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.6 Evaluation of P-37-033310 (CA-SDI-23551)

P-37-033310 was originally recorded as a prehistoric isolate consisting of a quartz core. During the survey, additional artifacts were identified, and the location of the isolate was determined to be an archaeological site (lithic scatter). SWCA recommends P-37-031110 ineligible for the CRHR and the County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-031110 ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-031110 ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends the resource P-37-031110 to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a prehistoric lithic scatter location which may contain a significant subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.7 Evaluation of P-37-033497/P-37-033502/P-37-033503

P-37-033497 (CA-SDI-21067), P-37-033502, and P-37-033503 were combined during the survey and the site now consists of a prehistoric lithic and ceramic scatter and a historic refuse scatter. SWCA recommends P-37-033497/P-37-033502/P-37-033503 ineligible for the CRHR or County Register under Criterion 1, as the multicomponent site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in history or prehistory.

SWCA recommends P-37-033497/P-37-033502/P-37-033503 ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the multicomponent site is not linked to specific people.

SWCA recommends P-37-033497/P-37-033502/P-37-033503 ineligible for the CRHR or County Register under Criterion 3, as the multicomponent site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends the prehistoric component of P-37-033497/P-37-033502/P-37-033503 to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as it represents a prehistoric lithic and ceramic scatter and may contain significant subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the prehistoric component of the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

SWCA recommends the historic-era component of P-37-033497/P-37-033502/P-37-033503 ineligible for the CRHR or County Register under Criterion 4. The component is a surficial historic-era refuse scatter, and the current recording has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a surficial refuse scatter—suggest the potential for a significant buried site is low. The historic component is not likely to yield additional information important to the history of the local area, California, or the nation.

5.1.8 Evaluation of P-37-033501

P-37-033501 was originally recorded as an isolated Tizon brownware body sherd but during the current survey, SWCA did not reidentify the isolate. SWCA recommends P-37-033501 ineligible for the CRHR or County Register under Criterion 1, as the isolated artifact was not relocated and is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this isolate to an event important in prehistory or history. As an isolated artifact it lacks features or intra-site patterning. Based on the above discussion, this isolate cannot be reasonably associated with events in history.

SWCA recommends P-37-033501 ineligible for the CRHR or County Register under Criterion 2, as it was not relocated and there are no known ethnographic data that support the association of this isolate with the lives of persons significant in our past; the isolate is not linked to specific people.

SWCA recommends P-37-033501 ineligible for the CRHR or County Register under Criterion 3, as it was not relocated and the isolate does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-033501 ineligible for the CRHR or County Register under Criterion 4. The original survey has captured the isolate's information value, and it was not relocated during the current effort. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—an isolated artifact—suggest the potential for a significant buried site is low. The isolate does not have the potential to yield information important to the prehistory of the local area, California, and the nation. Isolates by definition are not significant resources.

5.1.9 Evaluation of P-37-037612

P-37-037612 was originally recorded as an isolated gray volcanic flaked scraper tool. During the current survey, SWCA relocated the isolate and noted it to be in the same condition and location as when it was previously recorded. SWCA recommends P-37-037612 ineligible for the CRHR or County Register under Criterion 1, as the isolated artifact is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this isolate to an event important in prehistory or history. As an isolated artifact it lacks features or intra-site patterning. This isolate cannot be reasonably associated with events in history.

SWCA recommends P-37-037612 ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this isolate with the lives of persons significant in our past; the isolate is not linked to specific people.

SWCA recommends P-37-037612 ineligible for the CRHR or County Register under Criterion 3, as the isolate does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-037612 ineligible for the CRHR or County Register under Criterion 4. The original survey has captured the isolate's information. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—an isolated artifact—suggest the potential for a significant buried site is low. The isolate does not have the potential to yield information important to the prehistory of the local area, California, and the nation. Isolates by definition are not significant resources.

5.1.10 Evaluation of P-37-040847 (CA-SDI-23552)

P-37-040847 (CA-SDI-23552) was recorded by SWCA archaeologists as a low-density prehistoric lithic scatter consisting of four metavolcanic flakes. SWCA recommends P-37-040847 (CA-SDI-23552) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040847 (CA-SDI-23552) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040847 (CA-SDI-23552) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040847 (CA-SDI-23552) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a lithic scatter location which may contain a significant subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.11 Evaluation of P-37-040848 (CA-SDI-23553)

P-37-040848 (CA-SDI-23553) was recorded by SWCA archaeologists as a prehistoric site consisting of a lithic scatter, a ceramic scatter, and two bedrock milling features. SWCA recommends P-37-040848 (CA-SDI-23553) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040848 (CA-SDI-23553) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040848 (CA-SDI-23553) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040848 (CA-SDI-23553) to be assumed eligible for listing in the CRHR and County Register under Criterion 4, as the site represents a possible prehistoric habitation site location which is likely to contain a significant subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.12 Evaluation of P-37-040849 (CA-SDI-23554)

P-37-040849 (CA-SDI-23554), a historic refuse scatter was unevaluated for CRHR or for the County Register under all criteria, as the resource is located outside of the current project area.

5.1.13 Evaluation of P-37-040850 (CA-SDI-23555)

P-37-040850 (CA-SDI-23555) was recorded by SWCA archaeologists as a multicomponent site consisting of a moderate-density historic-era refuse scatter consisting of metal cans and various glass fragments, and a prehistoric component of a sparse lithic scatter. SWCA recommends both components of P-37-040850 (CA-SDI-23555) ineligible for the CRHR or County Register under Criterion 1, as the multicomponent site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known historic or ethnographic data that support the linking of this site to an event important in history or prehistory.

SWCA recommends P-37-040850 (CA-SDI-23555) ineligible for the CRHR or County Register under Criterion 2, as there are no known historic or ethnographic data that support the association of this site with the lives of persons significant in our past; the multicomponent site is not linked to specific people.

SWCA recommends P-37-040850 (CA-SDI-23555) ineligible for the CRHR or County Register under Criterion 3, as the multicomponent site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends the prehistoric component of P-37-040850 (CA-SDI-23555) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as it represents a prehistoric lithic reduction site and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

SWCA recommends the historic-era component of P-37-040850 (CA-SDI-23555) ineligible for the CRHR or County Register under Criterion 4. The site is a surficial historic-era refuse scatter, and the current recording has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a surficial refuse scatter—suggest the potential for a significant buried site is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.14 Evaluation of P-37-040851 (CA-SDI-23556)

P-37-040851 (CA-SDI-23556) was recorded by SWCA as a sparse lithic scatter consisting of eight flakes. SWCA recommends P-37-040851 (CA-SDI-23556) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040851 (CA-SDI-23556) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040851 (CA-SDI-23556) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends the prehistoric component of P-37-040851 (CA-SDI-23556) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as it represents a prehistoric lithic reduction site and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.15 Evaluation of P-37-040852 (CA-SDI-23557)

P-37-040852 (CA-SDI-23557), a low-density historic refuse scatter was unevaluated for CRHR or for the County Register under all criteria, as the resource is located outside of the current project area.

5.1.16 Evaluation of P-37-040853 (CA-SDI-23558)

P-37-040853 (CA-SDI-23558) was recorded by SWCA as a historic-era refuse scatter consisting of various crushed/fragmented metal cans and other assorted metal fragments, ceramic fragments, and glass fragments. SWCA recommends P-37-040853 (CA-SDI-23558) ineligible for the CRHR or County Register under Criterion 1, as the historic trash scatter is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known data that support the linking of this site to an event important in history. As a historic-era refuse scatter lacking historic features or intra-site patterning, this site cannot be reasonably associated with events in history.

SWCA recommends P-37-040853 (CA-SDI-23558) ineligible for the CRHR or County Register under Criterion 2, as there are no known data that support the association of this site with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-040853 (CA-SDI-23558) ineligible for the CRHR or County Register under Criterion 3, as the historic-era site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040853 (CA-SDI-23558) ineligible for the CRHR or County Register under Criterion 4. The site is a surficial metal, can and glass scatter, and the current recording effort has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a surficial metal can and glass scatter—suggest the potential for a significant buried site is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.17 Evaluation of P-37-040854 (CA-SDI-23559)

P-37-040854 (CA-SDI-23559), a moderate-density historic refuse scatter was unevaluated for CRHR under all criteria or for the County Register as the resource is located outside of the current project area.

5.1.18 Evaluation of P-37-040855 (CA-SDI-23560)

P-37-040855 (CA-SDI-23560) was recorded by SWCA as a historic-era can scatter. P-37-040855 (CA-SDI-23560) was unevaluated for CRHR or for the County Register under all criteria as the resource is located outside of the current project area.

5.1.19 Evaluation of P-37-040856 (CA-SDI-23561)

P-37-040856 (CA-SDI-23561) was recorded by SWCA as a historic-era can scatter. SWCA recommends P-37-040856 (CA-SDI-23561) ineligible for the CRHR or County Register under Criterion 1, as the historic

can scatter is not associated with local or regional history or the cultural heritage of California or the United States. There are no known data that support the linking of this site to an event important in history. As a historic-era refuse scatter lacking historic features or intra-site patterning, this site cannot be reasonably associated with events in history.

SWCA recommends P-37-040856 (CA-SDI-23561) ineligible for the CRHR or County Register under Criterion 2, as there are no known data that support the association of this site with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-040856 (CA-SDI-23561) ineligible for the CRHR or County Register under Criterion 3, as the historic-era site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040856 (CA-SDI-23561) ineligible for the CRHR or County Register under Criterion 4. The site is a sparse surficial can scatter, and the current recording effort has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a sparse surficial can scatter—suggest the potential for a significant buried component is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.20 Evaluation of P-37-040857 (CA-SDI-23562)

SWCA recorded P-37-040857 (CA-SDI-23562) as a prehistoric quartz quarry site with hundreds of estimated flakes and shatter consistent with initial reduction and an exposure of quartz bedrock. SWCA recommends P-37-040857 (CA-SDI-23562) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040857 (CA-SDI-23562) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040857 (CA-SDI-23562) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040857 (CA-SDI-23562) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as it represents a prehistoric lithic quarry site and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.21 Evaluation of P-37-040858 (CA-SDI-23563)

SWCA recorded P-37-040858 (CA-SDI-23563) as a prehistoric artifact scatter consisting of ground stone tools or tool fragments, lithic flakes, and one ceramic sherd. SWCA recommends P-37-040858 (CA-SDI-23563) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040858 (CA-SDI-23563) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040858 (CA-SDI-23563) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040858 (CA-SDI-23563) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the resource represents a prehistoric lithic and ceramic location which may contain a subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.22 Evaluation of P-37-040859 (CA-SDI-23564)

SWCA archaeologists recorded P-37-040859 (CA-SDI-23564) as a prehistoric habitation site consisting of hundreds of scattered artifacts, six artifact concentrations, and five granite outcrops with milling features. SWCA recommends P-37-040859 (CA-SDI-23564) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040859 (CA-SDI-23564) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this component with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040859 (CA-SDI-23564) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040859 (CA-SDI-23564) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as it represents a prehistoric habitation site location which has a wide variety of artifacts and features and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.23 Evaluation of P-37-040860 (CA-SDI-23565)

SWCA archaeologists identified and recorded P-37-040860 (CA-SDI-23565) as a historic-era scatter consisting of cans, glass fragments and bottles, and various ranching and housing–related refuse. SWCA recommends P-37-040860 (CA-SDI-23565) ineligible for the CRHR or County Register under Criterion 1, as the historic site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known data that support the linking of this site to an event important in history. As a historic-era refuse scatter lacking historic features or intra-site patterning, this site cannot be reasonably associated with events in history.

SWCA recommends P-37-040860 (CA-SDI-23565) ineligible for the CRHR or County Register under Criterion 2, as there are no known data that support the association of this site with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-040860 (CA-SDI-23565) ineligible for the CRHR or County Register under Criterion 3, as the historic-era site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040860 (CA-SDI-23565) ineligible for the CRHR or County Register under Criterion 4. The site is a sparse surficial historic site, and the current recording effort has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a sparse surficial refuse scatter—suggest the potential for a significant buried component is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.24 Evaluation of P-37-040861 (CA-SDI-23566)

SWCA archaeologists identified and recorded P-37-040861 (CA-SDI-23566) which consists of a flake stone artifact scatter and a metate fragment. SWCA recommends P-37-040861 (CA-SDI-23566) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040861 (CA-SDI-23566) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040861 (CA-SDI-23566) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040861 (CA-SDI-23566) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a prehistoric lithic reduction location which may contain a significant subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.25 Evaluation of P-37-040862 (CA-SDI-23567)

SWCA archaeologists identified and recorded P-37-040862 (CA-SDI-23567) as a prehistoric flaked stone artifact scatter. SWCA recommends P-37-040862 (CA-SDI-23567) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040862 (CA-SDI-23567) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040862 (CA-SDI-23567) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040862 (CA-SDI-23567) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a possible prehistoric lithic scatter location which

may contain a subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.26 Evaluation of P-37-040863 (CA-SDI-23568)

SWCA archaeologists identified and recorded P-37-040863 (CA-SDI-23568) as a prehistoric flaked stone artifact scatter. SWCA recommends P-37-040863 (CA-SDI-23568) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040863 (CA-SDI-23568) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040863 (CA-SDI-23568) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040863 (CA-SDI-23568) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a prehistoric lithic reduction location which may contain a subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.27 Evaluation of P-37-040864 (CA-SDI-23569)

SWCA archaeologists identified and recorded P-37-040864 (CA-SDI-23569) as a prehistoric flaked stone artifact scatter. SWCA recommends P-37-040864 (CA-SDI-23569) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040864 (CA-SDI-23569) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040864 (CA-SDI-23569) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040864 (CA-SDI-23569) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a prehistoric lithic reduction location which may contain a subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.28 Evaluation of P-37-040865 (CA-SDI-23570)

SWCA archaeologists identified and recorded P-37-040865 (CA-SDI-23570) as a prehistoric flaked stone artifact scatter. SWCA recommends P-37-040865 (CA-SDI-23570) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040865 (CA-SDI-23570) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040865 (CA-SDI-23570) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040865 (CA-SDI-23570) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a prehistoric lithic reduction location which may contain a subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.29 Evaluation of P-37-040866 (CA-SDI-23571)

SWCA archaeologists identified and recorded P-37-040866 (CA-SDI-23571) as a single oval mortar in bedrock milling feature with no additional artifacts. SWCA recommends P-37-040866 (CA-SDI-23571) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040866 (CA-SDI-23571) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040866 (CA-SDI-23571) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040866 (CA-SDI-23571) may be eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a bedrock milling location which may contain a subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.30 Evaluation of P-37-040867 (CA-SDI-23572)

SWCA archaeologists identified and recorded SWCA-53792-S-25 as a prehistoric quartz lithic quarry and associated scatter of approximately 30 flake-stone artifacts in various stages of reduction and one quartz scraper. SWCA recommends P-37-040867 (CA-SDI-23572) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural

heritage of California or the United States, as there are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040867 (CA-SDI-23572) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040867 (CA-SDI-23572) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040867 (CA-SDI-23572) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as it represents a prehistoric lithic quarry site and may contain subsurface cultural remains. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.31 Evaluation of P-37-040868 (CA-SDI-23573)

SWCA archaeologists identified and recorded P-37-040868 (CA-SDI-23573) as a low-density historic-era scatter consisting of glass fragments and cans. SWCA recommends P-37-040868 (CA-SDI-23573) ineligible for the CRHR or County Register under Criterion 1, as the historic site is not associated with local or regional history or the cultural heritage of California or the United States, as there are no known data that support the linking of this site to an event important in history. As a historic-era refuse scatter lacking historic features or intra-site patterning, this site cannot be reasonably associated with events in history.

SWCA recommends P-37-040868 (CA-SDI-23573) ineligible for the CRHR or County Register under Criterion 2, as there are no known data that support the association of this site with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-040868 (CA-SDI-23573) ineligible for the CRHR or County Register under Criterion 3, as the historic-era site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040868 (CA-SDI-23573) ineligible for the CRHR or County Register under Criterion 4. The site is a sparse surficial historic site, and the current recording effort has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a sparse surficial refuse scatter—suggest the potential for a significant buried component is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.32 Evaluation of P-37-040869 (CA-SDI-23574)

SWCA archaeologists identified and recorded P-37-040869 (CA-SDI-23574) as a prehistoric lithic quartz scatter consisting of flakes and cores. SWCA recommends P-37-040869 (CA-SDI-23574) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040869 (CA-SDI-23574) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040869 (CA-SDI-23574) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040869 (CA-SDI-23574) to be assumed eligible for listing in the CRHR or County Register under Criterion 4. The site represents a prehistoric lithic reduction location which may contain a significant subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.33 Evaluation of P-37-040870 (CA-SDI-23575)

SWCA archaeologists identified and recorded P-37-040870 (CA-SDI-23575) as a low-density prehistoric lithic scatter consisting of quartz flakes and shatter and one core. SWCA recommends P-37-040870 (CA-SDI-23575) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040870 (CA-SDI-23575) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040870 (CA-SDI-23575) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040870 (CA-SDI-23575) to be assumed eligible for listing in the CRHR or County Register under Criterion 4. It represents a prehistoric lithic quarry site and may contain a significant subsurface cultural deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.34 Evaluation of P-37-040871 (CA-SDI-23576)

SWCA archaeologists identified and recorded P-37-040871 (CA-SDI-23576) as a historic-era refuse scatter consisting of various metal fragments, can fragments, glass fragments, and one bedspring. SWCA recommends P-37-040871 (CA-SDI-23576) ineligible for the CRHR or County Register under Criterion 1, as the historic refuse scatter is not associated with local or regional history or the cultural heritage of California or the United States. There are no known data that support the linking of this site to an event important in history. As a historic-era refuse scatter lacking historic features or intra-site patterning, this site cannot be reasonably associated with events in history.

SWCA recommends P-37-040871 (CA-SDI-23576) ineligible for the CRHR or County Register under Criterion 2, as there are no known data that support the association of this site with the lives of persons significant in our past; the historic resource is not linked to specific people.

SWCA recommends P-37-040871 (CA-SDI-23576) ineligible for the CRHR or County Register under Criterion 3, as the historic-era site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040871 (CA-SDI-23576) ineligible for the CRHR or County Register under Criterion 4. The site is a sparse surficial can scatter, and the current recording effort has captured its information value. Field observations of the ground surface and on-site sediments, as well as consideration of the type of resource—a sparse surficial refuse scatter—suggest the potential for a significant buried component is low. The site does not have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.35 Evaluation of P-37-040872 (CA-SDI-23577)

SWCA archaeologists identified and recorded P-37-040872 (CA-SDI-23577) as a low-density prehistoric lithic and ceramic scatter. SWCA recommends P-37-040872 (CA-SDI-23577) ineligible for the CRHR or County Register under Criterion 1, as the prehistoric site is not associated with local or regional history or the cultural heritage of California or the United States. There are no known ethnographic data that support the linking of this site to an event important in prehistory.

SWCA recommends P-37-040872 (CA-SDI-23577) ineligible for the CRHR or County Register under Criterion 2, as there are no known ethnographic data that support the association of this site with the lives of persons significant in our past; the prehistoric resource is not linked to specific people.

SWCA recommends P-37-040872 (CA-SDI-23577) ineligible for the CRHR or County Register under Criterion 3, as the prehistoric site does not embody distinctive characteristics of a type, period, region, or method of construction, does not represent the work of a master, and does not possess high artistic values.

SWCA recommends P-37-040872 (CA-SDI-23577) to be assumed eligible for listing in the CRHR or County Register under Criterion 4, as the site represents a prehistoric lithic and ceramic scatter site location which may contain a significant subsurface deposit. Although further research, including archaeological test excavation, would be required to determine this conclusively, the site does appear to have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.1.36 Evaluation of All Isolates

SWCA recommends all 38 newly recorded isolates (P-37-040811 through P-37-040825, P-37-040827 through P-37-040836, P-37-040838 through P-37-040846, and P-37-040898 through P-37-040901) ineligible for the CRHR or County Register under Criterion 1, as an isolated artifact is not associated with local or regional history or the cultural heritage of California or the United States. No known ethnographic data support the linking of any isolate to an event important in prehistory or history. No isolate is associated with the lives of persons important to local, California, or national history. Each individual isolated artifact lacks features or intra-site patterning, therefore, no isolate can be reasonably associated with events in history.

SWCA recommends all isolates ineligible for the CRHR or County Register under Criterion 2, as there are no known historic or ethnographic data that support the association of any isolate with the lives of persons significant in our past; the isolates are not linked to specific people.

SWCA recommends all isolates ineligible for the CRHR or County Register under Criterion 3, as the isolates do not embody distinctive characteristics of a type, period, region, or method of construction, do not represent the work of a master, and dos not possess high artistic values.

SWCA recommends all isolates ineligible for the CRHR or County Register under Criterion 4. Isolates by definition are not significant. Survey and recording have captured each isolate's information value. Although the potential for subsurface deposits may vary at each location, based on the context of each, these do appear to be isolated, surficial artifacts. No isolates have the potential to yield information important to the prehistory of the local area, California, and the nation.

5.2 Impact Identification

Eligibility recommendations, impacts assessments, and management recommendations are summarized in Table 5. Resources P-37-010476/P-37-034159, P-37-027350 (CA-SDI-17873/W-293), P-37-033310 (CA-SDI-23551), P-37-033497/P-37-033502/P-37-033503, P-37-040847 (CA-SDI-23552), P-37-040848 (CA-SDI-23553), P-37-040850 (CA-SDI-23555), P-37-040851 (CA-SDI-23556), P-37-040857 (CA-SDI-23562), P-37-040858 (CA-SDI-23563), P-37-040859 (CA-SDI-23564), P-37-040861 (CA-SDI-23566), P-37-040862 (CA-SDI-23567), P-37-040863 (CA-SDI-23568), P-37-040864 (CA-SDI-23569), P-37-040865 (CA-SDI-23570), P-37-040866 (CA-SDI-23571), P-37-040867 (CA-SDI-23572), P-37-040869 (CA-SDI-23574), P-37-040870 (CA-SDI-23575), and P-37-040872 (CA-SDI-23577), which generally consist of prehistoric or multicomponent archaeological sites, are recommended assumed eligible for listing in the CRHR/County Register. The project has been designed to avoid impacts, and these resources will be located within dedicated open space easements. These resources are adjacent to the project development area, and because the resources will be avoided, impacts are considered to be less than significant under CEQA because the sites will not be physically altered.

Seven resources are recommended ineligible for listing in the CRHR or County Register. This includes two previously recorded sites (P-37-032037 [CA-SDI-20295] and P-37-033279 [CA-SDI-20946]) and five newly recorded sites (P-37-040853 [CA-SDI-23558], P-37-040856 [CA-SDI-23561], P-37-040860 [CA-SDI-23565], P-37-040868 [CA-SDI-23573], and P-37-040871 [CA-SDI-23576]) (see Table 5). Most of these are surficial scatters of historic-era trash. P-37-033279 (CA-SDI-20946) was previously evaluated through a Phase II testing and recommended ineligible for listing in the CRHR. Though SWCA located three artifacts within the surface of the site, nothing indicated that the evaluation status of the site should be reexamined. SWCA concurs with the recommendation of ineligible based on the previous Phase II efforts (Daniels 2013). Four sites (P-37-040849 [CA-SDI-23554], P-37-040852 [CA-SDI-23557], P-37-040854 [CA-SDI-23559], and P-37-040855 [CA-SDI-23560]) are outside of the project area; therefore, they were not evaluated.

All isolates (P-37-040811 through P-37-040825, P-37-040827 through P-37-040836, P-37-040838 through P-37-040846, and P-37-040898 through P-37-040901) are recommended ineligible for listing in the CRHR/County Register.

That said, all cultural resources sites are considered important under County of San Diego Guidelines for Determining Significance (County of San Diego 2007a). However, evaluation of each resource (or assumption of eligibility and avoidance of resources in the case of the current project), in conjunction with monitoring of ground disturbance within the entire project area, will reduce the impacts to these resources to less than significant. Sites P-37-033309 and P-37-033501 are not considered important under County guidelines as no cultural material was identified during the survey at those locations. Although no mitigation measures are necessary for these isolates, monitoring of grading is recommended at these locations under the project-wide monitoring recommendation. No mitigation measures are proposed for the isolates since these resources are not considered significant under CEQA and are not considered important under County guidelines.

Table 5. Archaeological Site Management Recommendations

Site Number	Brief Description	CRHR/ County Eligibility Recommendation	Plan Location	Impacts	Recommendations
Previously Recorded Resources					
P-37-010476/ P-37-034159	Prehistoric habitation site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-027350 (CA-SDI-17873/W-293)	Multicomponent site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place and within a dedicated open space easement
P-37-032037 (CA-SDI-20295)	Historic trash scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-033279 (CA-SDI-20946)	Prehistoric lithic and ceramic scatter	Previously evaluated, ineligible	Inside	None	Archaeological and tribal monitoring. Campo requested that all artifacts collected during testing be reburied at the site. Artifacts have been curated at the San Diego Archaeological Center (Tierra del Sol Project – Collection #675). Return of the artifacts for on-site reburial will be a condition of approval.
P-37-033309	Prehistoric lithic isolate	Ineligible	Not relocated	None	Archaeological and tribal monitoring
P-37-033310 (CA-SDI-23551)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-033497, P-37-033502, and P-37-033503	Multicomponent site of prehistoric ceramic and lithic scatters, and historic-era refuse scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-033501	Prehistoric ceramic isolate	Ineligible	Not relocated	None	Archaeological and tribal monitoring
P-37-037612	Prehistoric lithic isolate	Ineligible	Inside	None	Archaeological and tribal monitoring
Newly Recorded Resources					
P-37-040847 (CA-SDI-23552)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040848 (CA-SDI-23553)	Prehistoric bedrock milling feature and lithic and ceramic scatters	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040849 (CA-SDI-23554)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring

Site Number	Brief Description	CRHR/ County Eligibility Recommendation	Plan Location	Impacts	Recommendations
P-37-040850 (CA-SDI-23555)	Multicomponent site of prehistoric lithic scatter, and historic-era refuse scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040851 (CA-SDI-23556)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040852 (CA-SDI-23557)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040853 (CA-SDI-23558)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040854 (CA-SDI-23559)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040855 (CA-SDI-23560)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040856 (CA-SDI-23561)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040857 (CA-SDI-23562)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040858 (CA-SDI-23563)	Prehistoric lithic and ceramic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040859 (CA-SDI-23564)	Prehistoric habitation site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040860 (CA-SDI-23565)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040861 (CA-SDI-23566)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040862 (CA-SDI-23567)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040863 (CA-SDI-23568)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040864 (CA-SDI-23569)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040865 (CA-SDI-23570)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040866 (CA-SDI-23571)	Prehistoric bedrock milling feature	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040867 (CA-SDI-23572)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

Site Number	Brief Description	CRHR/ County Eligibility Recommendation	Plan Location	Impacts	Recommendations
P-37-040868 (CA-SDI-23573)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040869 (CA-SDI-23574)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040870 (CA-SDI-23575)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040871 (CA-SDI-23576)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040872 (CA-SDI-23577)	Prehistoric lithic and ceramic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

5.3 Native American Heritage Values

SWCA obtained no information through Native American outreach or communication with the Native American monitors during fieldwork that any of the sites are culturally significant, beyond their recognition as prehistoric, Native American–affiliated archaeological sites. In addition, no known tribal cultural resources as defined in CEQA, or known traditional cultural properties, as defined by NPS *National Register Bulletin 38, Guidelines for Evaluating and Documenting Traditional Cultural Properties* (NPS 1992), are known to exist within the project area, including those that currently serve religious or other community practices. During the survey, no artifacts or remains were identified or recovered that could be reasonably associated with such practices. Further, no human remains were identified. Care was taken at both prehistoric and historic sites and isolates to consider burning as funerary practices of the Kumeyaay. No evidence of burning typical of what would be expected in a funerary context was observed. All prehistoric archaeological material consisted of common flaked stone and ground stone items. The one exception to this statement may be the documentation of a ground slate pendant at site P-37-040859 (CA-SDI-23564). This site is assumed eligible for the CRHR and the County Register. The project has been redesigned around this site; the site has been located within dedicated open space to mitigate all impacts.

Tribal outreach for government-to-government consultation (AB-52) was initiated by the County of San Diego on February 15, 2023. Nine tribes (Barona, Campo, Jamul, Kwaaymii, Manzanita, San Pasqual, Santa Ysabel, Sycuan, and Viejas) were sent notices of the project. Four tribes (Campo, Jamul, San Pasqual, and Viejas) have requested formal government-to-government consultation. The County has met with Campo, Jamul, and San Pasqual. On February 5, 2024, Jamul Indian Village concluded its consultation with the County and deferred to Campo. Campo requested a larger, unspecified distance between cultural resource boundaries and construction areas. Consultation is ongoing and the County will provide any and all results of consultation updates which may result in design changes to the Project. Any design changes likely would need formal review by a qualified archaeologist for impacts to cultural resources. San Pasqual was provided an earlier draft copy of this report on May 30, 2024. To date no response has been receive from San Pasqual. With Viejas, due to a lack of response in numerous follow-up inquiries by the County to schedule a consultation, the County concluded consultation. No TCRs have been identified.

6 MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

6.1 Unmitigated Impacts

The current project design creates no unavoidable, unmitigable impacts.

6.2 Mitigated Impacts

6.2.1 Mitigation Measures and Design Considerations

Twenty-one resources (P-37-010476/P-37-034159, P-37-027350 [CA-SDI-17873/W-293], P-37-033310 (CA-SDI-23551), P-37-033497/P-37-033502/P-37-033503, P-37-040847 [CA-SDI-23552], P-37-040848 [CA-SDI-23553], P-37-040850 [CA-SDI-23555], P-37-040851 [CA-SDI-23556], P-37-040857 [CA-SDI-23562], P-37-040858 [CA-SDI-23563], P-37-040859 [CA-SDI-23564], P-37-040861 [CA-SDI-23566], P-37-040862 [CA-SDI-23567], P-37-040863 [CA-SDI-23568], P-37-040864 [CA-SDI-23569], P-37-040865 [CA-SDI-23570], P-37-040866 [CA-SDI-23571], P-37-040867 [CA-SDI-23572], P-37-040869 [CA-SDI-23574], P-37-040870 [CA-SDI-23575], and P-37-040872 [CA-SDI-23577]) are recommended to be assumed eligible for listing in the CRHR/County Register and are within the project area. The project has been designed to avoid impacts and these resources are located within dedicated open space easements within the project area. These impacts are considered less than significant under CEQA because the sites will not be physically altered. Details of the design considerations and mitigation measures are provided below.

Dedicated Open Space

CULT#1 – DEDICATED CULTURAL OPEN SPACE EASEMENT

INTENT: In order to protect sensitive Cultural Resources, a Cultural Resource Open Space Easement shall be granted. **DESCRIPTION OF REQUIREMENT:** Grant to the County of San Diego a Cultural Resource Open Space Easement as shown on the approved Open Space Easement exhibit. This easement is for the protection of archaeological sites P-37-010476/P-37-034159, P-37-027350 (CA-SDI-17873/W-293), P-37-033310 (CA-SDI-23551), P-37-033497/P-37-033502/P-37-033503, P-37-040847 (CA-SDI-23552), P-37-040848 (CA-SDI-23553), P-37-040850 (CA-SDI-23555), P-37-040851 (CA-SDI-23556), P-37-040857 (CA-SDI-23562), P-37-040858 (CA-SDI-23563), P-37-040859 (CA-SDI-23564), P-37-040861 (CA-SDI-23566), P-37-040862 (CA-SDI-23567), P-37-040863 (CA-SDI-23568), P-37-040864 (CA-SDI-23569), P-37-040865 (CA-SDI-23570), P-37-040866 (CA-SDI-23571), P-37-040867 (CA-SDI-23572), P-37-040869 (CA-SDI-23574), P-37-040870 (CA-SDI-23575), and P-37-040872 (CA-SDI-23577), and prohibits all of the following on any portion of the land subject to said easement: grading; excavation; placement of soil, sand, rock, gravel, or other material; clearing of vegetation; construction, erection, or placement of any building or structure; vehicular activities; trash dumping; or use for any purpose other than as open space. The sole exceptions to this prohibition are:

1. Implementation of a site-capping plan approved by the Director of Planning and Development Services, if necessary.
2. Selective clearing of vegetation by hand to the extent required by written order of the fire authorities for the express purpose of reducing an identified fire hazard.
3. Activities required to be conducted pursuant to a revegetation, habitat management, or landscaping plan approved by the Director of Planning and Development Services.

4. Vegetation removal or application of chemicals for vector control purposes where expressly required by written order of the Department of Environmental Health, in a location and manner approved in writing by the Director of Planning and Development Services.

DOCUMENTATION: The applicant shall prepare the legal descriptions of the easements, then submit them for preparation and recordation with the *[DGS, RP]*, and pay all applicable fees associated with preparation of the documents. **TIMING:** Prior to the approval of any plan and issuance of any permit. **MONITORING:** For recordation by separate document, the *[DGS, RP]* shall prepare and approve the easement documents and send them to *[PDS, PPD] and [DPR GPM]* for preapproval. The *[PDS, PPD]* shall preapprove the language and estimated location of the easements prior to recordation. Upon Recordation of the easements *[DGS, RP]* shall forward a copy of the recorded documents to *[PDS, PPD]* for satisfaction of the condition.

Treatment Agreement and Preservation Plan

CULT#2 – CULTURAL RESOURCES TREATMENT AGREEMENT AND PRESERVATION PLAN

INTENT: In order to mitigate for impacts to Cultural Resources, develop and enter into a Cultural Resources Treatment Agreement and Preservation Plan with the consulting Native American Tribes. **DESCRIPTION OF REQUIREMENT:** A Cultural Resources Treatment Agreement and Preservation Plan shall be developed between the applicant or their representative and the consulting Native American Tribes. 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:

a. Parties entering into the agreement and contact information.

b. Responsibilities of the Property Owner or their representative, Principal Investigator, archaeological monitors, Kumeyaay Native American monitors, and consulting tribes.

c. 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, and onsite storage of cultural materials.

d. Treatment of identified Native American cultural materials.

e. Treatment of Native American human remains and associated grave goods.

f. Incorporation of P-37-010476/P-37-034159, P-37-027350 (CA-SDI-17873/W-293), P-37-033310 (CA-SDI-23551), P-37-033497/P-37-033502/P-37-033503, P-37-040847 (CA-SDI-23552), P-37-040848 (CA-SDI-23553), P-37-040850 (CA-SDI-23555), P-37-040851 (CA-SDI-23556), P-37-040857 (CA-SDI-23562), P-37-040858 (CA-SDI-23563), P-37-040859 (CA-SDI-23564), P-37-040861 (CA-SDI-23566), P-37-040862 (CA-SDI-23567), P-37-040863 (CA-SDI-23568), P-37-040864 (CA-SDI-23569), P-37-040865 (CA-SDI-23570), P-37-040866 (CA-SDI-23571), P-37-040867 (CA-SDI-23572), P-37-040869 (CA-SDI-23574), P-37-040870 (CA-SDI-23575), and P-37-040872 (CA-SDI-23577) into dedicated open space.

g. Interim treatment and final internment of Native American cultural soils and materials.

h. Confidentiality of cultural information including location and data.

i. Regulations that apply to cultural resources that have been identified or may be identified during project construction.

DOCUMENTATION: A copy of the implemented agreement shall be submitted to the *[PDS, PPD]* for approval. **TIMING:** Prior to the approval of any plan and issuance of any permit. **MONITORING:** The *[PDS, PPD]* shall review the implemented agreement for compliance this condition.

Archaeological and Tribal Monitoring

CULT#3 – ARCHAEOLOGICAL MONITORING

INTENT: In order to mitigate for potential impacts to undiscovered buried archaeological resources and human remains, an Archaeological Monitoring Program and potential Data Recovery Program shall be implemented pursuant to the County of San Diego Guidelines for Determining Significance for Cultural Resources and the California Environmental Quality Act (CEQA). **DESCRIPTION OF REQUIREMENT:** A County Approved Principal Investigator (PI) known as the "Project Archaeologist," shall be contracted to perform archaeological monitoring and a potential data recovery program during all grading, clearing, grubbing, trenching, and construction activities. The archaeological monitoring program shall include the following:

- Pre-Construction
    - Contract with a County approved archaeologist to perform archaeological monitoring and a potential data recovery program during all earth-disturbing activities. The Project Archaeologist shall perform the monitoring duties before, during and after construction.
    - Pre-construction meeting to be attended by the Project Archaeologist and Kumeyaay Native American monitor(s) to explain the monitoring requirements.
- Construction
    - Monitoring. Both the Project Archaeologist and Kumeyaay Native American monitor(s) are to be onsite 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. Both the Project Archaeologist and Kumeyaay Native American monitor 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 at the time of discovery.
        - The Project Archaeologist in consultation with the County Archaeologist and Kumeyaay Native American monitor(s) shall determine the significance of discovered resources.
        - 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 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 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. If the human remains are to be taken offsite for evaluation, they may be accompanied by the 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 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
  - Monitoring Report. 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 the South Coastal Information Center and any culturally-affiliated tribe who requests a copy.

- Final Grading
  - Final. Report. 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 curation facility or 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.

DOCUMENTATION: The applicant shall provide a copy of the Archaeological Monitoring Contract or letter of acceptance, cost estimate, and MOU to *[PDS, PPD]*. Additionally, the cost amount of the monitoring work shall be added to the grading bond cost estimate. **TIMING:** Prior to approval of any grading and or improvement plans and issuance of any Grading or Construction Permits. **MONITORING:** *[PDS, PPD]* shall review the contract or letter of acceptance, MOU and cost estimate or separate bonds for compliance with this condition. The cost estimate should be forwarded to *[PDS, PPD]* for inclusion in the grading bond cost estimate, and grading bonds and the grading monitoring requirement shall be made a condition of the issuance of the grading or construction permit.

6.3 Effects Found Not to be Significant

The previously recorded sites and isolates P-37-032037 (CA-SDI-20295), P-37-033279 (CA-SDI-20946), P-37-033309, P-37-033501, and P-37-037612, and the newly recorded resources (including isolates) (P-37-040811 through P-37-040825, P-37-040827 through P-37-040836, P-37-040838 through P-37-040846, and P-37-040898 through P-37-040901)are recommended ineligible for the CRHR/County Register and, therefore, SWCA recommends no consideration of mitigation measures or design consideration for them.

The resources P-37-040849 (CA-SDI-23554), P-37-040852 (CA-SDI-23557), P-37-040854 (CA-SDI-23559), and P-37-040855 (CA-SDI-23560) are completely outside of the redesigned project area. As they are outside of the project, no consideration of eligibility for the CRHR/County Register was conducted.

All 38 newly recorded isolates, P-37-040811 through P-37-040825, (P-37-040811 through P-37-040825, P-37-040827 through P-37-040836, P-37-040838 through P-37-040846, and P-37-040898 through P-37-040901) will be directly impacted by the proposed project. However, isolates do not qualify as eligible for the CRHR or the County Register and, therefore, impacts to these resources are not considered to be significant.

Sites P-37-033309 and P-37-033501 are not considered significant under CEQA and County guidelines as no cultural material was identified during the survey at those locations. Although no mitigation measures are necessary for these sites, grading monitoring is recommended at these locations under the project-wide monitoring recommendation. No mitigation measures are proposed for the isolates since these resources are not considered significant under CEQA and are not considered significant under County guidelines.

7 REFERENCES CITED

Bajacalifology
2014 Databases: Ethnobiology of Baja California. Available at: https://sandiegoarchaeology.org/Laylander/Baja/bio.htm). Accessed November 29, 2023.

Basgall, Mark E.
2007 *Another Look at the Ancient Californians: Resurvey of the Emma Lou Davis Stake Areas and Reassessment of Collections, Naval Air Weapons Station China Lake, Kern County, California*. On file, Naval Air Weapons Station, China Lake, California.

Bean, Lowell John, and Harry W. Lawton
1973 Some Explanations for the Rise of Cultural Complexity in Native California with Comments on Proto-Agriculture and Agriculture. In *Patterns of Indian Burning in California: Ecology and Ethnohistory*, by Henry T. Lewis, pp. v-xlvii. Ballena Press, Ramona, California.

Bosque, Phill A.
2017 DPR 523 Forms for P-37-037612. SDG&E. Forms on file, South Coastal Information Center, California State University, San Diego.

Byrd, Brian F. (editor)
2011 *Archaeological Regional Research Design for MCB Camp Pendleton, San Diego County, California*. Prepared for Naval Facilities Engineering Command Southwest, San Diego. On file, South Coastal Information Center, San Diego State University, San Diego.

Byrd, Brian F., and L. Mark Raab
2007 Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory*, edited by Terry L. Jones and Kathryn A. Klar, pp. 215-228. Altimira Press, New York.

Carrico, Richard L.
1983 Brief Glimpse of the Kumeyaay Past: An Interview with Tom Lucas, Kwaaymii, of Laguna Ranch. *Journal of San Diego History* 29(2).

2006 Archaeological and cultural differentiation of the Ipai and Tapai. In *Memorias: Balances y Perspectivas de la Anthroplogia e Historia de Baja California*, Tomo 7.

Castetter, Edward F., and William H. Bell
1951 *Yuman Indian Agriculture*. University of New Mexico Press, Albuquerque.

Cleland, Robert G.
1941 *The Cattle on a Thousand Hills*. Huntington Library, San Marino, California.

Comeau, Brad
2013a DPR 523 Forms for P-37-033309. Dudek. Forms on file, South Coastal Information Center, California State University, San Diego.

2013b DPR 523 Forms for P-37-033310. Dudek. Forms on file, South Coastal Information Center, California State University, San Diego.

Comeau, Brad and Trevor Hough
2013 DPR 523 Forms for P-37-033279. Dudek. Forms on file, South Coastal Information Center, California State University, San Diego.

County of San Diego
2007a *Guidelines for Determining Significance, Cultural Resources: Archaeological and Historic Resources*. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, San Diego County, California.

2007b *Report Format and Content Guidelines: Archaeological and Historic Resources*. Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, San Diego County, California.

Cuero, Delfina
1970 *The Autobiography of Delfina Cuero (as told to Florence Shipek*). Malki Museum Press, Morongo Indian Reservation.

Dallas, H.
2004 Reevaluating the Early Millingstone Complex in Coastal Southern California: VEN-1, A Case Study. *Proceedings of the Society for California Archaeology* 17:151–161.

Daniels, James
2011 DPR 523 Forms for P-37-032037. ASM Affiliates, Inc. Forms on file, South Coastal Information Center, California State University, San Diego.

2013 *Archaeological Survey and Evaluation for the Tierra del Sol LLC Project, San Diego County California*. ASM Affiliates, Inc. On file, South Coastal Information Center, San Diego State University.

Davis, Emma Lou
1978 *The Ancient Californians: Rancholabrean Hunters of the Mojave Lakes Country*. Science Series No. 29. Natural History Museum of Los Angeles County, Los Angeles.

de Barros, Phillip
2013a DPR 523 Forms for P-37-033497. Professional Archaeological Services. Forms on file, South Coastal Information Center, California State University, San Diego.

2013b DPR 523 Forms for P-37-033502. Professional Archaeological Services. Forms on file, South Coastal Information Center, California State University, San Diego.

2013c DPR 523 Forms for P-37-033503. Professional Archaeological Services. Forms on file, South Coastal Information Center, California State University, San Diego.

2013d DPR 523 Forms for P-37-033501. Professional Archaeological Services. Forms on file, South Coastal Information Center, California State University, San Diego.

DeCourten, Frank
2010 *Geology of Southern California*. Available at: https://www.yumpu.com/en/document/view/10088307/geology-of-southern-californiapdf-grossmont-college. Accessed February 1, 2021.

Driver, Harold E.
1957 Estimation of Intensity of Land Use from Ethnobiology: Applied to the Yuma Indians. Ethnohistory 4:174–197.

1969 *The Indians of North America, Second Edition, Revised*. The University of Chicago Press, Chicago and London.

Drover, Christopher E., Henry C. Koerper, and Paul E. Langenwalter II
1983 Early Holocene Human Adaptation on the Southern California Coast: A Summary Report of Investigations at the Irvine Site (CA-ORA-64), Newport Bay, Orange County, California. *Pacific Coast Archaeological Society Quarterly* 19(3&4):1–84. Costa Mesa, California.

Engstrand, Iris H. W., and Mary F. Ward
1995 Rancho Guajome: An architectural legacy preserved. *Journal of San Diego History. San Diego Historical Society Quarterly, fall 1995, Volume 41, Number 4.* San Diego, California.

Erlandson, Jon M.
1991 Early Maritime Adaptations on the Northern Channel Islands. In *Hunter-Gatherers of Early Holocene Coastal California,* edited by J. M. Erlandson and R. Colten. Perspectives in California Archaeology, Vol. 1. Institute of Archaeology, University of California, Los Angeles.

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

Erlandson, J.M., and R.H. Colton
1991 An Archaeological Context for Early Holocene Studies on the California Coast. In *Hunter-Gatherers of Early Holocene Coastal California*, pp. 1-10. Institute of Archaeology, University of California, Los Angeles.

Erlandson, J.M., and M.A. Glassow (editors)
1997 *Archaeology of the California Coast During the Middle Holocene*. Institute of Archaeology, University of California, Los Angeles.

Forbes, Jack D.
1963 Indian Horticulture West and Northwest of the Colorado River. *Journal of the West* 2:1–14.

Framefinder
1953 Aerial photograph, flight AXN_1953, Frame 2M-14. Available at: https://mil.library.ucsb.edu/ap_indexes/FrameFinder/. Accessed November 20, 2022.

Gallegos, Dennis R.
1992 Patterns and Implications of Coastal Settlement in San Diego County: 9000 to 1300 Years Ago. In *Essays on the Prehistory of Maritime California*, edited by Terry L. Jones, pp. 205–216. Publication No. 10. Center for Archaeological Research at Davis, Davis, California.

2002 Southern California in Transition: Late Holocene Occupation of Southern San Diego County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 27–39. Perspectives in California Archaeology, vol. 6. Cotsen Institute of Archaeology, University of California, Los Angeles.

2017 *First People: A Revised Chronology for San Diego County.* Storyseekers, San Diego, California.

Gallegos, Dennis R., and Carolyn Kyle
1998 *Five Thousand Years of Maritime Subsistence at CA-SDI-48, on Ballast Point, San Diego California*. Coyote Press Archives of California Prehistory No. 40, Salinas, California.

Gifford, Edward W.
1918 lans and Moieties in Southern California. Uni*versity of California Publications in American Archaeology and Ethnology* 14:155–219. Berkeley.

1926 Miwok Lineages and the Political Unit in Aboriginal California. *American Anthropologist* 28:389–401.

1931 The Kamia of Imperial Valley. *Bureau of American Ethnology*, Bulletin 97.

Glassow, Michael A.
1997 Middle Holocene Cultural Development in the Central Santa Barbara Channel Region. In *Archaeology of the California Coast during the Middle Holocene*, edited by J. M. Erlandson and M. A. Glassow, pp.73–90. Perspectives in California Archaeology, Vol. 4. Institute of Archaeology, University of California, Los Angeles.

Glassow, M.A., L.H. Gamble, J.E. Perry, and G.S. Russell
2007 Prehistory of the Northern California Bight and the Adjacent Transverse Ranges. In *California Prehistory: Colonization, Culture, and Complexity*, edited by T. L. Jones and K. A. Klar, pp. 191–214. AltaMira Press, United Kingdom.

Gobalet, Kenneth W., and Thomas A. Wake
2000 Archaeological and Paleontological Fish Remains from the Salton Basin, Southern California. *Southwestern Naturalist* 45:514–520.

Golla, Victor
2007 California Archaeology and Prehistory after Moratto: Linguistic Prehistory. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 71–82. Altamira Press, Lanham, Maryland.

Google Earth Pro
2023 Aerial photograph. Available at: https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjK2emFvv6CAxWKIkQIHZw4AyMQFnoECA4QAQ&url=https%3A%2F%2Fwww.google.com%2Fearth%2Fabout%2Fversions%2F&usg=AOvVaw3Nv3q1mb6jWgB0ASkoFIlU&opi=89978449. Accessed December 2023.

Governor's Office of Planning and Research
2017 *Technical Advisory: AB 52 and Tribal Cultural Resources in CEQA*. Available at: https://opr.ca.gov/ceqa/docs/20200224-AB_52_Technical_Advisory_Feb_2020.pdf. Accessed December 2023.

Graf, K. E., C. V. Ketron, and M. R. Waters (editors)
2014 *Paleoamerican Odyssey*. Texas A&M University Press, College Station.

Green, S. J., and Fitzgerald, R. T.
2019 More Radiocarbon Dates from CA-LAN-1, the Tank Site, Topanga Canyon, California. *Journal of California and Great Basin Anthropology*, *39*(1):75–81.

Griffith, Glenn E., James M. Omernik, David W. Smith, Terry D. Cook, Ed Tallyn, Kendra Moseley, and Colleen B. Johnson.
2016 *Ecoregions of California*. Ecoregion map, 1:1,100,000. U.S. Geological Survey, Washington D.C. U.S. Geological Open-File Report 2016-1021.

Guerrero, Vladimir
2006 *The Anza trail and the Settling of California*. Heyday, Berkeley, California.

Harris, Marvin
1968 *The Fall of Anthropological Theory: A History of Theories of Culture*. AltaMira Press, London.

Hedges, Ken
1975 Notes on the Kumeyaay: A Problem of Identification. *Journal of California Anthropology* 2:71–83.

Heizer, Robert F., and Adan E. Treganza
1944 Mines and Quarries of the Indians of California. California Journal of Mines and Geology 40(3):285–359.

Hicks, Frederic Noble
1963 Ecological Aspects of Aboriginal Culture in the Western Yuman Area. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.

Hildebrand, John A., G. Timothy Gross, Jerry Schaefer, and Hector Neff
2002 Patayan Ceramic Variability: Using Trace Elements and Petrographic Analysis to Study Brown and Buff Wares in Southern California. In *Ceramic Production and Circulation in the Greater Southwest*, edited by Donna M. Glowacki and Hector Neff, pp. 121–139.

Hohenthal, W. D., Jr.
1950 Southern Diegueno Use and Knowledge of Lithic Materials. Kroeber Anthropological Society Papers No. 2. Berkeley, California.

2001 *Tipai Ethnographic Notes: A Baja California Indian Community at Mid-Century*. Ballena Press, Novato, California.

Horne, Melinda C., and Dennis P. McDougall
2008 *CA-RIV-6069: Early Archaic Settlement and Subsistence in the San Jacinto Valley, Western Riverside County, California*. Applied EarthWorks, Hemet, California. On file, Eastern Information Center, University of California, Riverside.

Howard, W. J., and L. M. Raab
1993 Olivella grooved rectangle beads as evidence of an early period Southern Channel Islands interaction sphere. *Pacific Coast Archaeological Society Quarterly*, *29*(3):1–11.

Jenkins, D. L. and J. M. Erlandson
1996 Olivella grooved rectangle beads from a middle Holocene site in the Fort Rock Valley, Northern Great Basin. *Journal of California and Great Basin Anthropology*, Volume 18, Issue 2 X:296–302.

Jones, T. L., and K. A. Klar (editors)
2007 *California Prehistory: Colonization, Culture, and Complexity*. AltaMira Press, New York, New York.

Kennett, D. J.
2005 *The Island Chumash: Behavioral Ecology of a Maritime Society*. University of California Press.

King, C. D.
1990 Evolution of Chumash Society: A Comparative Study of Artifacts Used in Social System Maintenance in the Santa Barbara Channel Region Before A.D. 1804. Revised Ph.D. dissertation with a new preface and updated bibliography. In *The Evolution of North American Indians*, edited by David Hurst Thomas. Garland Publishing, New York.

Koerper, Henry C., and Christopher E. Drover
1983 Chronology Building for Coastal Orange County: The Case from CA-ORA-119-A. *Pacific Coast Archaeological Society Quarterly* 19(2):1–34.

Koerper, H. C., R. D. Mason, and M. L. Peterson
2002 Complexity, Demography, and Change in Late Holocene Orange County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp. 63–81. Perspectives in California Archaeology, Vol. 6, Costen Institute of Archaeology, University of California, Los Angeles.

Kowta, Makoto
1969 The Sayles Complex, A Late Milling Stone Assemblage from the Cajon Pass and the Ecological Implications of its Scraper Planes. *University of California Publications in Anthropology* 6:35–69. Berkeley, California.

Kroeber, A. L.
1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78, Smithsonian Institution, Washington, D.C.

Lambert, Christine
2014 DPR 523 Forms for P-37-034159. ASM Affiliates. Forms on file, South Coastal Information Center, California State University, San Diego.

Landa, Alexia and Wendy L. Tinsley Becker
2023 *Historical Resource Technical Report: Starlight Solar Project, Boulevard, CA, 91905*. Urbana Preservation and Planning, LLC, La Mesa, California.

Laylander, Don
1994 *Phase III Data Recovery at the Elmore Site (CA-IMP-6427), Imperial County, California*. California Department of Transportation, District 11, San Diego.

1995 The Question of Prehistoric Agriculture among the Western Yumans. *Estudios Fronterizos* 35/36:187–201.

1997 The Linguistic Prehistory of Baja California. In *Contributions to the Linguistic Prehistory of Central and Baja California*, edited by Gary S. Breschini and Trudy Haversat, pp. 1–94. Coyote Press Archives of California Prehistory No. 44, Salinas, California.

2010 Linguistic Prehistory and the Archaic-Late Transition in the Colorado Desert. *Journal of California and Great Basin Anthropology* 30:141–155.

Laylander, Don, Jerry Schaefer, Nick Doose, Jessica Hennessey, and Ian Scharlotta
2014 *A Regional Synthesis of Prehistoric Archaeological Landscapes in the Jacumba/McCain Valley Region, San Diego and Imperial Counties, California*. Prepared for Bureau of Land Management El Centro Field Office and San Diego Gas & Electric. Prepared by ASM Affiliates, Carlsbad, California.

Lee, Melicent H.
1937 *Indians of the Oaks*. Athenean Press, Ginn and Co., Boston.

Luomala, Katherine
1963 Flexibility in Sib Affiliation among the Diegueño. *Ethnology* 21:282–301.

1978 Tipai and Ipai. In *Handbook of North American Indians, Volume 8: California*, edited by Robert F. Heizer, pp. 592–609. Smithsonian Institution, Washington, D.C.

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

McDougall, Dennis P.
2001 CA-RIV-5086/H. In *Archaic and Late Prehistoric Occupation Sites*, edited by Melinda C. Horne and Susan E. Rapp, pp. 831–871. Final Report of Archaeological Investigations, Eastside Reservoir Project, vol. 2, S. K. Goldberg, general editor. Applied Earthworks, Hemet, California. On file, Eastern Information Center, University of California, Riverside.

Macko, Michael E.
1998 *The Muddy Canyon Archaeological Project: Results of Phase II Test Excavations and Phase III Data Recovery Excavations at Archaeological Sites within the Crystal Cove Planned Community, Phase IV, Tentative Tract 15447, San Joaquin Hills, Orange County, California*. On file, South Central Coastal Information Center, California State University, Fullerton.

Mason, Roger D. and Mark L. Peterson
1994 *Newport Coast Archaeological Project; Newport Coast Settlement Patterns: Analysis and Discussion*. *Pacific Coast Archaeology Society Quarterly* 49 (1, 2). The Keith Companies.

Masters, Patricia M., and Dennis R. Gallegos
1997 Environmental Change and Coastal Adaptations in San Diego County during the Middle Holocene. In *Archaeology of the California Coast during the Middle Holocene*, edited by Jon M. Erlandson and Michael A. Glassow, pp. 11–21. Perspectives in California Archaeology, vol. 4. Cotsen Institute of Archaeology, University of California, Los Angeles.

Meighan, C.W.
1954 A late complex in Southern California prehistory. *Southwestern Journal of Anthropology* 10(2):215–227.

Meigs, Peveril, III
1939 The Kiliwa Indians of Lower California. *Iberoamericana* No. 15. Berkeley.

1971 Creation Myth and Other Reflections of the Nijí Mishkwish. *Pacific Coast Archaeological Society Quarterly* 7(1):9–13.

1972 Notes on the La Huerta Jat'am, Baja California: Place Names, Hunting, and Shamans. *Pacific Coast Archaeological Society Quarterly* 8(1):35–40.

Michelsen, Ralph C.
1991 La territorialidad del indígena americano de la tierra alta del norte de la Baja California. *Estudios Fronterizos* 24/25:151–160.

Moratto, Michael J.
1984 *California Archaeology*. Academic Press, San Diego.

Moriarty, James R., III
1966 Cultural Phase Divisions Suggested by Typological Change Coordinated with Stratigraphically Controlled Radiocarbon Dating in San Diego. *The Anthropological Journal of Canada* 4(4):20–30.

National Park Service (NPS)
1992 *National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties*. U.S. Department of the Interior.

1997 *National Register Bulletin: How to Apply the National Register Criteria for Evaluation*. Revised. U.S. Department of the Interior.

Natural Resources Conservation Service
2022 Web Soil Survey. Available at: https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx. Accessed December 19, 2022.

NETROnline
1984 Aerial image photography. Available at: https://www.historicaerials.com/viewer. Accessed November 20, 2022.

Norris, Robert M., and Robert W. Webb
1976 *Geology of California*. 2nd ed. John Wiley & Sons, New York.

Osborne, D.
1958 Western American prehistory—an hypothesis. *American Antiquity* 24(1):47–52.

Owen, Roger C.
1965 The Patrilineal Band: A Linguistically and Culturally Hybrid Social Unit. *American Anthropologist* 67:675–690.

Panich, Lee M., and Wilken-Robertson, Michael
2013 Papai Pottery Past and Present: Evolution of an Indigenous Ceramic Tradition. *Pacific Coast Archaeological Society Quarterly*, 48(1 and 2).

Pigniolo, Andrew
1998 Typological Trouble: Lake Cahuilla Ceramics and Typology. Paper presented at the annual meeting of the Society for California Archaeology. (Inadequacy of standard brownware and buffware typologies.)

Pourade, Richard F.
1960–1967 *History of San Diego*. 6 vols. Union-Tribune Publishing, San Diego, California.

Raab, L. M., and W. J. Howard
2002 Modeling Cultural Connections between the Southern Channel Islands and Western United States: The Middle Holocene Distribution of Olivella Grooved Rectangle Beads. In *Proceedings of the Fifth Channel Islands Symposium*, edited by K. Mitchell and C. Mitchell, pp. 590–597. Santa Barbara, California, Santa Barbara Museum of Natural History.

Reddy, Seetha N.
2007 *A Programmatic Approach to Determine Eligibility of Prehistoric Sites in the San Diego Subregion, Southern Coast Archaeological Region, California, for National Register of Historic Places*. Department of Defense Legacy Resource Management Program Project 05–251. Technical Report 07-08. Statistical Research, Woodland, California.

Riddell, Francis A., and William H. Olsen
1969 An Early Man Site in the San Joaquin Valley. *American Antiquity* 34(2):121–130.

Robertson, R.
1982 Personal communication at Tecate Peak on July 9, 1982.

Robinson, Evan B.
2017 Cultural Landscapes and Traditional Cultural Properties: A Study in Designation and Protection. Unpublished Master's Thesis for Rutgers University, New Brunswick, New Jersey.

Rogers, David B.
1929 Prehistoric Man of the Santa Barbara Coast. Santa Barbara Museum of Natural History, Santa Barbara, California. Edited by Richard F. Pourade. Union Tribune Publishing Company, San Diego, California.

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

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

1945 An Outline of Yuman Prehistory. Southwestern Journal of Anthropology I(2):167–198. Albuquerque, New Mexico.

Rolle, Andrew
1998 *California: A History*. Harlan Davidson, Wheeling, Illinois.

Sawyer, William A., and Henry C. Koerper
2006 The San Joaquin Hills Venus: A Ceramic Figurine from CA-ORA-1405-B. In *Contributions from Orange County Presented in Remembrance of John Peabody Harrington*, edited by Henry C. Koerper, pp. 13–34. Coyote Press Archives of California Prehistory, Number 53. Coyote Press, Salinas, California.

Shackley, M. Steven.
1981 Late Prehistoric Exchange Network Analysis in Carrizo Gorge and the Far Southwest. Unpublished M.A. thesis, Department of Anthropology, San Diego State University.

1984 Archaeological Investigations in the Western Colorado Desert: A Socioecological Approach (Volume 1).

Shipek, Florence C.
1982 Kumeyaay Socio-Political Structure. *Journal of California and Great Basin Anthropology* Winter 1982, 4(2):296–303. Malki Museum, Inc., Banning, California.

1985 Kuuchamaa: The Kumeyaay Sacred Mountain in Journal of California and Great Basin Anthropology. *Journal of California and Great Basin Anthropology* 7(1):67–74. Malki Museum, Canning, California.

1987 *Pushed into the Rocks: Southern California Indian Land Tenure 1769-1986*. Lincoln, Nebraska: University of Nebraska Press.

1989 An Example of Intensive Plant Husbandry: The Kumeyaay of Southern California. In *Foraging and Farming: The Evolution of Plant Exploitation*, edited by David R. Harris and Gordon C. Hillman, pp. 99–110. Unwin Hyman, London.

1993 Kumeyaay Plant Husbandry: Fire, Water, and Erosion Management Systems. In *Before the Wilderness: Native American Environmental Management*, edited by Thomas C. Blackburn and Kat Anderson, pp. 378–388. Ballena Press, Menlo Park, California.

Society for Historical Archaeology

2016 Kerr Glass Mfg. Co. Available at: https://sha.org/bottle/pdffiles/KerrGlass.pdf. Accessed December 7, 2023.

2018 Owens-Illinois Glass Co. -Part 2. Available at: https://sha.org/bottle/pdffiles/OwensIllinois2018Part2.pdf. Accessed December 7, 2023.

Spier, Leslie

1923 Southern Diegueño Customs. *University of California Publications in American Archaeology and Ethnology* 20:295–358.

Sutton, Mark Q.

1993 On the Subsistence Ecology of the "Late Inland Millingstone Horizon" in Southern California. *Journal of California and Great Basin Anthropology* 15(1):134–140.

2009 People and Language: Defining the Takic Expansion into Southern California. *Pacific Coast Archaeological Society Quarterly* 41(2&3):31–93.

2010 A Reevaluation of Early Northern Uto-Aztecan Prehistory in Alta California. *California Archaeology* 2(1):3–30.

Sutton, Mark Q., and Jill K. Gardner

2010 Reconceptualizing the Encinitas Tradition of Southern California. *Pacific Coast Archaeological Society Quarterly* 42(4):1–64. Costa Mesa, California.

Todd, V. R. (compiler)

2004 Preliminary Geologic Map of the El Cajon 30' x 60' Quadrangle, Southern California, Version 1.0. Open file report 2004-1361. Available at: http://pubs.usgs.gov/of/2004/1361.

Toulouse, Julian Harrison

1972 *Bottle Makers and Their Marks*. Thomas Nelson Inc., New York.

True, Delbert L.

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

1966 Archaeological Differentiation of Shoshonean and Yuman Speaking Groups in Southern California. Unpublished Ph.D. dissertation, Department of Anthropology, University of California, Los Angeles.

1980 The Pauma Complex in Northern San Diego County: 1978. *Journal of New World Archaeology* 3(4):1–39.

True, D. L., and Eleanor Beemer
1982 Two Milling Stone Inventories from Northern San Diego County, California. Journal of California and Great Basin Anthropology 4(2):233–261.

True, Delbert L., Clement W. Meighan, and Harvey Crew
1974 *Archaeological Investigations at Molpa, San Diego County, California*. University of California Publications in Anthropology No. 11. Berkeley.

U.S. Department of Agriculture (USDA)
1997 Las Posas Series. Available at: https://soilseries.sc.egov.usda.gov/OSD_Docs/L/LAS_POSAS.html#:~:text=The%20Las%20Posas%20series%20consists,is%20about%2062%20degrees%20F. Accessed November 22, 2023.

2001 Tollhouse Series. Available at: https://soilseries.sc.egov.usda.gov/OSD_Docs/T/TOLLHOUSE.html#:~:text=The%20Tollhouse%20series%20consists%20of,to%20very%20steep%20mountain%20slopes. Accessed November 22, 2023.

2017 Mottsville Series. Available at: https://soilseries.sc.egov.usda.gov/OSD_Docs/M/MOTTSVILLE.html. Accessed November 22, 2023.

Van Wormer, Steven
1986 *An Ethnohistory of Eastern Kumeyaay, Cabrillo Historical Association in The Impact of European Exploration and Settlement on Local Native Americans*. Cabrillo Historical Association, San Diego, California.

Vellanoweth, R. L.,
2001 AMS radiocarbon dating and shell bead chronologies: Middle Holocene trade and interaction in western North America. *Journal of Archaeological Science* 28(9):941–950.

Voigt, Neil
1990 Native American Chaplain. Personal communication, letter to Mike Mitchell. On file, Bureau of Land Management, Palm Springs-South Coast Resource Area. Palm Springs, California.

Wade, Sue A., Stephen R. Van Wormer, and Heather Thomson
2009 *240 Years of Ranching: Historical Research, Field Surveys, Oral Interviews, Significance Criteria, and Management Recommendations for Ranching Districts and Sites in the San Diego Region*. Prepared for California State Parks., San Diego, California.

Wallace, William J.
1955 A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 2:214–230.

1978 Post-Pleistocene Archaeology, 9000 to 2000 B.C. In *California*, edited by Robert F. Heizer, pp. 25–36. Handbook of North American Indians, Vol. 8, William G. Sturtevant, general editor, Smithsonian Institution, Washington D.C.

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

1967 The San Dieguieto Complex. A Review and Hypothesis. *American Antiquity* 32(2):168–185.

1968 Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams, pp. 1–14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.

Warren, Claude N., and Max G. Pavesic

1963 Shell Midden Analysis of Site SDi-603 and Ecological Implications for Cultural Development of Batiquitos Lagoon, San Diego County, California. In *Archaeological Investigations at Batiquitos Lagoon, San Diego County, California*, by Robert H. Crabtree, Claude N. Warren, and D. L. True. Appendix I. *Archaeological Survey Annual Report* 1962–1963:407–438. Department of Anthropology, University of California, Los Angeles.

Warren, Claude N., Gretchen Siegler, and Frank Dittner

2008 Paleoindian and Early Archaic Periods. In *Prehistoric and Historic Archaeology of Metropolitan San Diego: An Historic Properties Background Study*, pp. 13–107. ASM Affiliates, Carlsbad, California. On file, South Coastal Information Center, San Diego State University, San Diego.

Warren, Claude N., and D. L. True

1961 The San Dieguito Complex and Its Place in California Prehistory. *Archaeological Survey Annual Report* 1960–1961:246–338. Department of Anthropology, University of California, Los Angeles.

Warren, Claude N., D. L. True, and Ardith A. Eudey

1961 Early Gathering Complexes of Western San Diego County: Results and Interpretations of an Archaeological Survey. *Archaeological Survey Annual Report* 1960–1961:1–106. Department of Anthropology, University of California, Los Angeles.

Wilken-Robertson, Michael

2018 Kumeyaay Ethnobotany; Shared Heritage of the California's Notes on La Huerta Diegueño *Ethnobotany*. *Society of Ethnobotany, Volume 10, Number 1, pp 16-17*

York, Andrew L.

2005 *An Archaeological Research Context for the Lower Santa Margarita River, Marine Corps Base Camp Pendleton, California*. EDAW, San Diego. On file, South Coastal Information Center, San Diego State University, San Diego.

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9 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

9.1 Mitigation Measures

Table 6 presents a comprehensive listing of each site's proposed mitigation measures and a listing of all design considerations that were relied on to make the determination that an effect is reduced to less than significant if the prosed mitigation measures are met.

Table 6. Mitigation Measures

Site Number	Brief Description	CRHR/County Eligibility Recommendation	Plan Location	Impacts	Recommendations
Previously Recorded Resources					
P-37-010476/ P-37-034159	Prehistoric habitation site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-027350 (CA-SDI-17873/W-293)	Multicomponent site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-032037 (CA-SDI-20295)	Historic trash scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-033279 (CA-SDI-20946)	Prehistoric lithic and ceramic scatter	Previously evaluated, ineligible	Inside	None	Archaeological and tribal monitoring. Campo requested that all artifacts collected during testing be reburied at the site. Artifacts have been curated at the San Diego Archaeological Center (Tierra del Sol Project – Collection #675). Return of the artifacts for on-site reburial will be a condition of approval.
P-37-033309	Prehistoric lithic isolate	Ineligible	Not relocated	None	Archaeological and tribal monitoring
P-37-033310 (CA-SDI-23551)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-033497, P-37-033502, and P-37-033503	Multicomponent site of prehistoric ceramic and lithic scatters, and historic-era refuse scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-033501	Prehistoric ceramic isolate	Ineligible	Not relocated	None	Archaeological and tribal monitoring
P-37-037612	Prehistoric lithic isolate	Ineligible	Inside	None	Archaeological and tribal monitoring
Newly Recorded Resources					
P-37-040847 (CA-SDI-23552)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

Site Number	Brief Description	CRHR/County Eligibility Recommendation	Plan Location	Impacts	Recommendations
P-37-040848 (CA-SDI-23553)	Prehistoric bedrock milling feature and lithic and ceramic scatters	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040849 (CA-SDI-23554)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040850 (CA-SDI-23555)	Multicomponent site of prehistoric lithic scatter, and historic-era refuse scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040851 (CA-SDI-23556)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040852 (CA-SDI-23557)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040853 (CA-SDI-23558)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040854 (CA-SDI-23559)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040855 (CA-SDI-23560)	Historic-era refuse scatter	Unevaluated	Outside	None	Archaeological and tribal monitoring
P-37-040856 (CA-SDI-23561)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040857 (CA-SDI-23562)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040858 (CA-SDI-23563)	Prehistoric lithic and ceramic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040859 (CA-SDI-23564)	Prehistoric habitation site	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040860 (CA-SDI-23565)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040861 (CA-SDI-23566)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040862 (CA-SDI-23567)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040863 (CA-SDI-23568)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040864 (CA-SDI-23569)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040865 (CA-SDI-23570)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

Site Number	Brief Description	CRHR/County Eligibility Recommendation	Plan Location	Impacts	Recommendations
P-37-040866 (CA-SDI-23571)	Prehistoric bedrock milling feature and lithic artifact scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040867 (CA-SDI-23572)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040868 (CA-SDI-23573)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040869 (CA-SDI-23574)	Prehistoric lithic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040870 (CA-SDI-23575)	Prehistoric lithic quarry	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement
P-37-040871 (CA-SDI-23576)	Historic-era refuse scatter	Ineligible	Inside	None	Archaeological and tribal monitoring
P-37-040872 (CA-SDI-23577)	Prehistoric lithic and ceramic scatter	Assumed eligible	Inside, dedicated open space	None	Avoiding through redesign to preserve in place within a dedicated open space easement

APPENDIX A

Ethnographically Attested Plant Uses by the Kumeyaay

Non-Confidential

Table A-1. Ethnographically Attested Plant Uses by the Kumeyaay

Scientific Name	Common Name	Use
Abronia villosa	Desert sand verbena	Diuretic.
Adenostoma fasciculatum	Chamise	Arrows, tattooing.
Adenostoma sparsifolium	Redshank	Treat colic; mouthwash, toilet paper, firewood, construction material.
Agave sp.	Agave	Cordage, string, net, brush, pot repair, paint, cap, rabbit skin blanket, sandals, tanning, gaming, bird cages.
Agave deserti	Desert agave	Food.
Amaranthus retroflexus	Careless weed	Food.
Ambrosia monogyra	Single whorl burro bush	Treat hair, feet.
Amsinckia sp.	Fiddleneck	Treat hair.
Anemopsis californica	Lizard-tail	Food, treat burns, wounds, aches, infections.
Arctostaphylos sp.	Manzanita	Beverage, treat urinary infection, firewood.
Arctostaphylos glauca	Bigberry manzanita	Food, brooms, firewood.
Arctostaphylos pungens	Point leaf manzanita	Food, beverage.
Argemone sp.	Prickly poppy	Treat sores.
Artemisia sp.	Sagebrush	Treat ant bites, cold, colic; smoked.
Artemisia californica	Coastal sagebrush	Treat wounds, sores, fever, cold, gall bladder pain, digestive problems.
Artemisia tridentata	Big sagebrush	Treat stomachache, cold, earache, sores, sore muscles; firewood; used in ceremonies.
Arundo sp.	Reed	Arrow shaft, sleeping mat, boat, construction, smoked.
Asclepias subulata	Desert milkweed	Cord for sewing bow, apron, rabbit skin blanket, plug for cigarette tube, used in ceremony, string for bullroarer.
Atriplex californica	California saltbush	Treat ant bites, stomachache.
Atriplex canescens	Shadscale	Soap.
Atriplex torreyi	Torrey saltbush	Food.
Baccharis salicifolia	Mule-fat	Treat aching kidney, bruises, sores, wounds, stings, infections, hair, arrow shafts, fire drill, trap, thatching for house, granary, mourning ramada.
Baccharis sarothroides	Broom baccharis	Treat cough, stomachache.
Batis maritima	Saltwort	Food, chewed for moisture.
Brahea armata	Mexican blue palm	Food.
Brickellia californica	California brickel bush	Treat fever, chill, ague, stomach problems, respiratory problems.
Brodiaea sp.	Cluster-lily	Food.
Calystegia macrostegia	Morning glory	Treat sores.
Carex sp.	Sedge	Cap.
Ceanothus sp.	Lilac	Food; club.
Ceanothus leucodermis	Chaparral whitethorn	Treat itch, poison oak.
Cercocarpus montanus	Mountain mahogany	Treat cold, lung illnesses.
Chamaesyce sp.	Rattlesnake spurge	Treat sores, bites, stings.
Chamaesyce albomarginata	Rattlesnake weed	Treat sores.

Scientific Name	Common Name	Use
Chenopodium californicum	California goosefoot	Food, soap.
Claytonia perfoliata	Miner's lettuce	Food.
Clematis pauciflora	Rope vine clematis	Treat fever.
Cleome isomeris	Bladderpod	Food.
Cneoridium dumosum	Bush rue	Treat toothache; mouthwash.
Coreopsis maritima	Sea dahlia	Treat stomachache.
Corethrogyne filaginifolia	Common sand aster	Treat chest ache.
Croton californicus	California croton	Treat cough; eye wash.
Cucurbita sp.	Gourd	Food.
Cucurbita foetidissima	Buffalo gourd	Bleach.
Cuscuta californica	California dodder	Treat spider bites.
Cyperus erythrorhizos	Redroot flat sedge	Food.
Dasylirion wheeleri	Sotol	Thatching.
Datura sp.	Jimsonweed	Hallucinogen.
Daucus pusillus	American wild carrot	Treat toothache, fever.
Dichelostemma capitatum	Blue dick	Food.
Diplacus puniceus	Red bush monkeyflower	Treat menstruation.
Distichlis spicata	Saltgrass	Treat sore mouth.
Dudleya sp.	Liveforever	Food, treat asthma.
Dudleya lanceolata	Lance leaf liveforever	Food.
Dudleya pulverulenta	Chalk liveforever	Treat corn, callus; used in ceremonies.
Ephedra sp.	Mormon tea	Treat stomachache, venereal disease.
Ephedra californica	Desert tea	Treat cough, cold, kidney and urinary diseases, venereal disease; purify blood; improve appetite; general tonic.
Equisetum laevigatum	Horsetail	Treat high blood pressure.
Ericameria brachylepis	Chaparral golden bush	Treat wounds, chill.
Eriodictyon sp.	Yerba santa	Treat thick or slow blood, cough, cold, respiratory disorders, headache, pain, rheumatism.
Eriodictyon californicum	California yerba santa	Treat cough, cold.
Eriodictyon trichocalyx	Hairy yerba santa	Treat cough, cold, headache; shampoo.
Eriogonum fasciculatum	Flat-topped buckwheat	Food; treat colic, heart trouble, cold, stomach trouble, nausea, diarrhea, swollen feet; sedative.
Eriophyllum confertiflorum	Yellow yarrow	Treat pimples.
Euphorbia sp.	Spurge	Treat snake bite, insect bite.
Ferocactus sp.	Barrel cactus	Food, water, fishhook.
Fragaria vesca	Woodland strawberry	Food, treat diarrhea.
Fraxinus parryi	Chaparral ash	Food.
Galium angustifolium	Narrowleaf bedstraw	Treat diarrhea.
Grindelia hirsutula	Hall's gumweed	Blood tonic.
Gutierrezia sarothrae	Broom snakeweed	Treat diarrhea.

Scientific Name	Common Name	Use
Haplopappus sp.	–	Construction.
Haplopappus venetus	–	Broom.
Hazardia squarrosa	Sawtooth golden bush	Treat ache.
Helianthemum scoparium	Bisbee Peak rush rose	Assist childbirth.
Heliotropium curassavicum	Salt heliotrope	Treat menstruation.
Hemizonia fasciculata	Clustered tarweed	Treat venereal disease, piles, headache, effects of childbirth.
Hesperocyparis forbesii	Tecate cypress	Bow; treat stomachache, cold.
Hesperoyucca whipplei	Chaparral yucca	Food; cradle, basketry, construction.
Heteromeles arbutifolia	Christmas berry	Food; treat wounds, sores, cold.
Juncus acutus	Spiny rush	Basketry.
Juncus textilis	Basket rush	Basketry; mourning images.
Juniperus californica	California juniper	Food; treat hiccups, high blood pressure, hangover.
Lagenaria siceraria	Bottle gourd	Treat venereal disease; dish, storage container; rattle.
Larrea tridentata	Creosote	Treat ache, sprain, athlete's foot.
Lepidium nitidum	Shining peppergrass	Treat indigestion.
Limonium californicum	California sea lavender	Food.
Linum sp.	Flax	Food, used in ceremonies.
Lonicera sp.	Honeysuckle	Treat swelling, cough, cold, sores.
Lonicera subspicata	Honeysuckle	Treat wounds, sores.
Lotus scoparius	Common deerweed	Soap, thatching.
Lupinus sp.	Lupine	Treat urinary problem.
Malosma laurina	Laurel sumac	Beverages; treat disease; childbirth; clean eyes.
Malvastrum sp.	Desert mallow	Contraception, used in ceremonies.
Mammillaria dioica	Fishhook cactus	Food.
Marah macrocarpus	Cucamonga manroot	Paint, treat hemorrhoids.
Matricaria discoidea	Pineapple weed	Treat menstrual cramps, fever, postpartum condition.
Mimulus sp.	Monkeyflower	Treat stomach disorders.
Mirabilis californica	California four o'clock	Treat stomachache.
Monardella lanceolata	Mustang mint	Beverage, medicine.
Muhlenbergia rigens	Deergrass	Basketry.
Nicotiana attenuata	Coyote tobacco	Smoked.
Nolina parryi	Sotol	Fire drill.
Opuntia sp.	Pricklypear	Food; treat swelling, wounds, diabetes; tattooing.
Opuntia basilaris	Beavertail	Food.
Opuntia bigelovii	Cholla	Food.
Opuntia phaeacantha	Brown spined pricklypear	Food.
Paeonia californica	California peony	Treat stomach disorder, lung illness, kidney illness, indigestion, heartburn.
Pellaea andromedifolia	Coffee cliffbrake	Treat menstrual cramp.

Scientific Name	Common Name	Use
Pellaea mucronata	Birdfoot cliffbrake	Treat hemorrhage, charm.
Peritoma arborea	Bladderpod	Food.
Phaseolus acutifolius	Tepary bean	Food.
Phoradendron sp.	Mistletoe	Treat hair.
Phoradendron tomentosum	Bigleaf mistletoe	Treat hair.
Physalis philadelphica	Mexican groundcherry	Eye wash.
Pinus sp.	Pine	Food, arrow fletching, construction, shaman's wand.
Pinus monophylla	Single leaf piñon	Food, paint.
Pinus quadrifolia	Parry piñon	Food.
Pinus torreyana	Torrey pine	Food.
Plagiobothrys arizonicus	Arizona popcorn flower	Pigment.
Platanus racemosa	California sycamore	Treat asthma, blood tonic, house poles.
Pluchea sericea	Arrowweed	Stabbing pike, arrow shaft, fletching, trap, basketry, fire making, hold fishing seine net, personal adornment, bird cage, scratching, games, structure walls, roofing material, earth oven.
Polypodium californicus	California polypody	Treat internal bleeding.
Populus fremontii	Cottonwood	Treat strains, bruises, wounds, stings, pain, swelling, war club, mortar clothing, tattooing firewood, construction.
Prosopis glandulosa	Honey mesquite	Food.
Prosopis juliflora	Mesquite	Food; treat fever; eyewash; shampoo, string, shovel, weeding tool, beaver stick, pestle, bow stave, club, stabbing pike, cradle, girdle, dye, pigment, tattooing, ball, firewood.
Prosopis pubescens	Screwbean	Food, bow stave, club, rabbit stick, beaver stick nose piercing, firewood.
Prunus emarginata	Bitter cherry	Treat bruise, scar, swelling, sprain, rash.
Prunus ilicifolia	Holly leaf cherry	Food, treat cough, stomachache, headache, eyes, bow stave.
Pseudognaphalium bicolor	Two-color cudweed	Treat sore.
Quercus sp.	Oak	Food, treat sores, throwing stick, club, toys, construction, firewood, ceremonial wand.
Quercus agrifolia	Coast live oak	Food, treat sores, injuries, toothache, dye, house construction, firewood.
Quercus chrysolepis	Canyon live oak	Food, dye.
Quercus dumosa	Coastal sage scrub oak	Food, treat sore, ulcer; eye wash, throwing stick, cradle, granary.
Quercus engelmannii	Engelmann oak	Food, chewing gum.
Quercus kelloggii	California black oak	Food.
Quercus peninsularis	Oak	Food.
Ramona polystachya	–	Food.
Rhamnus sp.	Buckthorn	Food, granary.
Rhamnus californica	California buckthorn	Treat poison oak.
Rhamnus crocea	Redberry buckthorn	Food for pet mockingbird.
Rhus integrifolia	Lemonadeberry	Food; treat childbirth; medicine.
Rhus ovata	Sugarbush	Food; treat childbirth; construction, firewood.

Scientific Name	Common Name	Use
Rhus trilobata	Skunk bush sumac	Eye wash, basketry.
Rosa sp.	Wildrose	Food, eyewash.
Rosa californica	California wild rose	Treat fever.
Rubus ursinus	California blackberry	Food; treat diarrhea.
Sairocarpus nuttallianus	Violet snapdragon	Treat cold.
Salicornia virginica	Virginia glasswort	Chewed for salt.
Salix sp.	Willow	Treat headache, pain; bathe newborn, basketry, cradle, bow stave, paddle, handle. Clothing, head ring, string for hair, tattooing, blanket. Games, bird cage, tinder, construction, thatching, used in ceremonies.
Salix lasiolepis	Arroyo willow	Construction.
Salvia sp.	Sage	Tinder.
Salvia apiana	White sage	Food; treat cough, cold, rheumatism, poison oak, catarrh, dandruff, graying hair; blood tonic; sedative; fumigation, clothing, smoked, used in ceremonies.
Salvia carduacea	Thistle sage	Eaten.
Salvia clevelandii	Fragrant sage	Smoked.
Salvia columbariae	Chia	Food.
Salvia mellifera	Black sage	Treat flu, rheumatism, arthritis.
Sambucus nigra	Blue elderberry	Food; treat aching joint or limb, fever, cold, cough, flu, constipation, croup, breast ailment, swollen feet; bathe newborn, war club, clothing, cigarette tube; food for pets.
Sanicula arguta	Sharptooth blacksnakeroot	Food; treat cramps.
Sarcocornia pacifica	Pacific swamp fire	Chewed for salt.
Scirpus sp.	Bulrush	Food, balsa watercraft.
Scrophularia californica	California figwort	Treat fever.
Simmondsia chinensis	Jojoba	Treat sores.
Sisyrinchium bellum	Western blue-eyed grass	Treat cramps.
Solanum xanti	Chaparral nightshade	Treat athlete's foot.
Solidago californica	California goldenrod	Prevent hair loss.
Spartina foliosa	California cordgrass	Treat constipation, difficulty in urination, construction.
Stephanomeria virgata	Rod wire lettuce	Treat intestinal worms.
Suaeda moquinii	Alkali seepweed	Soap.
Suaeda suffrutescens	Desert seepweed	Dye.
Toxicodendron diversilobum	Poison oak	Eye wash.
Trichostema sp.	Blue curls	Treat cold.
Trichostema parishii	Parish's blue curls	Treat childbirth; contraception.
Trifolium sp.	Clover	Food.
Urtica dioica	Stinging nettle	Food; treat poison oak, other skin diseases, rheumatism, arthritis. used in ceremonies.
Viola pedunculata	Pansy	Food.
Vitis girdiana	Desert wild grape	Food; treat hair.

Scientific Name	Common Name	Use
Washingtonia filifera	California fan palm	Food.
Xylococcus bicolor	Mission manzanita	Beverage.
Yucca sp.	Yucca	Food, soap, basketry, sandals, brush, construction.
Yucca schidigera	Mohave yucca	Food, beverage, soap. sandals, container, beads, firewood, construction.
Zea mays	Corn	Food.

APPENDIX B

Ethnographically Documented Animal Species Used by the Kumeyaay

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Table B-1. Ethnographically Documented Animal Species Used by the Kumeyaay

Scientific Name	Common Name	Use
Mammals		
Antilocapra americana	Pronghorn antelope	Food.
Canis familiaris	Dog	Hunting (domesticated).
Didelphis virginianus	Virginia opossum	Food.
Lepus californicus	Black-tailed jackrabbit	Food, blanket.
Lynx rufus	Bobcat	Quiver.
Neotoma sp.	Woodrat	Food.
Odocoileus hemionus	Mule deer	Food, string, quiver, wrist guard, shield, pouch, awl, garment, sandal, tattooing, rattle.
Ovis canadensis	Bighorn sheep	Food.
Procyon lotor	Raccoon	Food.
Puma concolor	Mountain lion	Food.
Spermophilus sp.	Ground squirrel	Food.
Sylvilagus sp.	Rabbit	Food, blanket, cape, bird cage floor.
Thomomys bottae	Pocket gopher	Food.
Ursus americanus	Black bear	Food.
–	Mouse	Food.
–	Skunk	Food.
Birds		
Bubo virginianus	Great horned owl	Feathers for ceremony.
Colaptes auratus	Northern flicker	Feathers for headband, wand, arrow.
Columbina passerina	Ground dove	Food.
Corvus brachyrhynchos	American crow	Feathers for pike.
Corvus corax	Common raven	Feathers for ceremony.
Geococcyx californianus	Greater roadrunner	Food, feathers in ceremony.
Mimus polyglottos	Northern mockingbird	Pet.
Pelecanus sp.	Pelican	Feathers for pike, bones for gaming pieces.
–	Duck	Food.
–	Eagle	Ceremony, feathers for skirt, headband, image.
–	Hawk	Feathers for arrow, image.
–	Owl	Feathers for ceremony, wand, image.
–	Quail	Food, bait.
–	Vulture	Medicine.
Reptiles		
Crotalus sp.	Rattlesnake	Food, arrow poison; treat rheumatism.
Heloderma suspectum	Gila monster	Food, arrow poison.
Sauromalus obesus	Chuckwalla	Food.
–	Lizard	Food.

Scientific Name	Common Name	Use
–	Snake	Food.
–	Turtle	Food, rattle.
Invertebrates		
–	Grasshopper	Food, bait.
–	Locust	Food.

APPENDIX C

Resource Records Search Map

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APPENDIX D

NAHC and Tribal Coordination

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APPENDIX E

Results Maps

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APPENDIX F

DPR 523 Resource Records

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