

CULTURAL RESOURCES REPORT
for the
NEWLAND SIERRA PROJECT,
SAN DIEGO COUNTY, CALIFORNIA
PDS2015-GPA-15-001, PDS2015-SP-15-001,
PDS2015-REZ-15-001, PDS2015-TM-5597

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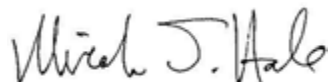
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JUNE 2018

Cultural Resources Report for the Newland Sierra Project

Summary of Cultural Resources Technical Report Text Changes

Section (Page)	Change
6.4 (page 206)	Revised Mitigation Measure M-CR-2a to include Preserve in Place for Site CA-SDI-4558
6.4 (pages 207 and 208)	Clarified Mitigation Measure M-CR-5
6.4 (page 214)	Clarified Mitigation Measure M-CR-9d
6.4 (page 215)	Revised Mitigation Measure M-CR-9h regarding CA-SDI-4558
6.4 (page 217)	Clarified applicable measure for sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822
6.4, Table 6-1 (page 219)	Updated recommended mitigation for CA-SDI-4558

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NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION

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Report Date: June 2018

Report Title: Cultural Resources Report for the Newland Sierra Project, San Diego County, California

Type of Study: Phase I Archaeological Inventory, Phase II Archaeological Evaluation

Resources: CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, CA-SDI-17265, P-37-025968

USGS Quads: San Marcos, California 1:24,000; unincorporated.

Acreage: 1,985

Permit Numbers: PDS2015-GPA-15-001, PDS2015-SP-15-001, PDS2015-REZ-15-001, PDS2015-TM-5597

Keywords: Newland Land Co., Newland Sierra, Positive Phase I Inventory, Phase II Evaluation, Significant, Eligible, Not Significant, Not Eligible, CRHR, CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, CA-SDI-17265, P-37-025968, Prehistoric, Habitation, Village, Bedrock Milling, Lithic Scatter, Projectile Point, Ceramics, Groundstone, Pestle, Handstone, Rock Art, Beads, Midden, Human Remains, Cremation, Bow Pipe, *Pavxin*, Ethnography, Cottonwood, Desert Side-Notched.

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LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
BLM	U.S. Bureau of Land Management
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
DPLU	County of San Diego Department of Planning and Land Use
DPR	California Department of Parks and Recreation
ESA	Environmentally Sensitive Area
GPS	Global positioning system
MFP	Multifaceted Platforms
MLD	Most Likely Descendant
MUP	Major Use Permit
NAHC	Native American Heritage Commission
NCMSCP	North County Multiple Species Conservation Program
NP	Natural/Cortical Platforms
NRHP	National Register of Historic Places
RPA	Register of Professional Archaeologists
RPO	County of San Diego Resource Protection Ordinance
SCIC	South Coastal Information Center
SDAC	San Diego Archaeological Center
SFP	Single-Facet Platforms
STP	Shovel Test Pit
STU	Shovel Test Unit
TCP	Traditional Cultural Property
USGS	U.S. Geological Survey

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MANAGEMENT SUMMARY

This report presents the results of a Phase I cultural resources inventory and a Phase II significance evaluation for the Newland Sierra Project (project) located in an unincorporated portion of the County of San Diego within the North County Metro Subregion. The project area is composed of 1,985 acres and would include 7 neighborhoods (also referred to as planning areas) with a total of 2,135 residential units. The proposed project would include a variety of housing types – some of which would be designed with grade-adaptive architecture – to meet the varied needs of the anticipated residents. Grade-adaptive architecture results in minimized site grading impacts by incorporating one or more steps in the ground floor that conform to the underlying slope of the site. Development of the project site would be focused into seven planning areas designed to promote land stewardship and avoid the most sensitive biological, cultural, and topographical resources. Taking inspiration from the property's unique landscape character and distinct landforms, the proposed project consists of a series of neighborhoods that individually respond to their unique topographical settings. This project falls in an unincorporated area depicted on the San Marcos, California, 1:24,000 USGS topographic map.

Records searches were completed at the South Coastal Information Center (SCIC) for the Project area and a surrounding 1-mile radius, identifying nine previously recorded cultural resources (CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H), one isolate (SDM-W-3880C), and one 1901 historic map depicting a structure. Additional records searches were performed for off-site improvement areas at a reduced buffer, as appropriate. A pedestrian survey resulted in the relocation of five previously recorded sites (CA-SDI-4558, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H), and the recordation of two newly discovered archaeological sites (CA-SDI-17264 and CA-SDI-17265) and one new isolate (P-37-025968). All other previously recorded resources, along with the mapped historic structure, were not relocated during pedestrian surveys; these have either been destroyed by previous development, or were originally mismapped and are not located in the project area. Ground visibility during the survey contributed to the difficulty of relocating previously recorded sites; visibility was generally poor in most areas that generally improved on hilltops and in some valley areas or earthen exposures.

Sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 have all been identified as However, the County has determined that the Deer Springs Road improvement is an essential public facility (as determined in the General Plan Update 2011) and that sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 are exempt from RPO compliance.

Direct impacts to CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 have been reduced through avoidance. The significant portion of CA-SDI-4558 has been avoided and a greenspace park

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planned for its periphery. Soldier pier retaining walls have been designed to reduce grading within CA-SDI-5951 and CA-SDI-9822, preserving as much as 60% of the site deposit at each site that will be set aside in dedicated open space. Mitigation of direct impacts for site CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 (portions that may exist within Deer Springs Road and adjacent to the road) will be achieved through either the Proposed At-grade option of data recovery, or the Alternative option of index sampling and site capping with surcharged fill. If the Proposed At-grade is chosen, then the data recovery program will involve the excavation of 35 1x1-meter units at CA-SDI-4558, 45 1x1-m units at CA-SDI-5951, and 100 1x1-meter units at CA-SDI-9822, artifact analysis, special studies, and a report of finding. For either the Proposed At-grade or the Alternative, reanalysis of previously collected artifacts (Palomar Community College) will be conducted.

If the Alternative option is selected, the site will be mitigated of potential direct impacts by covering the site with surcharged fill. All road-widening construction shall occur on the fill, rather than on sites CA-SDI-4558 and CA-SDI-5951 to lessen impacts. Mitigation of direct impacts for portions of site CA-SDI-9822 south of, within, and north of Deer Springs Road will be achieved by covering these portions of the site with surcharged fill. All road-widening construction shall occur on the fill, rather than on site CA-SDI-9822 to lessen impacts. Capping should include a permeable geotextile fabric (i.e., Amoco cloth) placed over the site, followed by at least 6 inches of sterile sand, followed by 1 to 3 feet of uncompacted fine-grained soil (i.e., decomposed granite), followed by clean fill soil. It is also necessary that the clean fill soil “feather” out 10 feet beyond the defined boundary of the capping area to create a buffer. Utility and irrigation lines will be placed either outside of the archaeological sites or within fill soil. A minimum of 3 feet of fill will be placed between the archaeological site midden (surface) and the utility line(s) for water or sewer. A minimum of 1 foot of fill will be placed between the archaeological site midden (surface) and electrical and/or telephone lines. It is anticipated that through the construction of Deer Springs Road on top of surcharged fill, direct impacts will be lessened and completely avoided. All placement of utilities on top of the cap should be monitored by the Project Archaeologist to ensure that the cap is not compromised. Examples of capping archaeological sites as a means of mitigation include Moosa Canyon archaeological materials from sites CA-SDI4807, CA-SDI-4808, and CA-SDI-4556 under Interstate 15, and US Army Corps of Engineers projects as cited in “The Archaeological Sites Protection and Preservation Notebook” (1990). It should be noted that this was the preferred mitigation method recommended by Native Americans who commented on the Moosa Canyon project.

If the Alternative option is chosen, for those portions of CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 that will be impacted by development and preserved/protected through capping, an index sample will be excavated to characterize CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822. The index sampling program will involve the excavation of six 1x1-meter units at each site,

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artifact analysis, special studies, and a report of finding. The index sample program, along with reanalysis of previously collected artifacts (Palomar Community College), will serve as the primary sources of materials for the preparation of technical reports for sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822.

As no comprehensive report for previous excavations at CA-SDI-9822 has been completed, a report of findings using previous work will be prepared for CA-SDI-9822. This work will include reanalysis of previously recorded cultural material, and/or additional field and laboratory work necessary to complete a report documenting previous work for these sites. CA-SDI-5951 was not previously excavated; therefore, no additional analysis is necessary.

Protective measures will be implemented to ensure the pictograph at CA-SDI-9822 will not be impacted by construction related dust.

For the portion of site CA-SDI-4558 that will be indirectly impacted, mitigation of indirect impacts will be achieved through temporary fencing during road construction followed by permanent fencing after road construction. The avoided portion of the site surrounded by the greenspace park will be cleared of non-native vegetation; however, native vegetation will remain. Non-native trees will be cut down to level with the roots left in place. Non-native grasses and brush will be cleared by hand or by the use of a weedwacker. The cement foundation will be carefully removed and minor fill capping using clean soil will be used in this area. A one-time hydro seeding with native plant seeds will be conducted. No sprinkler system or watering system will be used to promote native vegetation. For the portion of site CA-SDI-9822 (portions within open space) that will be indirectly impacted by Deer Springs Road improvements, mitigation of impacts will be achieved through temporary fencing and minor capping using clean soil as needed. Minor capping will only cover the surface of the site; however, bedrock milling features to the extent possible will not be capped. Indirect impacts include increased accessibility and the potential for pot hunters/looters. Construction equipment will be directed away from these sites, and construction personnel will be directed to avoid entering the areas.

Through tribal consultation the County has recognized the presence of a Traditional Cultural Property (TCP) anchored locally by CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822, and eligible for listing in the California Register of Historical Resources (CRHR). Direct impacts to cultural resources have been addressed. Potential indirect impacts could occur if archaeological material is located within the roadbed of Deer Springs Road that is planned for improvements. Mitigation of these significant impacts will also be achieved through repatriation of roadbed sediments from select portions of Deer Springs Road in a permanent area set aside for repatriation by the Applicant and County. The County, Applicant, consulting archaeologist, and

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consulting tribes will also enter into a pre-excavation agreement memorializing all commitments identified during tribal consultation and outlining the treatment of resources during monitoring, as well as a long term management plan for cultural resources.

The historic structure/location identified on the 1901 Escondido and San Luis Rey U.S. Geological Survey (USGS) maps was not re-located and appears to have been destroyed. Historic research identified the historic location within the Dietschy homestead. The lack of physical evidence of the structure, suggests that the site has been destroyed and it is not possible to determine whether Project implementation will or will not come into contact with cultural materials associated with this resource. However, because subsurface features may be present that can provide information on early homesteading in north San Diego County, development of the proposed project may result in potentially significant impacts. If this were to occur, and if avoidance or preservation of the resource proved infeasible, the impact can be mitigated to less than significant through implementation of a subsurface exploration plan to proactively search for potential historic structure foundations, wells, privies or other features that may relate to the 1901 historic structure.

Sites CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264 and CA-SDI-17265 were tested and identified as not significant. Sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, and CA-SDI-5640 have been destroyed by development and along with isolates SDM-W- 3880C and P-37-025968, are identified as not significant. No further work is recommended for sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, CA-SDI-5640, CA- SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265.

Monitoring of ground disturbance of the entire project by an archaeologist and a Native American is necessary to ensure that if cultural resources (i.e., human remains, hearths) are present, they will be handled in a timely and sensitive manner. All cultural materials excavated or removed from prehistoric or historic sites during testing, index sampling, and/or data recovery programs, will be permanently repatriated to a culturally affiliated tribe, deposited in a designated area of the project site. Prior to repatriation of cultural materials, all recovered cultural material (excluding human remains) will be subject to standard non-destructive archaeological analysis and documentation, and a sample of those materials will be subject to three-dimensional (3D) laser scanning to produce a digital curation record; this record will be curated at the San Diego Archaeological Center (SDAC) or a facility that meets federal standards (36 CFR Part 79). In consultation with the County and participating tribes, some archaeological materials may be subject to radiocarbon dating, or other special studies as appropriate, excluding human remains or other items deemed inappropriate for destructive analysis.

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1 INTRODUCTION

This report presents the results of a cultural resources inventory and evaluation for the Newland Sierra Project (Project) located in an unincorporated part of San Diego County, California (Figure 1-1). The project proposes construction of a planned community within a 1,985-acre area (Figure 1-2). The proposed project is generally located west and north of the intersection of Deer Springs Road and Interstate 15.

1.1 Project Description

The Newland Sierra Project (also referred herein as “Community” or “project”) is a 1,985-acre mixed-use community within the unincorporated area of San Diego County designed in accordance with the County of San Diego General Plan Community Development Model. The majority of the Community is within the Twin Oaks community of the North County Metropolitan Subregional Plan area, and a portion is within the Bonsall Community Planning area. The Specific Plan includes a residential component consisting of 2,135 dwelling units, which equates to an overall density of 1.08 dwelling units per acre (du/ac) over the entire 1,985 acres. The Community Development Model influenced the design and pattern of the seven neighborhoods (also referred to as “planning areas”) with the highest densities located in the Town Center. The Town Center includes a maximum of 81,000 square feet of general commercial uses, as well as educational and park uses. The Community also includes open space, parks, pocket parks, overlooks, trails, bike lanes, pathways, and a 6-acre school site.

Sustainability

The proposed project would promote sustainability through Site design that would conserve energy, water, open space, and other natural resources. The project would offer defining attributes, including a commitment to carbon neutrality by offsetting 100% of the project’s construction and operational greenhouse gas (GHG) emissions through the life of the project. As part of this commitment, the project would implement core sustainable development features, including solar on all residential units and a network of solar-powered street lights; low-water-use landscaping throughout the Community, with restrictions on the use of turf; possible indoor pre-plumbing for grey water systems in single-family residential dwelling units, if feasible; electric vehicle chargers in single-family garages and electric vehicle charging stations in commercial areas; and integration of community gardens and vineyards throughout the Community. The project would also implement a Transportation Demand Management (TDM) program to reduce automobile trips, both internal and external to the Community. The project’s carbon neutrality and energy-, water-, and transportation-efficient requirements, combined with its balance of interrelated land uses, high level of preservation, and high-quality neighborhood

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design, make the project the first large-scale planned community in San Diego County to achieve a 100% reduction in the project's construction and operational GHG emissions.

Access Points and Internal Circulation

The project's multimodal transportation network would support pedestrian, equestrian, bicycle, shuttle service, and vehicular use throughout the Community, with connections to off-site roads supporting the same. The project Site would have two primary access roads along Deer Springs Road at Mesa Rock Road and Sarver Lane, with an additional access point at Camino Mayor off North Twin Oaks Valley Road. The Mesa Rock Road access would be built as a six-lane entry road with a median that transitions into a four-lane divided road farther into the Site, and then into a two-lane undivided roadway until it reaches the Sarver Lane access where it would transition into a three-lane undivided roadway. The loop road is primarily designed with a width of 32 feet and would include striped bike lanes and a 10-foot-wide multi-use pathway along its entire length. The bike lanes and multi-use pathway would connect to bike routes and a 10-foot-wide multi-use pathway along Deer Springs Road.

An electric bike share program would be included to further link the neighborhoods to one another and reduce internal vehicle trips. The electric bike share program would include the placement of a kiosk in close proximity to each planning area to allow electric bikes to be taken from one kiosk and left at another, encouraging sustainable transportation between planning areas within the project. The program includes the placement of eight kiosks throughout the Community, with 10 to 20 electric bikes at each kiosk. Additionally, the project would include bike lanes, an extensive trail system consisting of roadside pathways within the linear greenbelts, and pathways. With incorporation of these internal circulation features, the project would provide residents the opportunity to access employment, education, and recreational and commercial uses via multiple modes of transportation.

Off-Site Mitigation Requirements

In addition to the improvements described above, traffic impacts to off-site roadways would necessitate various off-site improvements. These improvements are identified as mitigation measures to reduce traffic impacts. They include improvements to the Deer Springs Road/I-15 Interchange, Deer Springs Road, Twin Oaks Valley Road, Buena Creek Road, Monte Vista Drive, S. Santa Fe Avenue, and various intersections, and they are necessary to improve the capacity and operations of these roadways. Several of these roadway improvements are located within the jurisdiction of another lead agency. Because these additional off-site improvements are identified as mitigation measures, the EIR discusses the environmental effects of the improvements to the extent known at this time, and as required by CEQA, in less detail than the significant effects of the proposed project (See CEQA Guidelines Section 15126.4(a)(1)(D)).

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Deer Springs Road

Of the off-site mitigation requirements identified in the EIR, the improvements to Deer Springs Road (mitigation measures M-TR-8 through M-TR-10) would involve two options. Option A would improve an approximately 6,600-foot-long section of the segment of Deer Springs Road between Sarver Lane and Mesa Rock Road to a 2.1B Community Collector (two lanes of travel with a continuous center turn lane). The balance of the road southwest into the city of San Marcos and east to I-15, including its intersections with Sarver Lane and Mesa Rock Road, would be improved to a 4.1A Major Road (a four-lane road with a raised median). Consistent with these sets of improvements, Option A would reclassify Deer Springs Road in the Mobility Element of the County's General Plan from a 6.2 Prime Arterial (six-lane) to a 4.1A Major Road with Raised Median and a 2.1B Community Collector with Continuous Turn Lane classifications. The centerline of Deer Springs Road would be realigned to ensure a minimum 750-foot turning radii along the entire alignment.

Option B would construct the entire length of the road from the I-15 interchange to its intersection with Twin Oaks Valley Road as a four-lane road, with an approximately 7,600-foot-long section of the road between Sarver Lane and Mesa Rock Road as a 4.1B Major Road (four lanes of travel with a continuous center turn lane), and the balance of the road, including its intersections with Sarver Lane and Mesa Rock Road, as a 4.1A Major Road. Option B would not reclassify Deer Springs Road; the roadway would remain as a 6.2 Prime Arterial (six-lane) in the Mobility Element of the General Plan. The centerline of Deer Springs Road would be realigned to ensure a minimum 750-foot turning radii along the entire alignment.

Both Option A and Option B would provide increased capacity on Deer Springs Road relative to existing conditions, although when considering level of service, only Option B would meet the County's level-of-service standards at project buildout. As is standard, the ultimate design of the road would be subject to County final engineering review and approval, whereby the County may require minor adjustments to the design details described herein.

Off-Site Utilities Improvements

Off-site sewer and water improvements would be completed in accordance with the approved water and sewer master plans prepared for the project. These improvements would be made in conjunction with surface improvements to Sarver Lane, Deer Springs Road, and Twin Oaks Valley Road. Additional segments of sewer would be improved in Twin Oaks Valley Road to Del Roy Avenue and East of Twin Oaks Valley Road within an existing Vallecitos Water District easement. Additionally, an 800-foot-long pipeline segment would require upsizing from the existing 18-inch-diameter line to a 21-inch-diameter line. This segment is located

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north of East Mission Road between Twin Oaks Valley Road and Vineyard Road within the City of San Marcos. The existing sewer is located behind a commercial/retail development. For the purposes of this analysis, it is assumed that the entire 30-foot-wide easement would be impacted to upsize the existing sewer line.

1.2 Existing Conditions

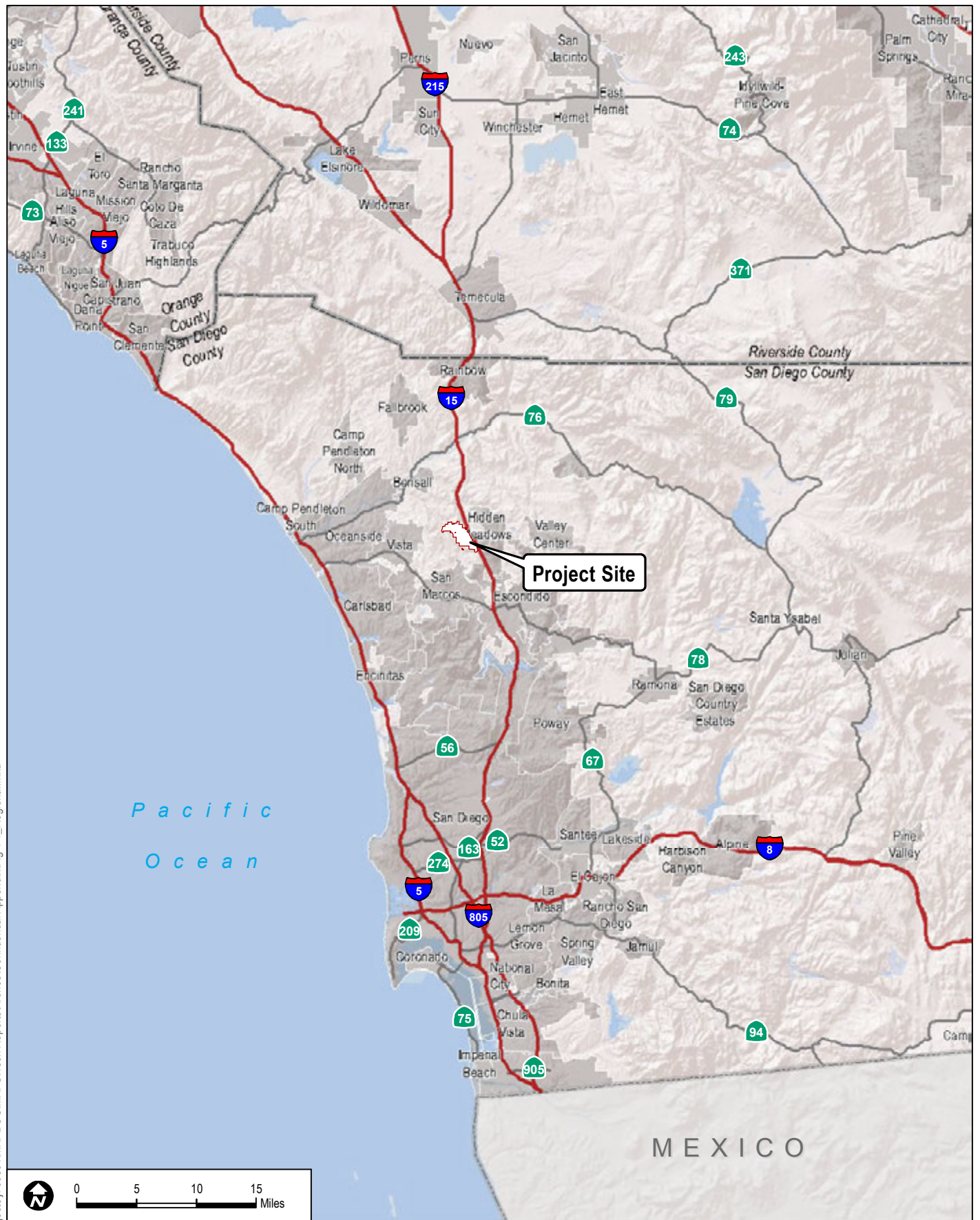
1.2.1 Environmental Setting

Natural Setting

The project Site is located within the northern portion of the Merriam Mountains, a narrow chain of low mountains generally running north/south, with a variety of east/west trending ridgelines and scattered peaks. These mountains originate near the northern end of the City of Escondido and are bordered by Gopher Canyon Road to the north, I-15 to the east, and Twin Oaks Valley Road to the west. The project Site is situated on approximately 3 miles of the northern portion of the Merriam Mountains.

The San Marcos Mountains are located northwest of the project Site. The San Marcos Mountains are largely undeveloped and have the potential to support a wide variety of native wildlife and rare and special-status plant species, such as tetracoccus, wart-stemmed Ceanothus, and southern mountain misery. Much of the northern two-thirds of the Merriam Mountains have high habitat value due to the undeveloped nature and potential to provide a major block of habitat that shall contribute to regional conservation planning. The project Site is located within the draft North County Multiple Species Conservation Program (MSCP) area, and is categorized by the draft North County MSCP regional habitat evaluation model as having mostly moderate value habitats with smaller areas of high value and very high value habitats.

Vegetation on the Site consists of large blocks of southern mixed chaparral with limited patches of Diegan coastal sage scrub, live oak woodlands, and southern willow scrub. Due to the dense nature of the chaparral covering most of the Site, wildlife movement is generally confined to existing dirt roads.



DUDEK

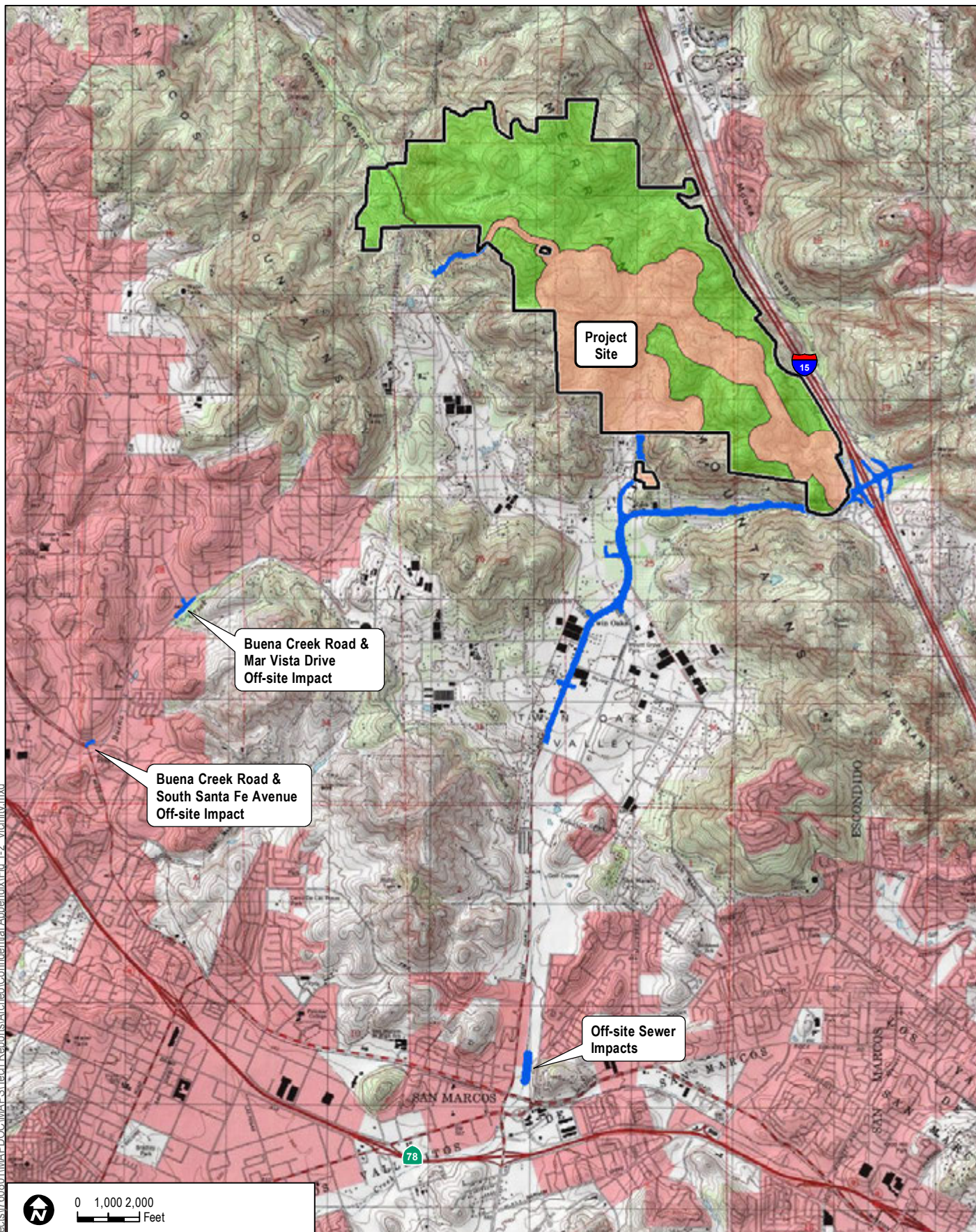
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**FIGURE 1-1
Regional Map**

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SOURCE: USGS 7.5-Minute Series San Marcos Quadrangle.

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**FIGURE 1-2
Vicinity Map**

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Large granodiorite outcroppings and pinnacles commonly occur throughout this region and are a common occurrence on the project Site. The project Site contains undeveloped steep slopes and rock outcroppings that are visually prominent from the I-15 corridor. The south fork of Moosa Canyon Creek runs from the northern to northeastern vicinity of the Site. In addition, the area is a tributary to the San Luis Rey River (to the north) through the south fork of Gopher Canyon Creek. The San Luis Rey River is an important riparian corridor containing extensive woodland vegetation and rare and protected species. Tributaries to the San Marcos Creek are also located in the vicinity and flow southwest towards Batiquitos Lagoon.

The project Site is located in two separate watersheds: the San Luis Rey and Carlsbad watersheds. The eastern and northern portions of the Site are located within the San Luis Rey watershed. The southern portion is located in the Carlsbad watershed. The project Site lies in the Moosa Hydrologic, Bonsall Hydrologic, and Twin Oaks Hydrologic Subareas. Natural topography of the Site is composed of hills and valleys dominated by rock outcroppings with moderate to steeply sloping terrain. Elevation ranges from approximately 660 feet above mean sea level (AMSL) near the northwestern limits at Twin Oaks Valley Road to approximately 1,750 feet AMSL in the west-central portion of the Site. Approximately 52% of the Site contains Resource Protection Ordinance (RPO) defined steep slope lands. Prominent, generally east-to-west trending ridgelines divide the Site into five separate drainage basins, which are tributaries to Moosa Canyon, Gopher Canyon, and San Marcos Creeks. Gopher Canyon Creek is located north of the project Site, and a small portion of the south fork of Gopher Canyon Creek runs southeast to northwest through the northwestern area, eventually meeting the San Luis Rey River. Both Gopher Canyon Creek and the San Marcos Mountains show favorable attributes as habitat and corridors for larger wildlife.

Cultural Setting

Evidence for continuous human occupation in the San Diego region spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad time frame have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes essentially similar trends in assemblage composition in more or less detail. This research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1750), and Ethnohistoric (post-AD 1769).

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Paleoindian (pre-5500 BC)

Evidence for Paleoindian occupation in coastal Southern California is tenuous, especially considering the fact that the oldest dated archaeological assemblages look nothing like the Paleoindian artifacts from the Great Basin. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from SDI-4669/W-12, in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2007). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of groundstone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on China Lake Naval Air Weapons Station near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted point site, and MNO-680—a single component Great Basined Stemmed point site (Basgall et al. 2000). At MNO-679 and MNO-680, groundstone tools were rare while finely made projectile points were common.

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

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004:26). Termed San Dieguito (Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile

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points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos' interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

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

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, wherein hunting-related tools are replaced by processing tools during the early Holocene (Basgall and Hall 1993).

Archaic (8000 BC–AD 500)

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

The Archaic pattern is relatively easy to define with assemblages that consist primarily of processing tools: millings, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the San Diego region, with little variability in tool composition. Low assemblage

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variability over time and space among Archaic sites has been equated with cultural conservatism (Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurs until the bow and arrow is adopted at around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remains low. After the bow is adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millings and handstones decrease in proportion relative to expedient, unshaped groundstone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complimented only by the addition of the bow and ceramics.

Late Prehistoric (AD 500–1769)

The period of time following the Archaic and prior to Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (M. Rogers 1945; Wallace 1955; Warren et al. 2004). However, several other subdivisions continue to be used to describe various shifts in assemblage composition, including the addition of ceramics and cremation practices. In northern San Diego County, the post-AD 1450 period is called the San Luis Rey Complex (True 1958), while the same period in southern San Diego County is called the Cuyamaca Complex and is thought to extend from AD 500 until Ethnohistoric times (Meighan 1959). Rogers (1929) also subdivided the last 1,000 years into the Yuman II and III cultures, based on the distribution of ceramics. Despite these regional complexes, each is defined by the addition of arrow points and ceramics, and the widespread use of bedrock mortars. Vagaries in the appearance of the bow and arrow and ceramics make the temporal resolution of the San Luis Rey and Cuyamaca complexes difficult. For this reason, the term Late Prehistoric is well-suited to describe the last 1,500 years of prehistory in the San Diego region.

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

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Cuyamaca Complex is the southern counterpart to the San Luis Rey pattern, however, and is most recognizable after AD 1450 (Hector 1984). Similar to True (1980), Hale (2009) argued that an acorn economy did not appear in the southern San Diego region until just prior to Ethnohistoric times, and that when it did occur, a major shift in social organization followed.

Ethnohistoric (post-AD 1769)

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

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

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The traditional cultural boundaries between the Luiseño and Kumeyaay Native American tribal groups have been well defined by anthropologist Florence C. Shippek:

In 1769, the Kumeyaay national territory started at the coast about 100 miles south of the Mexican border (below Santo Tomas), thence north to the coast at the drainage divide south of the San Luis Rey River including its tributaries. Using the U.S. Geological Survey topographic maps, the boundary with the Luiseño then follows that divide inland. The boundary continues on the divide separating Valley Center from Escondido and then up along Bear Ridge to the 2240 contour line and then north across the divide between Valley Center and Woods Valley up to the 1880-foot peak, then curving around east along the divide above Woods Valley. [1993 summarized by the San Diego County Board of Supervisors 2007:6]

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006:34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007:71). As the project area is in Valley Center, the Native American inhabitants of the region would have generally spoken a Luiseno variety of Takic, though would have had likely come into regular contact with the Ipai speaking northern Kumeyaay.

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

Golla suggests that there are two language families associated with Native American groups who traditionally lived throughout the San Diego County region. The northern San Diego tribes have traditionally spoken Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007:74). These groups include the Luiseño, Cupeño, and Cahuilla. Golla has interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers have contended that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic speaking San Diego tribes, occurring approximately 1500 BC–AD 1000.

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(Laylander 2010). The Luiseño are linguistically and culturally related to the Gabrielino, Cupeño, and Cahuilla, and represent the descendants of local Late Prehistoric populations. They are generally considered to have migrated into the area from the Mojave Desert, possibly displacing the prehistoric ancestors of the Yuman-speaking Kumeyaay (Ipai-Tipai) that lived directly to the south during Ethnohistoric times. Luiseño territory encompassed an area from roughly Agua Hedionda Creek on the coast, east to Lake Henshaw, north to Lake Elsinore, and west through San Juan Capistrano to the coast (Bean and Shippek 1978; Kroeber 1925). The Luiseño shared boundaries with the Gabrielino and Serrano to the west and northwest, the Cahuilla from the deserts to the east, the Cupeño to the southeast, and the Kumeyaay to the south. Southern Native American tribal groups of the San Diego region have traditionally spoken Yuman languages, a subgroup of the Hokan Phylum. Golla has suggested that the time depth of Hokan is approximately 8,000 years (Golla 2007:74). The Kumeyaay tribal communities share a common language group with the Cocopa, Quechan, Maricopa, Mojave, and others to east, and the Kiliwa to the south. The time depth for both the Ipai (north of the San Diego River, from Escondido to Lake Henshaw) and the Tipai (south of the San Diego River, the Laguna Mountains through Ensenada) is approximated to be 2,000 years at the most. Laylander has contended that previous research indicates a divergence between Ipai and Tipai to have occurred approximately AD 600–1200 (Laylander 1985). Despite the distinct linguistic differences between the Takic-speaking tribes to the north, the Ipai-speaking communities in central San Diego, and the Tipai southern Kumeyaay, attempts to illustrate the distinctions between these groups based solely on cultural material alone have had only limited success (Pignuolo 2004; True 1966).

The Uto–Aztecan inhabitants of northern San Diego County were called Luiseños by Franciscan friars, who named the San Luis Rey River and established the San Luis Rey Mission in the heart of Luiseño territory. Luiseño population estimates at the time of Spanish contact range from 3,000–4,000 (Kroeber 1925) to upwards of 10,000 (White 1963). In either case, the arrival of the Spanish undoubtedly decimated Native peoples through disease and changed living conditions (Bean and Shippek 1978).

The Luiseño were organized into patrilineal clans or bands centered on a chief, comprised of 25–30 people (Kroeber 1925), each of which had their own territorial land or range where food and other resources were collected at different locations throughout the year (Sparkman 1908). The title of chief was heritable along family lines. Inter-band conflict was most common over trespassing. Sparkman observed that “when questioned as to when or how the land was divided and sub-divided, the Indians say they cannot tell, that their fathers told them that it had always been thus” (1908). Place names were assigned to each territory, often reflecting common animals, plants, physical landmarks, or cosmological elements that were understood as being related to that location.

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Marriages were generally arranged by parents or guardians. Free and widowed women had the option to choose their partner. Polygamy occurred though was not common, often with a single man marrying a number of sisters and wives. Shamanism was a major component in tribal life. The physical body and its components was thought to be related to the power of an individual, and wastes such as fluids, hair, and nails were discarded with intent. Hair, once cut, was often carefully collected and buried to avoid being affected negatively or controlled by someone who wishes them harm. Some locations and natural resources were of cultural significance. Springs and other water-related features were thought to be related with spirits. These resources, often a component of origin stories, had power that came with a variety of risks and properties to those who became affected. Puberty ceremonies for both boys and girls were complex and rigorous. Mourning ceremonies were similar throughout the region, generally involving cutting of the hair, burning of the deceased's clothes a year after death, and redistribution of personal items to individuals outside of the immediate tribal group (Sparkman 1908; Kroeber 1925).

The staple food of the Luiseños during the ethnohistoric period was acorns (Sparkman 1908). Of the at least six oak species within this tribal groups traditional territory, the most desirable of these was the black oak (*Quercus kelloggii*) due to its ease of processing, protein content, and digestibility. Acorns were stored in granaries to be removed and used as needed. The acorns were generally processed into flour using a mortar and pestle. The meal was most commonly leached with hot water and the use of a rush basket, however, there are also accounts of placing meal into excavated sand and gravel pits to allow the water to drain naturally. The acorn was then prepared in a variety of ways, though often with the use of an earthen vessel (Sparkman 1908). Other edible and medicinal plants of common use included wild plums, choke cherries, Christmas berry, gooseberry, elderberry, willow, *Juncus*, buckwheat, lemonade berry, sugar bush, sage scrub, currents, wild grapes, prickly pear, watercress, wild oats and other plants. More arid plants such as *Yucca*, *Agave*, mesquite, chia, bird-claw fern, *Datura*, yerba santa, *Ephedra*, and cholla were also of common use by some Luiseño populations. A number of mammals were commonly eaten. Game animals included back-tailed deer, antelope, rabbits, hares, birds, ground squirrels, woodrats, bears, mountain lions, bobcats, coyotes, and others. In lesser numbers, reptiles and amphibians may have been consumed. Fish and marine resources provided some portion of many tribal communities, though most notably those nearest the coast. Shellfish would have been procured and transported inland from three primary environments, including the sandy open coast, bay and lagoon, and rocky open coast. The availability of these marine resources changed with the rising sea levels, siltation of lagoon and bay environments, changing climatic conditions, and intensity of use by humans and animals.

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The Historic Period (post-AD 1542)

Francisco Ulloa, exploring the Pacific coast under orders from Hernán Cortes, is reported to have stopped at the San Luis Rey River in 1540, marking the first contact between Europeans and the Luiseño, although the accuracy of his exploration is disputed (Garrahy and Weber 1971). Juan Rodriguez Cabrillo, who is widely considered the first European to explore Alta California, sailed the coast through Luiseno territory in 1542, but is not reported to have landed. Epidemic diseases may also have been introduced into the region at an early date, either by direct contacts with the infrequent European visitors or through waves of diffusion emanating from native peoples farther to the east or south (Preston 2002). It is possible, but as yet unproven, that the precipitous demographic decline of native peoples had already begun prior to the arrival of Gaspar de Portolá and Junípero Serra in 1769.

In 1798, Mission San Luis Rey, named for the King of France, was established four miles up along the San Luis Rey River. At its height San Luis Rey became one of the most populous and successful of the missions. In 1824, it had an Indian neophyte population of 3,000 and the extensive mission lands supported 1,500 horses, 2,800 sheep and 22,000 cattle (Pourade 1961:139). Under Spanish control, the missions set out to convert local populations to Christianity and to expand the influence of the Spanish empire. To support intensified missionization, *asistencias* (sub-missions) and *ranchos* were established throughout the territory in the vicinity of Native American villages. Eighteen years after the establishment of Mission San Luis Rey, the mission *asistencia* of Pala was established 20 miles upriver.

Throughout this period the Spanish established multiple missions and allowed only baptized Native Americans to legally own property. These disturbances to Native American communities only increased through Mexican Independence in 1821 and the succeeding secularization of the missions. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger Land Grants to affluent Mexican citizens and *rancheros*. In 1835 the missions took on the role of parish churches (Carrico 2008:41). While some *rancherias* and *pueblos* such as Las Flores (Uchme), San Pasqual, and San Dieguito remained under the control of their native inhabitants following secularization, over the succeeding four and a half decades these were eventually lost to Mexican and Anglo-American owners as well (Carrico 2008:41).

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to the Indians, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent the Indians from

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regaining their patrimony. By 1835, the missions, including Mission San Luis Rey, were secularized. Mission San Luis Rey lands were parceled into six ranchos: Santa Margarita, Las Flores, Buena Vista, Agua Hedionda, Monserrate, and Guajome. The remaining lands of San Luis Rey were sold in 1846 to José Cota and José A. Pico by Pío Pico, Governor of California, and the Luiseño converts who had lived around the mission were removed to nearby Pala. Some former mission neophytes were absorbed into the work forces on the ranchos, while others drifted toward the urban centers at San Diego and Los Angeles or moved to the eastern portions of the county where they were able to join still largely autonomous native communities. United States conquest and annexation, together with the gold rush in Northern California, brought many additional outsiders into the region. Development during the following decades was fitful, undergoing cycles of boom and bust. With rising populations in the nineteenth century throughout the Southern California region, there were increased demands for important commodities including agricultural goods. Land grants issued within the Valley Center area (1841–48) included the ranchos of Pauma, Rincon del Diablo, Cuca or El Potrero, and Guejito. Other land grants in the surrounding area included Bernardo, San Marcos, Buena Vista, and Monserrate. Of these, rancho Guejito is the last of these to remain in-tact (McHenry 1997).

In 1851, a group of Cahuilla and Cupeño Indians attacked American settlers in Warner's Hot Spring, hoping to unite Indian tribes and drive out the Americans (Bibb 1991). Led by Pablo Apis, the Luiseño of Temecula went to Mission San Louis Rey and remained out of the conflict (Bibb 1991). In 1852, the Treaty of Temecula (Treaty of Peace and Friendship) was signed, providing certain lands, horses, cattle, and other supplies to the Luiseño, Cahuilla, and Serrano in exchange for government control of the rest of their lands (Bibb 1991, Van Horn 1974). This treaty, and 17 others in California, was rejected by the U.S. Senate later that year.

California was officially ceded to the United States in 1848, which led to the continued appropriation of Native American Lands by ranchers, prospectors, and an increasing number of settlers. The United States Government did little to dissuade these trespasses. From 1850, with the passage of California's Indian Act, until legislative reforms in the late 1880s, state laws promoted conditions that amounted to indentured servitude for much of the Native American population in San Diego (Carrico 2008:56). These laws supported overt racism and inequitable treatment.

Valley Center, originally named Bear Valley, began to be settled by settlers during this period. This original name was granted after local ranchers killed a California Grizzly Bear reported to weigh 2,200 pounds. The Homestead Act of 1862 allowed US citizens to claim land by a number of different strategies. The most popular of these was to file a claim for 160 acres through payment of a \$10 initial fee and the promise to improve the land through cultivation or ranching as well as the construction of a residence and out-buildings (McHenry 1997). While a number of the original settlers have no record of their origins, the majority of those who filed early claims

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were native-born Californians. A relatively large number of individuals also came from Arkansas, Illinois, and Missouri. Farming was the primary business of these settlers. The planned community of Escondido was founded in the 1880s, increasing the demand for products produced by residents of Valley Center.

In December of 1875 President Grant issued an executive order for 52,400 acres to be set-aside as reservations for San Diego Native Americans (143). These included Mesa Grande, Santa Ysabel, Sycuan, Capitan Grande, Pala, Agua Caliente, Inaja, Cosmit, and Potrero (Carrico 2008:143; Eargle 2000). In 1889 Los Coyotes became the tenth San Diego reservation, and with 26,000 acres it was the largest yet (Carrico 2008:150). From 1891 to 1893, in response to the Act for the Relief of the Mission Indians in the State of California of 1891, six additional reservations were created (152). These included Campo, Laguna, La Posta, Manzanita, Ewiiapaayp (Cuyapaipa), and Pauma-Yuima (Carrico 2008:153). This was followed 20 years later by the creation of the San Pasqual reservation in 1911.

Local History (by Susan Bugbee, Gallegos and Associates)

The Merriam Mountains were named after Major Gustavus French Merriam, the first settler of the Twin Oaks community in north San Diego County. He possessed an impressive heritage, as his relatives included Charles and George Merriam, publishers of the Merriam-Webster Dictionary. The Merriams of his grandfather's generation were Yale graduates and served in the Revolutionary War. His father, Ela Merriam, had fought in the War of 1812, eventually attaining the rank of brigadier general. In 1819, Ela married Lydia Sheldon and they had eleven children. Gustavus, born in 1835, was their eighth child. He grew up on the family's prosperous dairy farm in upstate New York. He was an intelligent boy and did well scholastically (Quinn 1907).

Gustavus Merriam's parents encouraged all of their children, both the boys and the girls, to attend college. Merriam chose to attend the U.S. Naval Academy at Annapolis, where he began his studies in 1854. As a result of a broken eardrum, he took a medical leave during his third year of school at the academy and ventured to Kansas, obtaining employment as a township clerk until the Civil War began.

Merriam enlisted in Syracuse and joined the Third New York Volunteers as a First Lieutenant. His first assignment included being in charge of several forts in and around Washington, D.C. In addition, he was sent to North Carolina to train twelve batteries for service in the war. In 1862, he was promoted to Major and his next tour of duty was performed at Maryland Heights, opposite Harper's Ferry where troops had been placed to defend Washington, D.C. Later, Merriam's daughter, Virginia, recalled her father's tale of displeasure with the assignment because it lacked excitement. One day, General Grant arrived at the camp and personally

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expressed to Merriam that his specialized knowledge and ability with heavy artillery was needed there (Perkins 1966) (Figure 1-3). In 1908, he was still writing to some of his civil war comrades, such as Admiral Dewey, a classmate of his at the academy. Other classmates included Col. Davies, who later joined the Confederate army, and Major Beaumont, who joined the Union (The San Diego Union, 27 September 1908:20).



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Near the end of the war, Merriam was transferred to the Washington, D.C. area where he met Mary Elizabeth (Nina) Scott at a party. Scott had grown up on a plantation in the Shenandoah Valley of Virginia, and was engaged in tutoring children in French. The couple was married in Washington, D.C. in July of 1863, and over the course of their marriage they had six children: Edwin, Nina Helen, Anna Teresa (who died at the age of 3), Henry Scott, Wallace Webster, and Bertha Virginia (Quinn 1907; Perkins 1966).

In the late 1860s, Merriam, his wife, and their first-born son Edwin (Edwin had been born in Washington, D.C.) moved to Topeka, Kansas, where Gustavus worked as a “dealer in dry goods (1868, 1870); a [wheat] farmer (1871); a coal dealer (1872); and as a partner in a coal, feed and lime dealership (1874)” (Kimbrow n.d.). Nina Helen, Anna Teresa, and Henry Scott (Harry) were born in Kansas. Mrs. Merriam’s health was fragile, and her doctor recommended the family relocate to a milder climate, such as Southern California. Merriam made his first trip to San Diego County with his 10-year old son Edwin in 1874, and identified the area where he would build a house and plant a garden and groves. Merriam planned to farm in Southern California, a trade he had learned well as a child, and had engaged in while living in Kansas. Additionally, Merriam planned on beekeeping. In August of 1875, he brought the whole family to Southern California and homesteaded 160 acres. The homestead was located eight miles northwest of Escondido, in Section 25 of Township 11 South, Range 3 West and adjacent to the Coutts family’s Vallecitos de San Marcos Rancho. Merriam named the area “Twin Oaks” for the prominent large double oak on his property (Figure 1-4). The two youngest children, Wallace and Bertha, were born in 1877 and 1878 respectively, at Twin Oaks (Lindenmeyer 1978a). The 160-acre homestead is located adjacent to, but outside of, the Newland Sierra Project area.

In the 1870s, the Vallecitos de San Marcos Rancho was owned by the Coutts family living at Rancho Guajome. The property was constantly in a state of legal upheaval with various factions challenging ownership. In 1886 “the California State Supreme Court reach[ed] a decision in *Burroughs vs Ysidora Coutts* which allowed the Coutts estate to dispose of the property” (Bollinger 1976). Additionally, “Ysidora also had to wage a constant battle against the encroachment of her property by squatters. This problem continued for many years after the settlement of the lawsuit” (Bollinger 1976). Within the Coutts family, feuding over land rights and inheritance also occurred.

Upon arriving to the valley, Major Merriam had his share of difficulties with the Coutts family over his right to settle on the land. Henry Merriam recalled that:

...about four days after our family settled on the Twin Oaks homestead four vaqueros rode up, all with Winchesters across their saddles, and gave us four hours to get out of the country. Father had had some field engineering experience

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and replied that he was not on their land; he had surveyed it and knew where his lines were. They rode off and did not try to molest us in that manner (The San Diego Sun 7 August 1926; Carroll 1975).

However, the Merriam family had the occasional herd of cattle trample through their fields and groves.

In 1880, the Goodwin family moved in “next door” to the Merriam Ranch in Twin Oaks. Richmond Goodwin was one year old when his family arrived to live at Twin Oaks for the next seven years. Goodwin recalls, “Father had one hundred forty-five acres there and he raised wheat, corn and hogs mostly. We had no vineyard or orchard and we just had milk cows for the family” (Hastings 1960).

About the same time, John and Mary Harrison homesteaded 160 acres in the north Twin Oaks valley. John raised bees, as did Merriam, because this industry did not require irrigation and water was scarce. Four of the six Harrison children were born in Iowa prior to the family’s move to Twin Oaks. The fifth child, Hiram, was reputedly born in 1885 in the bee house, which served as the family’s home until a house could be built. A sixth child died at birth and is buried on the Harrison ranch. The Harrison estate eventually grew to 320 acres (Lindenmeyer 1978b).

In 1881, the local residents met and formed a school district and elected a board of trustees. By 1883 or 1884, Merriam built a schoolhouse on his land and the first schoolteacher arrived from Tustin. Until this time, the children had been schooled at home. In the early 1890s, a larger school building was constructed on Deer Springs Road. This edifice served both as school and community center until 1943 when it closed (San Diego Historical Society n.d.; Perkins 1966).

In 1887, over a decade after Merriam settled at Twin Oaks, “the lands of Los Vallecitos de San Marcos were opened for settlement...and the town of San Marcos was established on the Escondido branch of the Santa Fe railroad” (Brackett 1960). Four small communities sprang up in the San Marcos valley during the next 15 years. Barham, a 640-acre townsite located just south of San Marcos proper, was established in 1883 under the direction of J.H. Barham. Within 1 year, the town consisted of a store, a blacksmith shop, and a newspaper.



DUDEK

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SOURCE: Photo courtesy of San Marcos Historical Society

FIGURE 1-4
Merriam Homestead, North Twin Oaks Valley, *Circa 1880s*

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A second area of development occurred 3 miles west of the current center of San Marcos, under the direction of banker Jacob Gruendyke and his associate W.G. Jacobs, who sold parcels of land for the San Marcos Land Company (Carroll 1975). To the north and east respectively, the neighborhoods of Twin Oaks and Richland grew. During the “boom” of the mid-1880s, a great influx of settlers to the area created a swell in the north San Diego County population.

Merriam had already established himself as a beekeeper when he ventured into the vineyard business. The growing of grapes had become the new agricultural interest in the Escondido area, and Merriam planted vines in hopes of producing raisins. He received his first cuttings from France. Discouraged by the difficulty of drying the grapes, Merriam decided to try producing wine and began his own winery. As one of the area’s early vintners, he produced wine and brandy (Enges-Maas n.d.; Carroll 1975). In addition, he maintained his apiary business with 600 stands of bees sent from Topeka, Kansas. Merriam’s honey was shipped to Australia and San Francisco in 25-gallon pine barrels and the wine was sent around the Horn and sold on the East coast (Lindenmeyer 1978a). He also had stands in Fallon, Nevada (Perkins 1966). He was a meticulous man and kept copious notes on weather and rainfall, information he provided to government agencies. Merriam hired both Native Americans and German immigrants that had migrated to Olivenhain from Chicago. Jacob Uhland and George Oden worked for Merriam prior to taking up homesteads in the Twin Oaks valley (Lindenmeyer 1978a; San Diego Historical Society n.d.). On January 17, 1888, Merriam’s wife, Nina, died of consumption at Twin Oaks. She was 42 years old. Mrs. Oden had taken care of Nina when she became bedridden (Escondido Times-Advocate 19 January 1888, p.3).

Merriam had a long and close relationship with his older brother, Clinton, who was Merriam’s senior by eleven years. Clinton had been a financial support to his younger brother and the two men kept in touch through numerous letters. Clinton owned a dry goods importing business in New York City and contributed much to the city’s political arena. He eventually ran for congress on the Republican ticket, won, and was then re-elected for a second term. Clinton Merriam knew many prominent people. In 1889, on a trip to visit his friend John Muir in Northern California, Clinton visited his brother’s place at Twin Oaks with his daughter Florence. Impressed with the location, Clinton purchased land adjacent to his brother’s homestead and gave Gustavus the charge to build a house that endearingly became known as “La Mesita.” Clinton and Florence returned to Twin Oaks in 1894. Clinton stayed only a few months, returning to Washington, D.C. to take care of business. Florence, a young lady of 25, stayed longer and authored books on the natural surroundings of Twin Oaks and her experiences there. As a graduate of Smith College, Florence intended to become a writer. She was influenced greatly by her older brother, C. Hart Merriam, an ornithologist and later the first Chief of the U.S. Biological Survey. Together with her naturalist’s interest in birds and her talent for writing, Florence produced her observations at

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Twin Oaks in *A-Birding on a Bronco*. “Her notes were detailed and precise, and they form one of the earliest records of live western birds” (Kimbrow n.d.).

Gustavus Merriam remarried to Mrs. Augusta M. Koch in 1892. Koch had one grown son, a graduate of the University of California at Berkeley, and a high school teacher in the San Francisco area (Quinn 1907). They continued to live at the Merriam Ranch for the next 20 years. When a team of state surveyors mapped the area in 1898, they named the chain of mountains to the north of his ranch the Merriam Mountains (San Diego Historical Society n.d.).

In the early 1900s, when the county of San Diego experienced growth in population, it was popular for writers and columnists to showcase the outlying communities. The following vignette appeared in a 1908 article of the Escondido Times-Advocate:

One of the prettiest of valley drives is out to Twin Oaks, eight miles away (from Escondido). The landscape is enchanting – all along the way. Viewed from every angle the groves and hills, the fields and homes are good for sickness and death to the blues. Away at the head of a little valley which God must have taken pains in making and where man has helped made every prospect to please, stand two giant live oaks that were hundreds of years old when Columbus first beheld the shores of the new world. They stand on the beautiful possession of Major G. F. Merriam, a New York veteran of the civil war, who nearly thirty-five years ago left his store at Topeka, Kansas and erected here his family altar. He was sixteen miles from a post office, forty miles from the San Diego seaport and hundreds of miles from a railroad. He came to increase the years of so afflicted helpmeet, and has been blessed in happiness and in store. His vineyards, his groves, his fields and his herds have flourished as the old veteran has grown with the years in the love and confidence of those who have occupied this and kindred valleys (Escondido Times-Advocate 6 March 1908, p.3).

Meanwhile, Merriam’s children grew up. Edwin, at the age of 21, homesteaded 160 acres adjacent to his father’s ranch and later married Katherine Keyes. Helen graduated from Columbia University in New York. Harry attended business college in Los Angeles and San Diego. The two youngest children, Wallace and Virginia, attended Coronado High School after completing 9th grade in Twin Oaks. They both graduated high school in 1896, and attended the University of California at Berkeley (Perkins 1966).

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In 1905, Merriam's daughter, Virginia, started a boarding school for boys. The "Twin Oaks Ranch School" catered to the wealthy and was in business for about 10 years. The Escondido Times-Advocate wrote about the school in 1908:

Under the monster oaks on his farm is a school so unique as to deserve passing mention. It is for boys under fifteen years of age. Its curriculum includes camping trips, pony riding, safe and sane out-of-door life generally, wholesome diet, expurgated moral atmosphere and genial home influences. One hundred dollars a month is the tuition, with fifty dollars per quarter additional for saddle horse. The School has wrought wonders in the lives of city boys denied a fair start in physical capital. The teachers are Miss Virginia Merriam, daughter of the pioneer and Miss Margaret Marsh-Parker, of an honored New York family. Both are highly educated, but as unaffected and natural as possible, devoted to their work and in love with their life near to Nature's heart (Escondido Times-Advocate 6 March 1908, p.3).

A young man, Thomas Colby, who came from Detroit to attend the school in 1910, returned 30 years later to take up residency in north San Diego County (Perkins 1966).

In 1913, the 78-year-old Merriam and his second wife retired to Los Angeles. In January 1914, he was struck by a car and died within a short time, never having regained consciousness. It is thought that the elderly Merriam, who was at the time quite deaf, did not hear the car coming (Escondido Times-Advocate 26 January 1914, p.1).

Merriam's son Wallace became a mining engineer and moved to Mexico (Quinn 1907). In 1918, Henry Scott (Harry) Merriam, along with his wife and two sons, moved to their ranch in Holtville for a couple of years, leasing the Twin Oaks ranch to Otto Groschopp (Escondido Times-Advocate 25 October 1918, p.1). Upon returning to the Twin Oaks ranch, he was active in community affairs. In 1923, the Vista Irrigation District was formed and Harry became the first president of the group.

Merriam's grandson, Sheldon, built a large adobe house on the Twin Oaks property in the 1940s, where Sheldon's two children grew up. Sheldon continued to acquire additional acreage until the ranch totaled over 500 acres. On the land, he cultivated hay, grain, grapes and oranges. In 1975, Sheldon died at his adobe home. Sheldon's son, Richard, had joined his father in the agriculture business and continued to grow proteas, oranges, lemons and avocados after Sheldon's death (Enges-Maas n.d.; Weiss 1978). The historic redwood home that was built by Gustavus Merriam in 1889 was inherited by his great-grandson, Robert Merriam, a free-lance writer and citrus farmer. In 1982, Robert restored the 1,700-square-foot home after many years of being used as a rental (Schlesinger 1982).

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In 1880, the Kimball brothers of National City purchased Rancho Encinitas consisting of over 4,000 acres. They advertised the property throughout the East and Midwestern United States, drawing a large German population from Denver and Chicago to north San Diego County. These settlers arrived in 1884 and 1885, and did not find the rich farmland promised, but rather property covered with dry brush and a scarcity of water. For income, the settlers sought work at the outlying ranches. From Olivenhain, the new German community, several settlers were directed to seek work from Gustavus Merriam. Jacob Uhland walked 16 miles to the Merriam ranch and was immediately hired. George Oden did the same, leaving his family in an old adobe barn shared with other families. Oden, who arrived in north San Diego County in 1884, was encouraged by Merriam to homestead 160 acres in Twin Oaks with an old shack on it that had not been “proved up” (Lindenmeyer 1978a). Uhland came to Olivenhain in 1885, and settled on land to the east of Merriam, which later became known as Uhland Canyon, until a deer was shot there and the local folks started calling it Deer Springs.

Another early settler to the area, Peter Cochems, arrived at Olivenhain in 1885 and then moved to Twin Oaks in 1887. Initially, Cochems built a small house and barn, but in 1902 had a large two-story farmhouse erected on his 40-acre homestead (Figure 1-5). Cochems was a skilled baker and cigar manufacturer from Kochem, Germany. He had met and married his German-born wife Anna in Chicago, where their five children were born (Figure 1-6). Because of labor troubles in Chicago, Cochems gave up his cigar business and moved the family to a “Socialist community, called Olivenhain” (San Marcos Historical Society n.d.). Becoming disgruntled with the community, the Cochems moved to Twin Oaks. Cochems and his two sons, Edgar and Oscar, dry-farmed the land and raised hay and oats. His ranch was the furthest north in the Twin Oaks valley at the time. Cochems died in 1912 at the age of 67 and is buried at the San Marcos cemetery. One of his sons sold the property shortly after his death.

In 1893, after heavy rains, George Oden died when the well he was cleaning out collapsed on him. He was 45 years old, and the family buried him on the property near the home he had built. Oden’s widow was left to care for their six children. She later remarried a Mr. Alwin Frohberg from the German community at Olivenhain, who moved to the Oden homestead. Emma Einer, a longtime resident of Twin Oaks, remembered, “We had picnics down in the grove beyond the old Oden place above the Merriam place. That was a lovely picnic area under those nice big oaks” (Einer 1976).



Peter Cochems' First House (undated)



Anna and Peter Cochems (undated)

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Cochems House with “Bee Mountain in Background, *Circa 1902*



Cochems House; Peter and Anna Cochems (seated) in Foreground, *Circa 1902*

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John H. Dietschy filed a homestead claim for 120 acres in Twin Oaks, and he received title in 1891. Mr. Dietschy does not appear in any of the County directories for the Twin Oaks or San Marcos areas between the years 1895 and 1913, however he is shown as an owner on the 1913 Alexander Plat map. There appears to be a structure at the edge of his property as portrayed on the 1901 Escondido and San Luis Rey USGS maps, but the nature of the edifice, whether home, barn, shed or other out-building, is unknown (Figure 1-7). This may actually be the Oden/Frohberg house.

In the 1950s, F. Brock Gist purchased 360 acres of land in Sections 13 and 24 of Township 11 South, Range 3 West. There is a road that follows the approximate boundary lines for his property, which appears as Gist Road on current maps.

1.2.2 Records Search Results

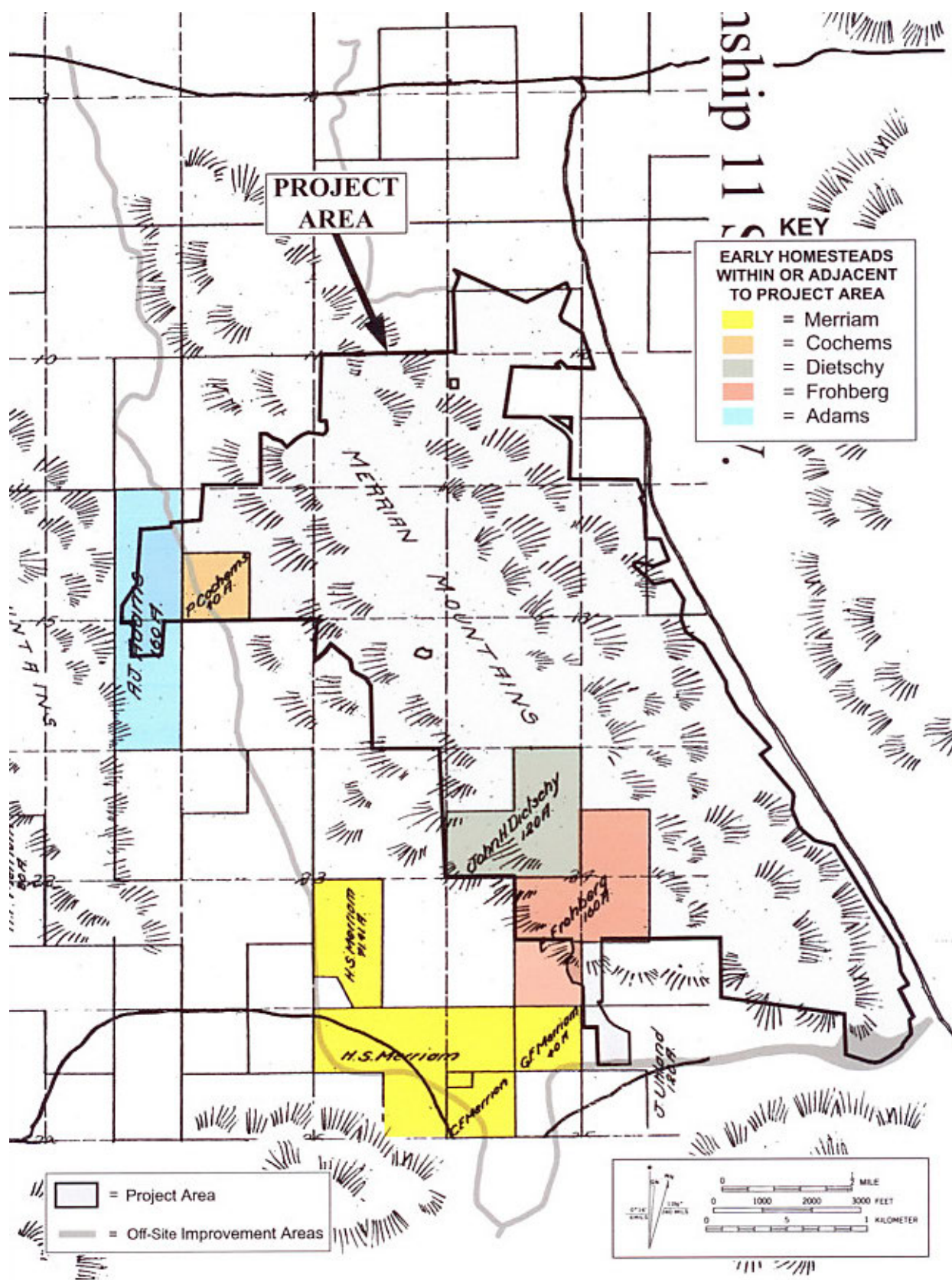
A records search was completed at the South Coastal Information Center (SCIC) for the project area (including the off-site improvement areas) and surrounding one-mile radius in 2004. A supplemental search of the California Historical Resources Information System (CHRIS) at the SCIC was conducted on November 11, 2014, and again on June 1, 2017 for minor off site improvement areas. The updated CHRIS search sought to identify any new findings, and included a review of the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the California Points of Historical Interest list, the California Historical Landmarks list, the Archaeological Determinations of Eligibility list, and the California State Historic Resources Inventory list.

Previous Studies

The SCIC records indicate that 164 previous cultural resources studies have been performed within the records search area (AA 1988; Affinis 2003; 2005; APRA 1978; ARU 1990; ASI 1991; ASM 1978, 1980, 1984, 2012; Banks 1980; Beddow 2007; BFSa 2007; Berryman 1977, 1988, 1992; Bonner and Williams 2009; Bonner 2011; Bowden-Renna 2012; Brown 2001; Browne and Vogt 1985; Carrico 1976, 1977, 1978, 1982, n.d.; Carrico et al. 1995; Carrico and Rhodes 1979; CDF 2000; Cheever 1988; Clevenger et al. 1992; Clifford and Smith 2004; Cook (J.) 1988; Cook (R.) 1978; Cook et al. 1977; Cooley and Jordan 2003; County of San Diego 1979; Crawford 2011; Crull 1989, 1990a; Cupples 1976, 1977; Davison and Robbins-Wade 2013; De Barros 1999b, 2000, 2005; Duke 2001a, 2001b; Eckhardt 1978; EDAW 2003; Engineering-Science 1981; ERC 1990; Flower et al. 1979; Freeman 1988; Fulton 2013; Gallegos 1983; Gallegos and Associates 1999a, 1999b, 1999c, 2001a 2001b, 2007; Gallegos and Carrico 1985; Gallegos and Cheever 1986; Gallegos and Kyle 1989; Gallegos and Strudwick 1992; Gallegos et al. 2007; Gardner 2009; Glenn 1993a, 1993b; Gross and Jacobsen 1990; Guerrero et

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al. 2001; Guerrero and Gallegos 2005; Gunderman and Ghabhlain 2010; Hatley 1979; HCH & Associates 1978, 1984; Hector 2006; Jones 1989, 2013; Jones and Stokes 2000; Kirkish 1996; Kwiatkowski 2008; Kyle 2007; Kyle et al. 1998; Kyle and Gallegos 1987a, 1987b; Kyle consulting 2001; Loftus 2013a, 2013b, n.d.; Marben-Laird Associates 1987; MBA Inc. 1989a, 1989b, 2008; McCoy 1979; McHenry 1989; Mooney 1992; NHPC 1982, 1984; Ogden 1992a, 1992b, 1992c; Olsen et al. 1991; Peak 1991; Pierson 2001; Pignuolo 2006; Polan 1978; Polan and Berryman 1977; PRC Troups Corporation 1978, 1981; P.S. Preservation Services; 1990 Recon 1978; Recon 1989; RMW 1986, 1991; Robbins-Wade 1999, 2001, 2003; Rosen 2011; Rosenberg 2009; Rosenberg et al. 2007; Roth and Associates 1991a, 1991b; Roy 2013; SDCED 1972; Schroth 1991; SDCAS 1975; Smith 1987, 1991; Smith and Clowery-Moreno 2008; Smith and Gilbert 2003; Smith and Lorenzen 2006; Spelts 2013; SRS 1982, 1990; Strudwick and Gallego 1994; TMI 1989a, 1989b; Unknown 1972, 2009, 2012, 2014a, 2014b, 2016; VanHorn 1989; Wade 2001; WESTEC 1983a, 1983b, 1983c; White 1990; White and Corum 1980; White and White n.d.; White et al. 2008; Wilson 2013; Winterrowd and Cardenas 1987; Wright 2003, 2004a, 2004b, 2004c, 2004d, 2006, 2007; Xinos 1984; and Zepeda-Herman 2012. Of these, 23 have covered at least a portion of the project area (ASI 1991; ASM 1984; City of Escondido 1980; Cook et al. 1977; Cupples 1976, 1977; de Barros 2000; Duke 2001a, 2001b; Gallegos et al. 2007; Gross and Jacobsen 1990; Guerrero et al. 2001; Hector 2006; Kyle and Gallegos 1987a, 1987b; NHPC 1982, 1984; Olsen et al. 1991; Recon 1978; Robbins-Wade 2001, 2003; SDCAS 1975; and White and White n.d.). Confidential Appendix A provides the complete bibliography of all prior cultural resources studies occurring within one-mile of the project area.



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Seventy-five cultural resources were identified in the records search area, including 59 sites, 4 isolates, 11 extant historic structures, and a historic structure noted on early USGS maps (Figure 1-8, Confidential Appendix A). Of these, 14 resources have been recorded wholly or partially in the project area (Table 1.1). Three of these are located within the project off-site-improvement area: CA-SDI-5640, CA-SDI-5951, and P-37-025968. The records search results are included in the report as Confidential Appendix A.

Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
<i>Sites within a one-mile radius of the Project Area</i>					
P-37-019199	—	Historic: Three standing structures	64 x 64	Hilton, S. 2000	Recommended Not Eligible
P-37-025780	—	Historic: Standing privy	2 x 1.5	Van Horn, D. 2003	Recommended Not Eligible
P-37-014965	CA-SDI-(I)267	Prehistoric: Isolate ceramic sherd	—	Gross et al. 1990	Not Eligible
P-37-000561	CA-SDI-561	Prehistoric: Lithic scatter	—	True, n.d.	No Determination
—	CA-SDI-662	No Information	—	—	—
P-37-004367	CA-SDI-4367	Prehistoric: Bedrock milling	—	May et al. 1975a	No Determination
P-37-004368	CA-SDI-4368	Prehistoric: Temporary camp / Bedrock milling	23 x 15	May et al. 1975b	No Determination
P-37-004369	CA-SDI-4369	Prehistoric: Habitation / Bedrock milling	46 x 67	May et al. 1975c	No Determination
P-37-004372	CA-SDI-4372	Prehistoric: Lithic scatter	18 x 30	Brock, T. et al. 1975a	No Determination
P-37-004373	CA-SDI-4373	Prehistoric: Temporary camp	5 x 122	Brock, T. et al. 1975b	No Determination
P-37-004374	CA-SDI-4374	Prehistoric: Bedrock milling / Ceramic scatter	—	Baksh, M. 1975a	No Determination
P-37-004375	CA-SDI-4375	Prehistoric: Habitation / Bedrock milling	30 x 15	Baksh, M. 1975b	No Determination
—	CA-SDI-4377	No Information	—	—	—
—	CA-SDI-4378	No Information	—	—	—
—	CA-SDI-4379	No Information	—	—	—
—	CA-SDI-4542	No Information	—	—	—
P-37-004559	CA-SDI-4559	Prehistoric: Pictographs	—	Kearns, T. 1971b	No Determination
P-37-004560	CA-SDI-4560	Prehistoric: Habitation debris / Lithic scatter	50 x 50	Kearns, T. 1971c	No Determination
P-37-004562	CA-SDI-4562	Prehistoric: Lithic scatter	50 x 50	Kearns, T. 1971d	No Determination
P-37-004573	CA-SDI-4573	Prehistoric: Bedrock milling	5 x 5	Carrico, R. 1975	No Determination
—	CA-SDI-5071	No Information	—	—	—
—	CA-SDI-5072	No Information	—	—	—

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Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
P-37-005187	CA-SDI-5187	Prehistoric: Bedrock milling	4 x 3	Berryman, S. n.d.	No Determination
—	CA-SDI-5190	No Information	—	—	—
P-37-005357	CA-SDI-5357	Prehistoric: Habitation / Bedrock milling	40 x 60	Norwood, R.H. 1977	No Determination
P-37-005638	CA-SDI-5638	Prehistoric: Habitation	—	Ricard, R. 1977a	Destroyed
P-37-005950	CA-SDI-5950	Prehistoric: Habitation debris / Bedrock milling	46 x 15	Aasved et al. 1978a	No Determination
P-37-008095	CA-SDI-8095	Prehistoric: Lithic scatter	—	Rhodes, K. 1978	No Determination
—	CA-SDI-8250	No Information	—	—	—
P-37-008327	CA-SDI-8327	Prehistoric: Lithic scatter	40 x 40	Cardenas, D. S. 1980	No Determination
P-37-009252	CA-SDI-9252	Prehistoric: Bedrock milling	30 x 30	Heuett, M. L. 1982a	No Determination
—	CA-SDI-10150	No Information	—	—	—
—	CA-SDI-11060	No Information	—	—	—
—	CA-SDI-11066	No Information	—	—	—
—	CA-SDI-11067	No Information	—	—	—
—	CA-SDI-11068	No Information	—	—	—
—	CA-SDI-11618	No Information	—	—	—
—	CA-SDI-12520	No Information	—	—	—
—	CA-SDI-12521	No Information	—	—	—
—	CA-SDI-12522	No Information	—	—	—
—	CA-SDI-13009	No Information	—	—	—
P-37-018797	CA-SDI-15671	Historic: Pit mine	8.5 x 6.5	de Barros, P. 1999a	No Determination
P-37-018824	CA-SDI-15689	Prehistoric: Bedrock milling	3 x 6	James and Briggs 2000	No Determination
P-37-027196	CA-SDI-17787	Prehistoric: Bedrock milling / Lithic scatter	50 x 80	Aguilar, J. 2006	No Determination
P-37-027197	CA-SDI-17788	Prehistoric: Bedrock milling / Lithic scatter	2.5 x 2	Aguilar, J. 2006	No Determination
P-37-027456	CA-SDI-17910	Prehistoric / Historic: Bedrock milling / Lithic scatter / four structures of the Circle P Ranch	120 x 30	Wise, M. et al. 2006	No Determination
P-37-012098	CA-SDI-12098	Prehistoric: Lithic Scatter	30 x 30	ERC Environmental 1991	No Determination
P-37-012210	CA-SDI-12210	Prehistoric: Lithic Scatter	10 x 4	Joyner 1990	No Determination
P-37-014081	-	Historic: Structure		Thornton 1994	No Determination
P-37-015578		Prehistoric Isolate	-	Ogden 1996	No Determination

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Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
P-37-018186	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018202	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018203	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018204	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018205	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018206	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018207	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018208	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018209	-	Historic: Structure		Preservation Services 1999	No Determination
P-37-018224	-	Historic: Structure		Tsunoda 2010; P.S. Preservation Services 1999	No Determination
P-37-033844	CA-SDI-21254	Historic: Structure ruins		Quach 2014	No Determination
<i>Sites within the Project Area</i>					
1901 Historic Structure	—	—	—	—	—
P-37-025968	—	Prehistoric: Isolate debitage	—	Guerrero 2004a	Not Eligible
SDM-W-3880C	—	Prehistoric: Isolate lithic tool	—	Winterrowd 1986	Not Eligible / Destroyed
P-37-004370	CA-SDI-4370	Prehistoric: Bedrock milling	—	Guerrero 2007a May et al. 1975d	Destroyed
P-37-004371	CA-SDI-4371	Prehistoric: Bedrock milling	5 x 5	May et al. 1975e	Destroyed
P-37-004558	CA-SDI-4558	Prehistoric: Habitation / Bedrock milling	110 x 100	Guerrero 2007b Cook 1977 Kearns, T. 1971a Rogers, M. n.d.	Recommended Eligible
P-37-005639	CA-SDI-5639	Prehistoric: Bedrock milling / Ceramic scatter	170	Guerrero 2007c Ricard, R. 1977b	Destroyed
P-37-005640	CA-SDI-5640	Prehistoric: Bedrock milling	30 acres	Guerrero 2007d Ricard, R. 1977c	Destroyed
P-37-005951	CA-SDI-5951	Prehistoric: Temporary Camp / Bedrock milling	61 x 46	Aasved et al. 1978b	No Determination

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Table 1-1
Previously Recorded Cultural Resources Identified in Records Search

Primary Number	Trinomial	Resource Type	Dimensions (m)	Author	NRHP Status
P-37-009253	CA-SDI-9253	Prehistoric: Temporary Camp / Rock shelter / Bedrock milling	159 x 55	Guerrero 2005 Cardenas, D. S. 1986a Heuett, M. L. 1983b	Recommended Not Eligible
P-37-009822	CA-SDI-9822	Prehistoric: Habitation / Human remains / Pictograph / Bedrock milling	80 x 60	Guerrero 2007e Crull, S. 1990b Diehl and Brown 1986 Hedges, K. 1977 Rogers, M. n.d.	Significant
P-37-010747	CA-SDI-10747H	Historic: 1930's homestead	213 x 73	Guerrero 2007f White and White n.d. Cardenas, D. S. 1986b	Recommended Not Eligible
P-37-025966	CA-SDI-17264	Prehistoric: Lithic scatter	160 x 10	Guerrero 2004b	Recommended Not Eligible
P-37-025967	CA-SDI-17265	Prehistoric: Bedrock milling	15 x 15	Guerrero 2004c	Recommended Not Eligible

Previously Recorded Sites Within or Straddling the Project APE (with Gallegos and Associates)

CA-SDI-4370

Site CA-SDI-4370 was originally recorded by May et al. (1975a) as a single milling slick. A survey report for site CA-SDI-4370 was not on file at the South Coastal Information Center. Also, there is no record of site testing to determine site significance for CA-SDI-4370.

CA-SDI-4371

Site CA-SDI-4371 was originally recorded by May et al. (1975b) as a single milling slick. It should be noted that the majority of CA-SDI-4371 is located outside of the project area. Therefore, the milling feature may be present, but located adjacent to and outside of the project area.

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CA-SDI-4558

Site CA-SDI-4558 was originally recorded by Kearns (1971) for the Interstate 15 project (Cupples 1977). Kearns (1971) described the site as an occupation site consisting of millings, handstones, flakes, and core and cobble tools. Cook (1977) updated the site during the test program for CA-SDI-4558 (Cook et al. 1977). A total of thirty-five 1x1-m units were excavated, producing large bifaces (San Dieguito and Elko), handstones, battered implements, debitage, and marine shell. In addition, two possible hearth features were exposed during the test program. Site CA-SDI-4558 was identified as significant and recommended as potentially eligible to the National Register of Historic Places in 1977 (White 2005). Given this previous determination, site CA-SDI-4558 is identified as significant under CEQA and the County Resource Protection Ordinance (RPO). It should be noted that the structures were not recommended as significant resources, as these structures are less than 50 years old.

CA-SDI-5639

Site CA-SDI-5639 was originally recorded by Gouveia and Ricard (1977a) as a milling site bisected by Twin Oaks Valley Road. Two milling features and associated ceramic sherds were noted. Smith (1982) later updated the site for the South Coast Asphalt Products Twin Oaks Quarry project. Site CA-SDI-5639 was not relocated and Smith (1982) stated that the site had been destroyed as a result of construction improvements for Twin Oaks Valley Road and the San Diego Aqueduct (New Horizon Planning Consultants 1982).

CA-SDI-5640

Site CA-SDI-5640 was originally recorded by Gouveia and Ricard (1977b) as a single milling site adjacent to two driveways, Twin Oaks Valley Road and a trailer. No artifacts were reported. Continued plowing was noted at the site.

CA-SDI-5951

Site CA-SDI-5951 was originally recorded by Aasved et al. (1978b) as a temporary camp and milling site north of Deer Springs Road. A single milling feature with a scatter of ceramics, lithics, and vertebrate and invertebrate faunal remains was noted. Aasved and Murray stated a large area immediately east of the site had been cleared and that the location of CA-SDI-5951 would be developed.

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CA-SDI-9253

Site CA-SDI-9253 was originally recorded by Heuett (1982) as multiple bedrock milling features consisting of several slicks. Cardenas (1986a) updated the site for the Sycamore Ridge project and extended the site boundary to approximately 159 x 55 m in area. The 1986 update described site CA-SDI-9253 as a temporary camp consisting of rock shelters, bedrock milling features, debitage, and a midden deposit. The west portion of the site has been impacted by the construction of a 1930s homestead (see site CA-SDI-10747H).

CA-SDI-9822

Site CA-SDI-9822 (W-223-A) was originally recorded by Rogers (n.d.) as a habitation site, consisting of a dark midden, flakes, handstone fragments, a large amount of shell, and bedrock milling features. Site CA-SDI-9822 was updated by Hedges (1977), and a heavily weathered and exfoliated red pictograph feature was identified on a rock face situated in the northwest portion of the site. In 1990, site CA-SDI-9822 was again updated by Crull (1990b). Palomar Community College conducted a field school from 1980 to 1989 that was under the direction of Dennis O'Neil, Ph.D. Approximately 40 1x2-meter units, with an average depth of 120 centimeters, were excavated and as a result, an extensive collection of over 80,000 primarily Late Period artifacts, including arrow points, pottery, ceramic pipe fragments, bone tools, milling tools, beads (bone, shell, stone, and glass), arrow shaft straighteners, stone tools for cutting, chopping, and scraping, obsidian, shell, bone, and cremations were recovered. It should be noted that the only written report on this site is the M.A. thesis on the faunal assemblage by Quintero (1987). The southern portion of the site has been impacted by the construction of Deer Springs Road and a trailer park south of Deer Springs Road. Crull (1990b) reported that the habitation area and milling features are protected by a chain-link fence, however, additional milling features, surface artifacts, and the pictograph feature are located outside of the fence. On the basis of previous work, site CA-SDI-9822 is identified as significant under CEQA and County Resource Protection Ordinance criteria.

CA-SDI-10747H

Site CA-SDI-10747H was originally recorded by Cardenas (1986b) for the Sycamore Ridge Project. Site CA-SDI-10747H is located adjacent to the west edge of site CA-SDI-9253 (see above for site description of CA-SDI-9253). Site CA-SDI-10747H represents the remnants of a 1930s homestead, consisting of a three-room house, a rock and mortar hearth/chimney structure, a stone and concrete one-room foundation, and a partially collapsed wood structure (Cardenas 1986b). White and White (n.d.) conducted a patents record search for Stonegate Development and identified one homestead patent issued in the same section (Section 13, Township 11 South,

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Range 3 West). White and White (n.d.) stated that site CA-SDI-10747H is most likely associated with homestead patent #0046358 issued to Orland Arthur Rush in 1931.

SDM-W-3880C

Isolate SDM-W-3880C is a single lithic tool fragment that was recorded by Winterrowd (1986) for the Sycamore Ridge project (Winterrowd and Cardenas 1987). The isolate was identified within a highly disturbed graded dirt road. No additional cultural materials were located.

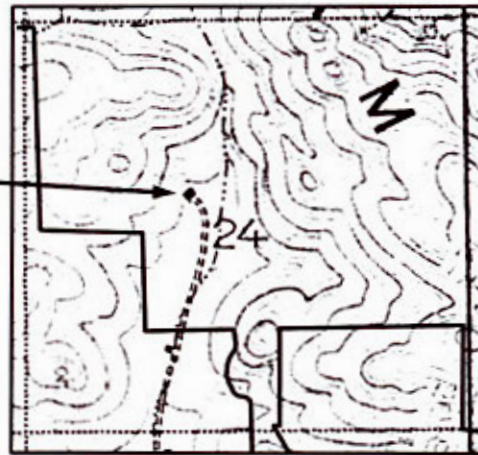
Historic Structures

Early USGS maps (1901 Escondido 15'; 1901 San Luis Rey 15'; 1942 Escondido 15'; 1948 San Marcos 7.5') were reviewed for early historic structures. One structure was identified on the 1901 Escondido USGS map and the 1901 San Luis Rey USGS map (Figure 1-9). This structure may be related to the parcels identified as Dietschy or Frohberg (see Figure 1-7). No structures were identified on the 1942 Escondido or 1948 San Marcos USGS maps.

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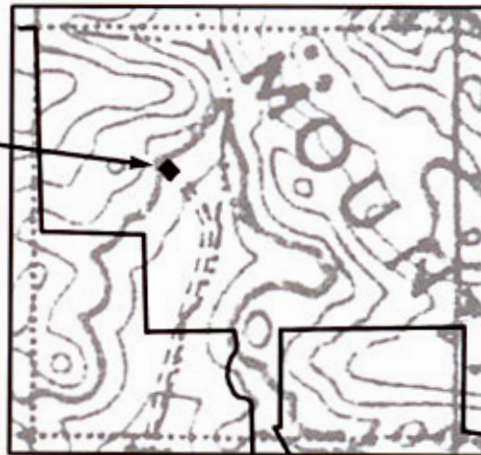
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Historic Structure
Location



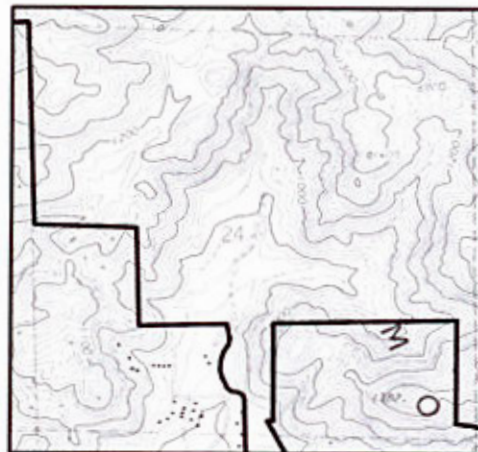
Escondido 1901 1:62,500 Scale Map (enlarged)

Historic Structure
Location

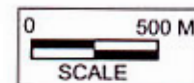


San Luis Rey 1901 1:125,000 Scale Map (enlarged)

Structure Not Shown



San Marcos 1968/83 1:24,000 Scale Map



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1.3 Applicable Regulations

Cultural resource regulations that apply to the project area are the County of San Diego RPO, the Local Register, CEQA, and provisions for the CRHR.

Historic and archaeological districts, sites, buildings, structures, and objects are assigned significance based on their exceptional value or quality in illustrating or interpreting the heritage of San Diego County in history, architecture, archaeology, engineering, and culture. A number of criteria are used in demonstrating resource importance.

State Level Regulations

The California Register of Historic Resources (Public Resources Code section 5020 et seq.)

In California, the term “historical resource” includes but is not limited to “any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (California Public Resources Code section 5020.1(j)). In 1992, the California legislature established CRHR “to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (California Public Resources Code section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following National Register of Historic Places (NRHP) criteria:

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. 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.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

(California Public Resources Code section 5024.1(c).) Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (see 14 CCR, section 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and

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properties listed or formally designated as eligible for listing on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

Native American Historic Cultural Sites (California Public Resources Code section 5097 et seq.)

State law addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NRHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resource Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy an Indian historic or cultural site that is listed or may be eligible for listing in the CRHR.

California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act (California Repatriation Act), enacted in 2001, required all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

California Environmental Quality Act

As described further below, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological and historic resources:

1. California Public Resources Code section 21083.2(g): Defines “unique archaeological resource.”
2. California Public Resources Code section 21084.1 and CEQA Guidelines section 15064.5(a): Define historical resources. In addition, CEQA Guidelines section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource;” it also defines the circumstances when a project would materially impair the significance of a historical resource.
3. California Public Resources Code section 5097.98 and CEQA Guidelines section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.

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4. California Public Resources Code sections 21083.2(b)-(c) and CEQA Guidelines section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code section 5024.1(q)), it is a “historical resource” and is presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (California Public Resources Code section 21084.1; CEQA Guidelines section 15064.5(a)).

A “substantial adverse change in the significance of an historical resource” reflecting a significant effect under CEQA 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(b)(1); California Public Resources Code section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project:

1. 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; or
2. 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
3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its

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eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

See Section 2, below for a discussion of the CEQA guidelines for determining significance and mitigating impacts to unique archaeological resources.

California Health and Safety Code section 7050.5

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains shall occur until the County coroner has examined the remains (section 7050.5b). If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (section 7050.5c). The NAHC will notify the Most Likely Descendant. With the permission of the landowner, the Most Likely Descendant may inspect the site of discovery. The inspection must be completed within 24 hours of notification of the Most Likely Descendant by the NAHC. The Most Likely Descendant may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

County

San Diego County Local Register of Historical Resources

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

- Resources associated with events that have made a significant contribution to the broad patterns of California or San Diego County's history and cultural heritage;
- Resources associated with the lives of persons important to our past, including the history of San Diego and our communities;

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- Resources that embody the distinctive characteristics of a type, period, region (San Diego County), or method of construction, or represent the work of an important creative individual, or possesses high artistic values; and
- Resources that have yielded or are likely to yield, information important in prehistory or history.

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

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

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

County Of San Diego Resource Protection Ordinance (RPO)

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

The County defines a significant prehistoric or historic site under its RPO as follows:

- a. 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 by the Keeper of the National Register; or
 - b) To which the Historic Resource (H designator) Special Area Regulations have been applied; or
- b. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data or materials; and

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- c. 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.

Traditional Cultural Properties

Native American Heritage Values

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Also potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties in discussions of cultural resource management (CRM) performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices. Examples of properties possessing such significance include:

- a. A location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- b. A rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- c. An urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
- d. A location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- e. A location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

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A Traditional Cultural Property, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community.

Federal Regulations

No federal nexus has been identified for this project as of the date of this report. However, in the event that a federal nexus is identified in the future, a memo has been prepared that summarizes the methods and results of this cultural resources study and evaluates identified resources under Section 106 of the National Historic Preservation Act (NHPA). This Section 106 memo is located in Confidential Appendix H.

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2 GUIDELINES FOR DETERMINING SIGNIFICANCE

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

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

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

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

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

- When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).
- If a lead agency determines that the archaeological site is a historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.
- If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section

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21083.2. The time and cost limitations described in Public Resources Code Section 21083.2 (c–f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources.

- If an archaeological resource is neither a unique archaeological nor a 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) & (e) contain additional provisions regarding human remains. Regarding Native American human remains, paragraph (d) provides:

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

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

Under CEQA, an EIR is required to evaluate any impacts on unique archaeological resources (California Public Resources Code section 21083.2.) A “unique archaeological resource” is defined as:

[A]n archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets 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.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

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(California Public Resources Code section 21083.2(g)). An impact to a non-unique archaeological resource is not considered a significant environmental impact and such non-unique resources need not be further addressed in the EIR (Public Resources Code section 21083.2(a); CEQA Guidelines section 15064.5(c)(4)).

As stated above, CEQA contains rules for mitigation of “unique archeological resources.” For example, “[i]f it can be demonstrated that a project will cause damage to a unique archeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:”

1. “Planning construction to avoid archeological sites.”
2. “Deeding archeological sites into permanent conservation easements.”
3. “Capping or covering archeological sites with a layer of soil before building on the sites.”
4. “Planning parks, greenspace, or other open space to incorporate archeological sites.” (Pub. Resources Code section 21083.2(b)(1)-(4).)

Public Resources Code section 21083.2(d) states that “[e]xcavation as mitigation shall be restricted to those parts of the unique archeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report.”

The rules for mitigating impacts to archeological resources to qualify as “historic resources” are slightly different. According to CEQA Guidelines section 15126.4(b), “[p]ublic agencies should, whenever feasible, seek to avoid damaging effects on any historic resource of an archeological nature. The following factors shall be considered and discussed in an EIR for a project involving such an archeological site:

- (A) Preservation in place is the preferred manner of mitigating impacts to archeological sites. Preservation in place maintains the relationship between artifacts and the archeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.
- (B) Preservation in place may be accomplished by, but is not limited to, the following:
 1. Planning construction to avoid archeological sites;
 2. Incorporation of sites within parks, greenspace, or other open space;

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3. Covering the archeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site[; and]
4. Deeding the site into a permanent conservation easement.

Thus, although section 21083.2 of the Public Resources Code, in addressing “unique archeological sites,” provides for specific mitigation options “in no order of preference,” CEQA Guidelines section 15126.4(b), in addressing “historical resources of an archeological nature,” provides that “[p]reservation in place is the preferred manner of mitigating impacts to archeological sites.”

Under CEQA, “[w]hen data recovery through excavation is the only feasible mitigation,” the lead agency may cause to be prepared and adopt a “data recovery plan,” prior to any excavation being undertaken. The data recovery plan must make “provision for adequately recovering the scientifically consequential information from and about the historic resource.” (CEQA Guidelines section 15126.4(b)(3)(C).) The data recovery plan also “must be deposited with the California Historical Resources Regional Information Center.” (*Ibid.*) Further, “[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation.” (*Ibid.*)

However, “[d]ata recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center.” (CEQA Guidelines section 15126.4(b)(3)(D).)

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3 RESEARCH DESIGN (WITH GALLEGOS AND ASSOCIATES)

The objective of this project was to identify cultural resources within the project area and off-site improvement areas and to obtain archaeological assemblage data that could be used to evaluate those resources for historical significance under CEQA and County guidelines. The research orientation developed for the test program employed regionally and locally specific questions and identified data needs to approach these questions. A wide range of research questions or topics was possible for the sites; however, five research domains were selected on the basis of overall contribution to the archaeological record. Specific research questions focused on chronology, lithic technology, subsistence and settlement, and trade and travel. These questions were used to guide the study to determine if materials were available to address the research questions given a sufficient excavation sample (i.e., data recovery).

3.1 Chronology

Study Topics

- What was the period of use and/or occupation for sites CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265?

Data Needs

Materials (i.e., shell, charcoal, and bone) recovered from the sites for radiocarbon dating can be used to determine age and period of site occupation. Diagnostic artifacts such as small arrow points and pottery can also be used for relative site dating to the Late Period.

3.2 Lithic Technology

Several flake-tool reduction strategies have been identified for the Southern California coastal region. These include nodule core reduction, bipolar core reduction, and biface reduction using two types of cores. The decision to use one type of core instead of another depends on at least two factors: 1) the form of the material to be reduced (small nodule, large nodule, layered); and, 2) the intended product (i.e., biface tool, scraper, hammerstone). In this region, expedient use of locally available nodules is expected to dominate the assemblage for flake tools, battered implement tools, and some ground stone tools. This assumption was tested and several study topics were formulated for the retrieval of data needed to address this topic.

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Study Topics

Which technological reduction strategies were present based on the debitage at the sites?

- Which reduction strategies were used to produce which tools? Were these strategies the same or different?
- If ground stone tools were present, were the nodule materials local or non-local?
- Was there evidence that ground stone tools were produced at the site, or were they produced elsewhere prior to being carried to the sites?
- How do technologies and stages of tool reduction relate to site function and tools found on the sites?

Data Needs

- Collection of a statistically valid sample of formed artifacts and debitage
- Detailed analysis of formed artifacts and debitage for technological attributes and reduction sequence classification
- Identification of the technological attributes and reduction sequences used to produce tools.

3.3 Subsistence

Study Topics

- Do the sites represent specialized food-processing localities or, conversely, do they represent campsites wherein a wide range of foods were gathered and processed?

Data Needs

Data necessary to address the question of economic strategy include floral and faunal remains, which permit the reconstruction of diet, or dietary practices, and preferences of the site occupants. The presence of particular species of plants, animals, and shellfish allows for a more complete appraisal of the various environmental niches exploited by the site occupants.

Methods for interpreting the data include: 1) protein residue analysis of selected artifacts to identify floral and faunal material processed; 2) speciation of the recovered faunal assemblage, with special attention to evidence of butchering or cooking; and, 3) identification of species within preferred habitats, and the placement of speciated remains within the ecological model for the purpose of reconstructing the habitat(s) exploited by the site occupants.

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Artifacts recovered from the site can also provide inferential information regarding subsistence exploitation. For example, if plant material was not found, the presence of mortars, handstones, and millingstones provides evidence that floral and faunal materials were processed at the site. Immunological studies of residues on tools from the site may provide data relating to both tool use and resources exploited.

3.4 Settlement

In California, ethnographic sources have been used to develop models for prehistoric hunter-gatherer settlement and subsistence patterns. Shipek's model for the Luiseño (Shipek 1977) is one of sedentary villages located between the coast and the mountains in various ecological zones north of the San Dieguito River. True and Waugh (1982) propose a settlement configuration of foraging patterns, with several residential shifts occurring throughout the year. This settlement/subsistence model has been correlated to river drainage systems during the San Luis Rey I period, shifting to a bipolar system of permanent winter camps or villages in the western foothills and permanent summer camps in the mountains during the San Luis Rey II period. Graham's settlement/subsistence model (1981) is a fusion-fission pattern in which residential bases were occupied during the summer and fall months in the mountains for exploitation of acorns and grass seeds, with small groups migrating into the desert during the winter months to exploit legume and cacti resources.

Study Topics

- Temporally, how do these sites fit into the overall pattern for San Diego County? Can the group or culture be identified in the presently understood context of the cultural prehistory for San Diego County?
- What was the function of the sites (i.e., base camp, village, special-use site, or extractive site), and how did these sites relate to other sites?
- What form of settlement pattern was practiced?
- In general, how did occupation and use of these sites contribute to seasonal or year-round occupation of the region?

Data Needs

- Recovery of temporally-sensitive and diagnostic materials, such as organic material for radiometric dating, obsidian for hydration analysis, and time-sensitive artifacts such as pottery, projectile points, and beads

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- Recovery of an adequate artifact sample and cultural material from the sites to determine site functions
- Recovery of ecofacts representing seasonal exploitation (i.e., bird bone, otoliths).

3.5 Trade and Travel

To what extent are trade and travel evidenced at the sites? Early travelers and ethnographers noted the presence of Native American trails and trade activities among different cultural groups in the Southern California region. The procurement of lithic resources, such as serpentine, chalcedony, chert, jasper, obsidian, and steatite, may identify contact with other cultural groups, as these materials were not available in the local area. Although many other trade items were often perishable, what sustaining archaeological evidence can be used to demonstrate trade and/or travel?

Study Topics

- Is there evidence of trading contact or travel?
- What was the nature of cultural contact — continuous, sporadic, or limited?
- What were the inferred routes of trade?
- What economic needs, if any, were met through contact and trade?

Data Needs

- Recovery and analysis of an adequate sample of cultural material, including trade goods such as serpentine, steatite, obsidian, desert lithic material, and beads
- Identification of the source of trade items.

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4 ANALYSIS OF PROJECT EFFECTS

4.1 Methods (with Gallegos and Associates)

This section describes the techniques employed to identify and evaluate archaeological resources within the project area. All methods exceed the Secretary of Interior's guidelines, as do all project personnel for their respective roles. Additionally, all methods were preapproved by the County archaeologist prior to implementation.

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

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

4.1.1 Survey Methods

A Phase I inventory and Phase II significance evaluations for the project were completed by Gallegos and Associates personnel in 2006-2007. Dudek completed supplemental reconnaissance and intensive pedestrian surveys as needed from 2013 to 2016, a resurvey of the APE in 2017, and the evaluation of CA-SDI-5951 in 2017. During the 2017 field season, off-site areas were resurveyed, including the entire Deer Springs Road corridor, sewer improvement areas, and the Interstate 15 interchange area (excluding Caltrans ROW that consisted entirely of engineered fill). The objectives of the cultural resource study were to survey the entire project APE, including the project site and off-site improvement areas, to determine site significance under County of San Diego and CEQA criteria for cultural resources identified within the project area. Testing and field methods included collection of surface artifacts, site mapping, and excavation of shovel test pits (STPs) and 1x1-meter units to determine site size, depth, content, integrity, and significance. Gallegos and Associates project field personnel included Larry Tift, Monica Guerrero, Karen Hovland, Nick Doose, Lucas Piek, Ryan Anderson, Carmen Lucas, and Jo Huval. Mark Mojado (San Luis Rey Band of Luiseño Indians) and Manuel Masiel (Pechanga Band of Luiseño Indians) provided Native

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American monitoring services. Dudek personnel included Dr. Micah Hale, Dr. Mark Basgall, Brad Comeau, Nicholas Hanten, Adam Giacinto, Angela Pham, Matthew DeCarlo, Scott Wolf, Chay Morrissey, Javier Hernandez, Patrick Hadel, Makayla Murillo, Kent Smolik, Thomas Stanley, Victor Herrera, Zach Lefevre, Allana Griffith, and Joshua Cullen; Mr. PJ Stoneburner and Banning Taylor from Saving Sacred Site (San Luis Rey) acted as a tribal monitors for Dudek's supplemental fieldwork.

A total of 2,300 acres was subject to intensive pedestrian survey using transects spaced at 10 m where feasible, prior to the design changes that reduced the project acreage to 1,985 acres. Transects were oriented according to terrain. Excessively steep, densely vegetated slopes were surveyed using targeted methods where surveyors traversed the slope to inspect areas of earthen exposure. The off-site improvement APE was also surveyed intensively with transects oriented according to the alignment.

Ground surface visibility varied from poor to fair throughout the project area, with at least minimal vegetation cover throughout the APE. Disturbances noted during the survey was moderate to substantial, due to historic and modern land uses including farming, clearing/grubbing, bioturbation, erosion and deposition, and construction of roads, buildings, and other such features.

Surveying efforts focused on the identification and recording of historic- and prehistoric-period artifacts, features, and sites. The GPS receiver was uploaded with data that included Project area boundaries, previously identified cultural resources, background aerial photographs, and a data dictionary designed to note attributes necessary for completion of DPR forms 523A through L (DPR 523), as appropriate. Photographs were taken for each site area, artifact concentrations, and features.

DPR records for all newly encountered and revisited sites were filled out and submitted to the SCIC.

A supplemental survey was attempted on January 16 and 17, 2017 at the request of Cami Mojado and Merri Lopez-Keifer from San Luis Rey. The intent of this survey was to update the previous survey conducted by Gallegos and Associates. Less than 300 acres were intensively surveyed due to extremely dense ground cover that created a physical barrier to pedestrian surveyors.

An unmanned aerial vehicle (UAV) was retained to provide 100-percent coverage with a high-resolution camera to identify specific areas of interest to tribal members. The UAV produced coverage with resolution down to 1 cm of the entire project area. No specific areas were identified from the UAV imagery that could be targeted for additional pedestrian survey.

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4.1.2 Test Methods

Shovel Test Pit Excavation

Shovel test pits (STPs), 30 centimeters in diameter, were used to assess site size and depth based on buried deposits. STPs were excavated in 10-centimeter levels, with all soil dry-screened using 1/8-inch hardware mesh. The artifacts and/or ecofacts removed were bagged by STP and by level. Intervals for STPs are 10 to 20 meters across each site. Additional STPs were placed near bedrock milling features and surface artifacts. STPs excavated at site CA-SDI-5951 were 25 x 50 centimeter rectangular units excavated in 20 cm levels.

Unit Excavation

When a subsurface component was identified, one 1x1-meter test unit or one 1 x 0.5 meter shovel test unit (STU) was excavated to determine site content, integrity, and potential to address important research questions. Placement of the unit was determined by either the highest amount of subsurface material or the most likely area to possess subsurface material (based on surface remains, natural features, and STP results). Units were excavated in 10-centimeter levels to sterile; STUs were excavated in 20 centimeter levels. Sterile defines 1 of 3 scenarios: 1) when bedrock is encountered; 2) when excavation of 1 level produces no cultural material; and, 3) when excavation of 2 consecutive levels produces a significant decline in cultural materials. All soil was dry-screened using 1/8-inch hardware mesh screens.

All cultural material collected from each 10-centimeter level was sorted and bagged for laboratory analysis and cataloging. Each bag was marked with the site number, unit number, level, and date of recovery. Field forms were kept on a daily basis and provide information identifying excavator(s), date, location, unit number, level, types and quantities of materials collected, and changes in soil. At least one photograph and one hand-drawn sketch of each unit were provided to show the north sidewall profile, or a profile of the unit wall that offered the best stratigraphic detail.

If features (i.e., fire hearths, rock platforms, artifact caches, rock cairns) were encountered, additional excavation expansion units may have been necessary to expose the feature. Features would be photographed and illustrated, and associated artifacts labeled.

4.1.3 Laboratory Methods

An industry standard system of cleaning, cataloging, and analyzing cultural remains was used for artifacts recovered during this study. These procedures include cleaning and separating artifacts and ecofacts by material class for each unit level prior to cataloging. Each item, or group of items, was counted, weighed and/or measured, and given a consecutive catalogue number

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marked directly on the artifact or on an attached label. Additionally, each item was analyzed for specific characteristics particular to each material class. All cataloged items were divided into typological categories and placed within appropriately labeled boxes prepared for permanent curation at the San Diego Archaeological Center (SDAC).

All artifacts and ecofacts collected were treated using accepted and appropriate archaeological procedures. Initial laboratory work included washing and/or brushing artifacts and cataloging. Artifacts were sorted into classes, such as bifaces, cores, bone tools, beads, milling tools, and flakes. Cataloging provides basic data such as count, measurement, weight, material, condition, and provenience. The catalogue also offers information as to horizontal and vertical distribution of cultural material. Specialized studies were conducted after the initial sorting and cataloging. The number and type of specialized studies completed for this report depends on the materials recovered and the level of research. Studies completed include lithic technological analysis, ceramic analysis, groundstone analysis, and vertebrate and invertebrate faunal analysis.

4.1.4 Disposition of Cultural Materials

All cultural materials excavated or removed from prehistoric or historic sites during testing and/or data recovery programs, along with associated project data, will be permanently curated at a San Diego curation facility or culturally affiliated Tribal curation facility meeting federal standards (36 CFR Part 79). In lieu of curation, the cultural materials may be repatriated to a culturally affiliated tribe. If curation is selected as the method for the disposition of artifacts, then any burial related cultural materials and unless otherwise required by law will be repatriated. Curation includes, but is not limited to, field notes, photographs, catalogues, and final reports. Collections from previous excavations at sites CA-SDI-4558 and CA-SDI-9822 shall be combined with the collections recovered as a result of the current study and any future extended testing and/or data recovery programs. These artifacts and associated documentation are necessary to produce a comprehensive report of finding for sites CA-SDI-4558 and CA-SDI-9822. Additionally, the owner agrees to execute a release of title form and to pay the required curation fees in effect at the time of curation.

4.1.5 Native American Consultation

The County of San Diego contacted the Native American Heritage Commission (NAHC) to request information and/or input regarding Native American concerns either directly or indirectly associated with the Newland Sierra project, as well as names of individuals in the area who should be contacted prior to completion of this study. Those individuals identified by the NAHC have been contacted by letter, and information as to cultural resources within the project area was requested. Additional project notification was conducted through general public distribution

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of the environmental report. Mark Mojado (San Luis Rey Band of Luiseño Indians) and Manuel Masiel (Pechanga Band of Luiseño Indians) provided monitoring services for survey and test excavation fieldwork conducted. The Newland Sierra project design and development impacts including the widening of Deer Springs Road were discussed. All Open Space planning, including use of cultural resources for public interpretation, and/or capping and protection of the resources was discussed with local Native Americans. Several meetings were held with consulting tribes. These included meetings between the County and tribes, and meetings among tribal representatives, the applicant, and Dudek. During these meetings, tribal representatives provided information on the importance of local resources, such as archaeological sites CA-SDI-4558, CA-SDI-9822, which were visited in person with participating tribes (i.e., Pechanga, Rincon, and San Luis Rey), the applicant, Dudek staff, and County staff. Pechanga also provided a region-specific ethnography to the Applicant and County in February 2017. The ethnography provided specific tribal information on the project APE and overall landscape. Records of Tribal correspondence are on file with the County of San Diego and are included in Confidential Appendix E. Both San Luis Rey and Pechanga have been informed that the CEQA statutes that pertain to tribal cultural resources and tribal cultural landscapes (Pub.Res. Code §§ 21074, 21080.3.1, 21080.3.2, 21082.3, and 21084.3) post-date the NOP for this Project and therefore do not apply. Banning Taylor and PJ Stoneburner, representing Saving Sacred Sites, Inc., provided monitoring services during the additional survey and evaluation fieldwork performed by Dudek in 2016 and 2017.

Documentation regarding human remains is included in Confidential Appendix F and the ethnography is included in Confidential Appendix G.

4.2 Results

4.2.1 Survey Results

A pedestrian survey was completed for the entire APE, including approximately 2,300 acres of the initially designed project site, and off-site improvement areas. A total of nine cultural resources (CA-SDI-4370, -4371, -4558, -5639, -5640, -5951, -9253, -9822, and -10747H), one isolate (SDM-W-3880C), and a 1901 historic structure location have been previously identified within the project APE and off-site improvement areas.

The field surveys resulted in the relocation of five previously recorded sites CA-SDI-4558, -5951, -9253, -9822, and -10747H, and the identification of two new sites (CA-SDI-17264 and CA-SDI-17265), and one isolate (P-37-025968) (Figure 4-1, Confidential Appendix B). Four previously recorded sites (CA-SDI-4370, CA-SDI-4371, CA-SDI-5639 and CA-SDI-5640) and the isolate (SDM-W-3880C) were not relocated and are believed to have been destroyed, or are

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located adjacent to but outside of the project area (i.e., CA-SDI-4371). The historic 1901 structure/location was not relocated and appears to have been destroyed; however, there may still be remaining buried foundations and associated features, as historic research identified the historic location within the Dietschy homestead. Two foundations, that appear to date to the 1960s, were identified within and adjacent to site CA-SDI-4558, and one dilapidated structure, believed to be less than 50 years old, was identified at site CA-SDI-10747H.

No additional discoveries were made during the 2017 re-survey attempt, or through the high resolution UAV survey imagery.

Previously Recorded Sites

CA-SDI-4370

Site CA-SDI-4370 was not relocated and appears to have been destroyed by previous grading for housing and ranch development.

CA-SDI-4371

Site CA-SDI-4371 was not relocated within the project area. The site may have been located off-project and to the west; however, it was likely destroyed by construction of a road that now occupies the center of the recorded site area.

CA-SDI-4558

Site CA-SDI-4558 was relocated during the current study, and two additional bedrock milling features were identified. This site appears to be in the same condition as previously reported by Cook et al. (1977). One foundation was identified in the central portion of site CA-SDI-4558 and another foundation was identified adjacent to and north of the site. Both foundations appear to be the remains of residential structures that were previously described by Cook et al. (1977). Disturbance noted includes the construction of Deer Springs Road, construction of houses, paved access roads, grading, agricultural use, bioturbation, and trash dumping.

CA-SDI-5369

Site CA-SDI-5369 was not relocated and appears to have been destroyed as a result of construction of Twin Oaks Valley Road and the San Diego Aqueduct.

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CA-SDI-5640

Site CA-SDI-5640 was not relocated, as it has been destroyed by the development of Twin Oaks Valley Road.

CA-SDI-5951

Site CA-SDI-5951 was not relocated during the original survey, but was subsequently relocated during the re-survey of Deer Springs Road. The site's location was correctly mapped in the site record, but was translocated at some point in the information center's records. CA-SDI-5951 is a habitation site with bedrock milling, midden soil, and a variety of artifact classes situated on a series of ridges/knolls dissected by narrow, steep drainages. It is currently in the same general condition as described in the original site record. Notable disturbances include Deer Springs road to the south, rodent burrows, the cleared area to the east of the site, which involved pushing boulders into the eastern portion of the site, and vegetation clearing/excavation related to installation of a utility pole in the center of the site.

CA-SDI-9253

Site CA-SDI-9253 was relocated during the current survey. Four bedrock milling features and debitage were noted. A portion of the site has been impacted by the construction of a post-1930s homestead (see site CA-SDI-10747H); however the majority of the site appears to be in good condition.

CA-SDI-9822

Site CA-SDI-9822 was relocated during the current survey. Bedrock milling features and the rock with the pictograph were relocated. Surface artifacts noted included debitage, pottery, a ceramic pipe fragment, and burned bone. No artifacts were collected. Rodent disturbance, modern trash dumping, and foot traffic were also noted. A protective fence installed by Palomar Community College is still in place around most of the site area; however, the fence has been partially torn down along Deer Springs Road. The southern portion of site CA-SDI-9822, north of Deer Springs Road, is currently eroding into the road.

CA-SDI-10747H

Site CA-SDI-10747H is located adjacent to site CA-SDI-9253, and includes the remains of a house, a collapsed wood structure, and a rock and mortar hearth/chimney structure. Disturbance at the site includes foot traffic on the adjacent trail, minor trash dumping, and some off-road vehicle activity.

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1901 Historic Structure Location

The historic structure/location identified on the 1901 Escondido and San Luis Rey USGS maps was not relocated and appears to have been destroyed; however, buried foundations and associated features may still be present. Historic research identified the historic location within the Dietschy homestead. Disturbance at the historic location includes foot traffic on the adjacent trail, minor modern trash dumping, and some off-road vehicle activity.

Newly Recorded Sites

CA-SDI-17264

Site CA-SDI-17264 consists of a light lithic scatter located in the southwest portion of the project area. This site consists of a single bifacial handstone and debitage within a dirt road. Because of the dense vegetation the site boundary is unknown.

CA-SDI-17265

Site CA-SDI-17265 consists of a single bedrock milling feature located in the west portion of the project area, within a flat valley. The single milling feature consists of a large slick, approximately 60x30 centimeters in area. No surface artifacts were noted. Disturbance noted included off-road vehicle activity adjacent to the site.

P-37-025968

Isolate P-37-025968 was located within the northeast off-site improvement area. This isolate is a single piece of debitage, which was collected. No features or additional artifacts were noted.

Reconnaissance Survey

A reconnaissance survey was conducted in 2013 and 2014 to revisit the locations of previously recorded archaeological sites, including those relocated by the initial survey, and those that were not relocated. The reconnaissance survey did not result in the identification of newly discovered resources and generally confirmed the location and condition of archaeological sites relocated by the initial survey. However, the reconnaissance survey resulted in the observation that illicit artifact prospecting is occurring at CA-SDI-4558 and CA-SDI-9822, based on recent excavation holes. Additionally, cultural materials at both of these resources are currently eroding into the public road right of way.

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4.2.2 Archaeological Evaluation Results

4.2.2.1 CA-SDI-4558 (Caltrans Site)

Site CA-SDI-4558 was originally recorded by Malcolm Rogers and was updated by Kearns in 1971 for the Interstate 15 project. Kearns described the site as an occupation site consisting of millingstones, handstones, flakes, and core and cobble tools. In 1977, a test program was conducted for site CA-SDI-4558 for the Department of Transportation (Cook et al. 1977). A total of thirty-five 1x1-meter units were excavated, producing large points, handstones, battered implements, debitage, and marine shell (Figure 4-2, Confidential Appendix B; Table 4-1). In addition, two possible hearth features were exposed during the test program. Disturbances noted at the time of the original test program included the destruction of the southern portion of the site by the construction of Deer Springs Road; the construction of a paved access road and horse corrals across the eastern portion of the site; removal of top soil at the far east portion of the site; the construction of two houses; and previous agriculture use. Cook et al. (1977) stated that even with this amount of disturbance, a substantial cultural deposit (130-centimeter depth) was present at the site. In 1977, site CA-SDI-4558 was recommended and accepted as eligible for placement on the National Register of Historic Places (White 2005).

Site CA-SDI-4558 has not been updated since 1971, and a formal report of finding for the test program for CA-SDI-4558 was never submitted to the South Coastal Information Center. As the 1977 (Cook et al. 1977) test program did not fully address site size, supplemental testing of site CA-SDI-4558 was necessary. The purpose of the current test program was to define the primary site area, and to determine site depth, content, integrity, and site boundary.

Table 4-1
CA-SDI-4558 Cultural Material Recovered by Cook et al. (1977)

Cultural Material	Surface	Units	Features	Total
Abrader	0	1	0	1
Anvil	0	0	1	1
Blade	0	1	0	1
Chopper	0	1	1	2
Core	1	35	2	38
Core/Hammer	0	3	0	3
Crystal	0	1	0	2
Debitage	1	4354	1	4356
Flake Tool	0	33	3	36
Groundstone	0	11	6	16
Hammer	0	9	3	12
Handstone	1	34	23	58

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Table 4-1
CA-SDI-4558 Cultural Material Recovered by Cook et al. (1977)

Cultural Material	Surface	Units	Features	Total
Handstone/Pestle	0	0	1	1
Millingstone	0	6	6	12
Ceramics	0	5	0	5
Ochre	0	10	0	10
Pestle	0	1	0	1
Biface	2	3	0	5
Scraper	0	7	1	8
Antler	0	3	0	3
Bone Tool	0	8	0	8
Polished Bone	0	9	0	9
Shaped bone	0	2	0	2
Total	5	4537	48	4590
Bone* (g)	0	549.2	0	549.2
Shell* (g)	0	0.4	0	0.4

NOTE: * Weight in Grams; total does not include faunal bone or shell

CA-SDI-4558 Test Results

Archaeological testing for the current project included excavation of 24 STPs; documentation of bedrock milling features; relocation of the site boundary; examination of the 1977 fieldwork notes, maps, and artifact catalogue; and artifact cataloguing and analysis for the current test program (Figure 4-3, Confidential Appendix B). The 24 STPs were placed in both north–south and east–west directions across the site and in areas tested by Cook in 1977. A total of 18 STPs were positive, producing 1 biface, 75 debitage, 2 groundstone fragments, and 3.8 grams of bone (Table 4-2 and Confidential Appendix C). Rodent disturbance and modern trash dumping were noted throughout the site. Two foundations were identified within and adjacent to site CA-SDI-4558. Both foundations appear to be the remnants of residential structures; however, based on previous work (Cook et al. 1977), the structures are dated post 1947.

Table 4-2
Results of 2007 Test Excavations at CA-SDI-4558 for the Current Project

STP	Cultural Material			Total	Bone (g)
	<i>Biface</i>	<i>Debitage</i>	<i>Groundstone</i>		
3	0	2	0	2	0
4	0	1	0	1	0
5	0	1	0	1	0
7	0	5	0	5	0.1

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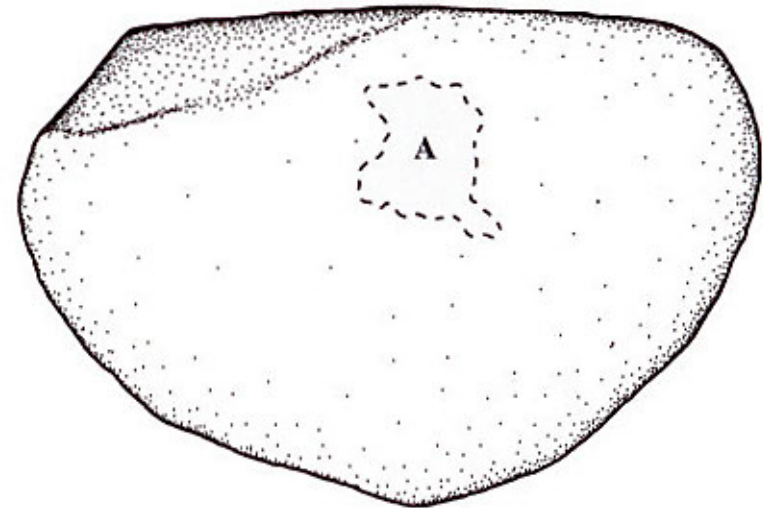
Table 4-2
Results of 2007 Test Excavations at CA-SDI-4558 for the Current Project

STP	Cultural Material			Total	Bone (g)
	<i>Biface</i>	<i>Debitage</i>	<i>Groundstone</i>		
8	0	1	0	1	0
9	0	7	0	7	0.1
11	1	5	0	6	0.3
12	0	5	0	5	0.5
13	0	4	0	4	0
14	0	13	0	13	0
15	0	2	0	2	0
16	0	3	1	4	1.9
17	0	4	0	4	0.9
18	0	4	0	4	0
19	0	4	0	4	0
21	0	2	0	2	0
23	0	6	1	7	0
24	0	6	0	6	0
Total	1	75	2	78	3.8

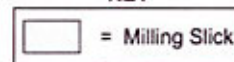
Two bedrock milling features (BRM) were identified during the current study. BRM-1 is located on a flat sloping boulder in the central portion of the site, southwest of the house foundation (Figure 4-4). BRM-2 is located on a flat sloping boulder in the central portion of the site, south of the house foundation (Figure 4-5). Both bedrock milling features exhibit heavy weathering and portions of the milling elements have exfoliated.

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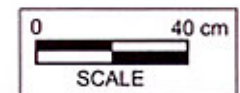
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KEY



A. = slick (40cm N/Sx40cm E/W)

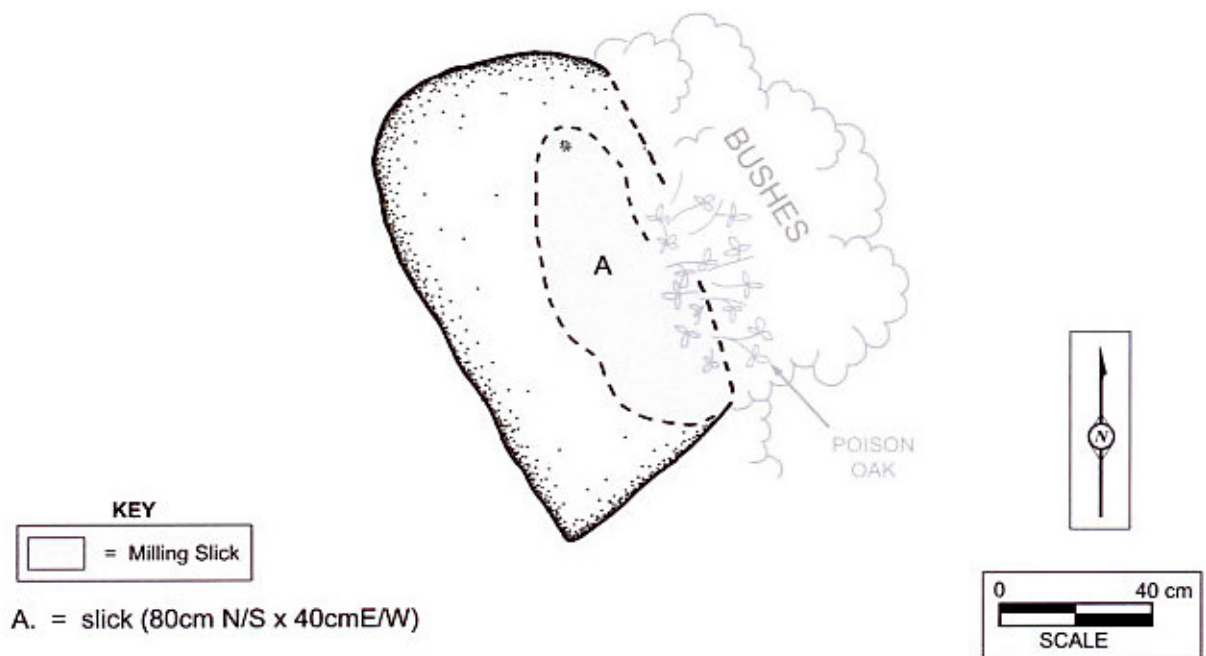


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Photograph of Bedrock Milling Feature 2: Facing East



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CA-SDI-4558 Lithic Analysis (with Tracy Stropes)

The technological identification of all debitage sampled was based on work by Flenniken (1981 and 1985) for analysis and interpretation. Technological lithic analysis based upon replicative data was conducted for all flaked stone artifacts recovered as a result of the subsurface site boundary assessment for CA-SDI-4558. Technological identifications were ascertained for all lithic artifacts recovered from the 18 positive STPs. All lithic artifacts were also examined on the basis of raw material types and reduction stage categories (Confidential Appendix C).

All debitage recovered from the 18 positive STPs was analyzed, identified, and assigned to specific technological categories and stages. Technologically diagnostic debitage was assigned to a specific reduction category, and served as the basis for interpretation of lithic technology. Preliminary analyses indicate that artifacts recovered from the site are intra-site similar in technological character. As such, the sample of the entire excavated assemblage is considered homogenous. As no technological change was identified either horizontally through the site or vertically across the site, all artifacts from the site were combined for the purpose of interpretation of the site's lithic technology. The assemblage is composed of primarily two reduction technologies including nodule core reduction, and, to a lesser extent, biface reduction. As stated previously, these reduction technologies may be part of the same continuum, as flakes from nodule core reduction may have been used as flake blanks for flake-based biface production.

All formed artifacts and debitage were combined for the purpose of analysis. Out of 75 debitage, 36% (n=27) were technologically diagnostic (Tables 4-3 and 4-4) of two different reduction technologies, while 64% (n=48) were technologically undiagnostic (Table 4-5). Only three lithic toolstone materials were represented in the CA-SDI-4558 assemblage (including both technologically diagnostic and undiagnostic debitage). These materials include 59 metavolcanic, 10 quartz, and 6 Piedra del Lumbre (PDL) chert.

The most common reduction technology identified in the assemblage was nodule core reduction. Fifteen (93.2%) of the technologically diagnostic debitage supported nodule core reduction (see Table 4-3). Two nodule core platform types were represented at CA-SDI-4558. Single-facet platform debitage was represented by ten flakes and multi-faceted platform debitage by five flakes. These two platform configurations suggest two different platform preparations on cores.

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Table 4-3
CA-SDI-4558 Diagnostic Nodule Core Debitage by Material

Nodule Core Reduction	Material		Total
	<i>Metavolcanic</i>	<i>Quartz</i>	
Single Facet Platform			
SFP-10	1	0	1
SFP-11	7	2	9
Subtotal	8	2	10
%	53.3	13.3	66.7
Multi-Faceted Platform			
MFP-6	1	0	1
MFP-11	3	1	4
Subtotal	4	1	5
%	26.7	6.7	33.3
Total	12	3	15
% Diagnostic Debitage	80	20	100

The most frequently occurring single-facet platformdebitage category was SFP-11 (n=7). While flakes in this category are ideal flake blanks, these specific flakes were broken or were too small for use. The most common (n=4) multi-faceted platformdebitage category was MFP-11. As with single-facet platform cores, this flake category comprises ideal flake blanks, but the specific flakes from CA-SDI-4558 were broken or were too small for use and likely discarded.

Table 4-4
CA-SDI-4558 Diagnostic Biface Debitage by Material

Biface Debitage	Material			Total
	<i>Metavolcanic</i>	<i>Quartz</i>	<i>PDL</i>	
302.E-	1	0	0	1
303.E+	1	0	0	1
305.L+	3	0	0	3
400.E-	1	1	2	4
402.L-	0	0	3	3
Total	6	1	5	12
%	50	8.3	41.7	100

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Table 4-5
CA-SDI-4558 Undiagnostic Debitage by Material

Undiagnostic Flake Fragments	Material			Total
	<i>Metavolcanic</i>	<i>Quartz</i>	<i>PDL</i>	
Uw/icc	1	1	0	2
Uwo/c	40	5	1	46
Total	41	6	1	48
%	85.4	12.5	2.1	100

Biface reductiondebitage was divided into five reduction-oriented technological categories (as defined by Flenniken and Stropes 2002) that were, in turn, employed to define the reduction sequences used at CA-SDI-4558. These include core reduction (Category 1), edge preparation (Category 2), percussion bifacial thinning (Category 3), pressure bifacial thinning (Category 4), and undiagnostic fragments (Category 5). However, in the present assemblage no Category 1 bifacial reductiondebitage was identified. The following technological definitions have been offered by Flenniken and Stropes (2002) for the previously mentioned bifacial technological categories:

1. Core reduction, that is, primary decorticationdebitage segregated on the basis of approximately 100% cortex on the dorsal surface and platform configuration; secondary decorticationdebitage separated based upon partial dorsal cortex and platform type; and interiordebitage categorized by platform attributes, dorsal arris count and direction, flake cross/long-section configuration, and especially, absence of dorsal cortex;
2. Edge preparation, that is, bifacial reductiondebitage classified on the basis of multi-faceted platform configuration and location, location of remnant bulb of force, dorsal arris count and direction, flake termination, flake cross/long-section orientation, and presence or absence of detachment scar;
3. Percussion bifacial thinning, that is,debitage segregated on the basis of multi-faceted platform configuration, size, lipping, and location, dorsal arris count and direction, flake termination, cross/long-section orientation, and presence or absence of detachment scar;
4. Pressure bifacial thinning, that is,debitage separated on the basis of multi-faceted platform configuration and location, dorsal arris count and direction, flake termination, platform-to-long axis geometry, cross/long-section orientation, and presence or absence of detachment scar (Confidential Appendix C); and,
5. Undiagnostic fragments, that is, potlids (995.PL), bipolar shatter (996.SH), and flake fragments, with cortex (including type [997.UP and 998.UI]) or without cortex (999.UN).

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A limited number (n=12) of technologically diagnostic flakes were identified as biface reduction debitage from the present sample (see Table 4-3). Two flakes were early percussion bifacial thinning flakes (302.E-, 303.E+), while three were late stage percussion bifacial thinning flake (305.L+). In addition, four early (400.E-) and three late stage (402.L-) pressure flakes were identified within the technologically diagnostic portion of the assemblage. The presence of these technological categories suggests bifacial tools were thinned and/or resharpened by percussion and pressure at CA-SDI-4558.

A total of 48 technologically undiagnostic flake fragments were also identified from this assemblage (see Table 4-5). Only 2 fragments possessed cortex (Uw/icc), while 46 were cortex-free (Uwo/c). The cortex noted on these flakes includes only flakes with incipient cone cortex common on local lithic materials. The overall lack of cortex on debitage across the site suggests that the cores used to produce flakes at CA-SDI-4558 had been prepared (decorticated and shaped) at another location.

Excavations at CA-SDI-4558 for the current project resulted in the recovery of one biface. The single quartz biface fragment was recovered from STP 11 at the 10-20-centimeter level. The biface is an early stage bifacial preform that likely fractured during manufacture. This is evidenced by the presence of bending fracture near the medial section of the biface. Bending fractures most commonly occur when the objective piece is not supported properly during the percussion stages of bifacial shaping. As is to be expected, the biface was likely abandoned at this juncture, as no evidence of further reduction beyond the bending fracture is apparent (i.e., early/late stage pressure flaking). The specimen measures 29.1x25.5x9.2 millimeters with a weight of 7.4 grams. Although the final intended use for the specimen is unknown, the biface falls within the weight range of bifaces produced for most dart points (>3.5g).

Nodule core reduction technology is the most common technology identified in the lithic sample from CA-SDI-4558. Products of nodule core reduction are the most abundant in the site as measured by percent of technologically diagnostic flakes. This simple and expedient technology was so commonly used because of the local abundance of nodule metavolcanic materials. Furthermore, this technology provided a simple and relatively effortless method to produce useful flake blanks intended for further reduction. Variability among the analyzed assemblages can be studied at two scales, individual artifacts and artifact assemblages, and this variability is explained by several factors: the shape and size of raw material packages, stages of reduction, and site specific knapping activities.

Pebbles, cobbles, and, to a lesser extent, boulders were selected for size, shape, material quality, and platform location. Nodules with natural platforms were reduced directly by percussion in a circular manner around the natural platform. The location of dorsal cortex indicates the sequence

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of flake removals (Confidential Appendix C). Cores with faceted platforms are nodules that required platform preparation prior to reduction. This occurred usually when a nodule of high quality material was selected, but the nodule did not possess a suitably shaped platform. It was, therefore, necessary to create a functional platform by percussion flaking. The desired products of nodule core reduction were flake blanks that were thin in cross-section, long and narrow in plan view, and effectively range from 4 to 10 centimeters in length.

Debitage produced from nodule core reduction (i.e., natural platform cores, single-facet cores) was classified according to the pattern of dorsal cortex present (if any), and platform attributes. Dorsal cortex attributes provide clues concerning two processes: (1) stage of reduction, and (2) patterning of flake removals. Generally, the amount of cortex will decrease through the reduction sequence. Flakes with 100% dorsal cortex (NP/SFP/MFP-1s), therefore, usually result from earlier portions of the sequence, while flakes with no dorsal cortex (NP/SFP/MFP-11s) result from the latter portions of the sequence. The abundance of flakes that lack dorsal cortex is explained by the fact that once cortex is removed from a nodule, perhaps early in the reduction sequence, all subsequent flakes will no longer have dorsal cortex. The positioning of dorsal cortex results from the patterning of flake removals (clockwise, counterclockwise, or unpatterned in relation to the platform). The analysis of the CA-SDI-4558 assemblage revealed no meaningful patterns regarding the sequence of flake removals. In other words, cores were not consistently reduced in a clockwise sequence, but instead were probably reduced in whatever manner made sense considering the shape of a given nodule.

Another aspect of variability seen in the nodule core reductiondebitage assemblage relates to platform characteristics. This variability also appears to result purely from technological considerations rather than, for instance, a “mental template” to which might be attached some chronological or ethnic significance. Three types of platforms are found (unprepared/natural/cortical, single-facet, and multi-faceted), and they vary in part according to the amount of shaping required to obtain a suitable platform configuration for successful flake removals (a uniform platform surface and adequate platform angle). Some nodules required no shaping (natural platforms) to obtain a proper platform configuration; others required more (multi-faceted platforms) or less (single-facet platforms) shaping. It is expected that these different platform types could have been produced within a single reduction sequence as a result of adjustments made in response to the changing shape of the core as it was reduced. This is supported by the highest frequencies of “late stage”debitage (NP/SFP/MFP-11s) that occur in combination with faceted platforms.

Another source of inter-site variation may result from initial nodule core reduction conducted at one site, and then transported and later reduced at a second location or site. It appears that cores were not always entirely reduced at a single location; instead, initial shaping may have been

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performed at one site and subsequent core reduction performed at another. This is indicated by the minimal number of early reduction stage flakes and the higher frequency of late reduction stage flakes recovered from CA-SDI-4558. Alternatively, this pattern could be explained as a result of sampling bias resulting from incomplete or non-representative artifact collection.

Intended end products of this technology (flake blanks and flake tools) were likely transported for use or further reduction outside of the study area, since the most useful blanks (NP/SFP/MFP-11s) were absent from the analyzed collection, and, when present, were broken or too small to have served as useful tool blanks.

Biface reduction is not well represented at this site. The biface reduction debitage sample consisted of 12 flakes previously discussed in Section 4.2.2. One biface fragment was recovered from the present excavations that supports the manufacture of bifacial tools at CA-SDI-4558. This sample is small, however, and does not lend itself to a lengthy discussion concerning the employment of biface technology at the site.

Overall, nodules of primarily fined-grained metavolcanic materials were selected for direct free-hand percussion core reduction. All of these nodules were reduced with either single-facet or multi-faceted platforms. This suggests nodules were selected and prepared outside of the present site area. A single pattern of flake removal could not be identified within the present core reduction techniques. Interestingly, sizeable, useable flakes without dorsal surface cortex were not noted in this assemblage, suggesting these flakes were produced at CA-SDI-4558, but transported elsewhere. Nodule core reduction is the most commonly occurring technique noted at CA-SDI-4558. Biface reduction was poorly represented at CA-SDI-4558, as evidenced by the presence of 12 biface reduction thinning flakes. These flakes, as well as the biface fragment, suggest bifaces were at least partially thinned and possibly used at CA-SDI-4558.

CA-SDI-4558 Groundstone Analysis

All groundstone materials recovered during the current evaluation were selected for analysis and interpretation. Groundstone tools are associated with the processing/milling of plants, seeds, nuts (i.e., acorns, walnuts, holly leaf cherry), and the processing of small mammals. In addition, ethnographic evidence indicates that bone, clay, and pigments may also have been processed with the same tools (Gayton 1929; Kroeber 1925; Spier 1978). Implements of this type may be identified by the pattern of wear developed through milling stone against stone. This process often results in a smooth and/or polished surface, depending on the substance ground and the lithic material type. Often these surfaces are pecked or resharpened when ground too smooth. These implements are sometimes shaped into a desired form by pecking, grinding, or flaking. Thus, tool identification is based on the presence of ground or smooth surfaces, pecked or

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resharpened surfaces, and evidence of shaping of the tool form. Groundstone tools are generally separated into five groups: handstones (handstones), millingstones (millingstones), pestles, mortar/bowls and unidentifiable groundstone fragments. Unidentifiable groundstone is defined herein as a fragment of lithic material with a minimum of a single ground surface, but with no technologically identifiable characteristics to indicate tool form. The two groundstone fragments recovered have some grinding, but lack any defining attributes that would facilitate tool identification. Each of the fragmentary pieces of granitic groundstone is thermally damaged. The lithic material used for groundstone was locally available.

CA-SDI-4558 Vertebrate Faunal Analysis

The 3.8 grams of bone fragments recovered from CA-SDI-4558 lack the morphological features that allow them to be identified to a taxonomic category greater than their class. The present specimens are representative of primarily small to medium size mammals. The category of small mammals (2.2 grams of the collection) roughly equates to all non-diagnostic vertebrate fragments, whose sizes are between a mouse and a jackrabbit. Those fragments defined as medium size mammal (1.6 grams of the collection) roughly equate to non-diagnostic vertebrate fragments, whose sizes are larger than a jackrabbit, but smaller than a deer. Evidence of burning was present on only a small portion of the collection. This may represent bone that was burned during preparation or may also be the result of having been discarded in a fire hearth (Wing and Brown 1979).

CA-SDI-4558 Summary

Testing at CA-SDI-4558 by Cook et al. (1977) and for the current project recovered a wide range of artifacts to include cobble and flake tools, bifaces, milling tools, bone tools, a crystal, ceramics, shell, and bone. Disturbances observed at CA-SDI-4558 include construction of roads and houses, grading, agriculture use, modern trash dumping, and rodent disturbance. Flake production from locally available nodules suggests flake tool use and/or biface production. Most likely, these tools were manufactured and used at the site, then transported elsewhere for use where stone tool materials may not have been as readily accessible. This site is identified as an Early Period habitation site with a light Late Period component. A wide range of activities were probably conducted including hunting and collection and processing of plants and seeds, as represented by the biface and groundstone tool fragments. The presence of bone and shell identifies the exploitation of small to medium mammals and demonstrates the variety of foods collected, hunted, and processed.

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4.2.2.2 CA-SDI-9253

Site CA-SDI-9253 was originally recorded by Heuett (1982) as multiple bedrock milling features consisting of several slicks. Cardenas (1986a) updated the site for the Sycamore Ridge project and extended the site boundary to approximately 159x55-meter in area. The 1986 update described site CA-SDI-9253 as a temporary camp consisting of rock shelters, bedrock milling features, debitage, and a midden deposit. The west portion of the site has been impacted by the construction of a post-1930s homestead (see site CA-SDI-10747H).

CA-SDI-9253 Test Results

Site CA-SDI-9253 was tested for the current project to determine site significance. It should be noted that the reported rock shelter consisted of a natural rock overhang in a drainage with no evidence of occupation. Testing included collection of surface artifacts, excavation of 13 STPs and one 1x1-meter test unit, and artifact cataloguing and analysis (Figure 4-6, Confidential Appendix B and Table 4-6). Cultural material recovered from the test program included 15 debitage and 1.2 grams of bone. Disturbance at the site included some light foot traffic, off-road vehicle activity, and rodents.

Table 4-6
Cultural Material Recovered from CA-SDI-9253

Cultural Material	Surface	Unit 1	Total
Debitage	2	13	15
Bone (g)	0	1.2	1.2

Cultural material recovered from the surface of CA-SDI-9253 included two debitage (see Table 4-6).

Thirteen shovel test pits (STPs) were excavated to determine the presence or absence of subsurface materials and extent of the subsurface deposit (see Figure 4-6). STP excavation resulted in 13 negative STPs.

One 1x1-meter unit was placed in a flat area adjacent to BRM-1 and BRM-2. Soil stratigraphy included loose, brown sandy gravelly loam with a high organic content from the unit surface to approximately 5 to 10 centimeters subsurface (Figure 4-7). From approximately 10 centimeters to approximately 78 centimeters, soil was brown, lightly compacted, sandy gravelly loam, becoming increasingly rocky (sub-angular, granite clasts) from approximately 50 centimeters to depth. A number of larger roots (to 1 inch diameter) were also noted from 50 centimeters to depth. At approximately 78 to 80 centimeters, soil changed to light brown, compacted, gravelly,

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decomposing granite and the unit was terminated. Cultural material recovered from Unit 1 included 13 debitage and 1.2 grams of bone (see Table 4-6).

Four bedrock milling features were identified during the current study. BRM-1 (three basins, one slick) and BRM-2 (one slick) are located on separate flat sloping boulders in the central portion of the site, southeast of the house foundation (Figures 4-8 and 4-9). BRM-3 (one slick) is located adjacent to a dirt road, between STP 2 and STP 10. BRM-4 (four basins, four slicks) is located northwest of STP 6 (Figures 4-10 and 4-11). All milling features exhibit heavy weathering and portions of the milling elements have exfoliated.

CA-SDI-9253 Lithic Analysis (with Tracy Stropes)

The artifact assemblage from CA-SDI-9253 consists of a narrow range of artifact types including 15 debitage and 1.2 grams of bone (see Table 4-6). All 15 debitage are of metavolcanic material.

Lithic analysis based on replicative data was conducted for the debitage recovered from CA-SDI-9253. The technological identification of all debitage was based on work by Flenniken (1981 and 1985) for analysis and interpretation. All materials were recovered from Unit 1 and the surface collection, and were selected for technological analysis. Eight of the specimens are non-diagnostic flake fragments. The sample of technologically diagnostic debitage comprises the remainder of the overall sample (n=5). Of the diagnostic sample, nodule core reduction comprises 100% of the sample. It is likely that because of the small size of the present sample and the small amount of cortical debitage, the collection represents the maintenance and/or minimal reduction of a prepared nodule core(s).

CA-SDI-9253 Vertebrate Faunal Analysis

A total of 1.2 grams of vertebrate faunal remains were recovered from excavations at CA-SDI-9253. The bone fragments were small, unburned, and primarily unidentifiable. The bone may represent local fauna (avian), not associated with the site occupation activities. The paucity of bone may be attributed to site type activity (i.e., non-hunting), or poor preservation conditions at CA-SDI-9253.

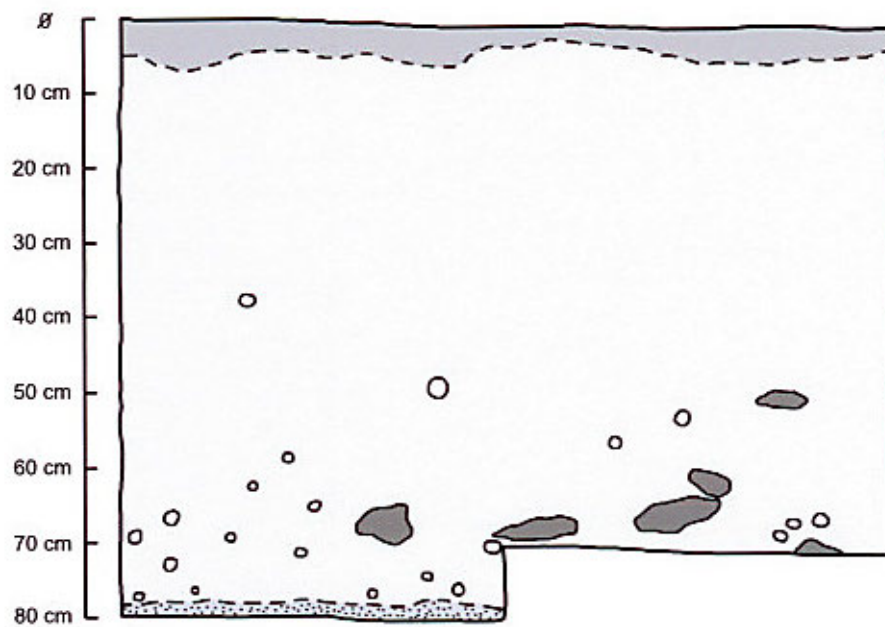
CA-SDI-9253 Summary

Testing at CA-SDI-9253 included the excavation of 13 STPs and one 1x1-meter unit, producing 15 debitage and 1.2 grams of bone. Disturbance from both bioturbation and organic materials was noted. A small amount of nodule core reduction activities may be apparent within the lithic assemblage. However, lithic reduction activities completed at the site were minimal. The present sample is too small to make any definitive statements concerning the past activities of the inhabitants of CA-SDI-9253, other than situational vegetal processing and related tasks.

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CA-SDI-9253; Unit 1



KEY

- = loose, brown, sandy gravelly loam with high organic content
- = lightly compacted, brown, sandy gravelly loam
- = highly compacted, light brown, gravelly decomposing granite
- = larger, subangular granite clasts
- = large roots

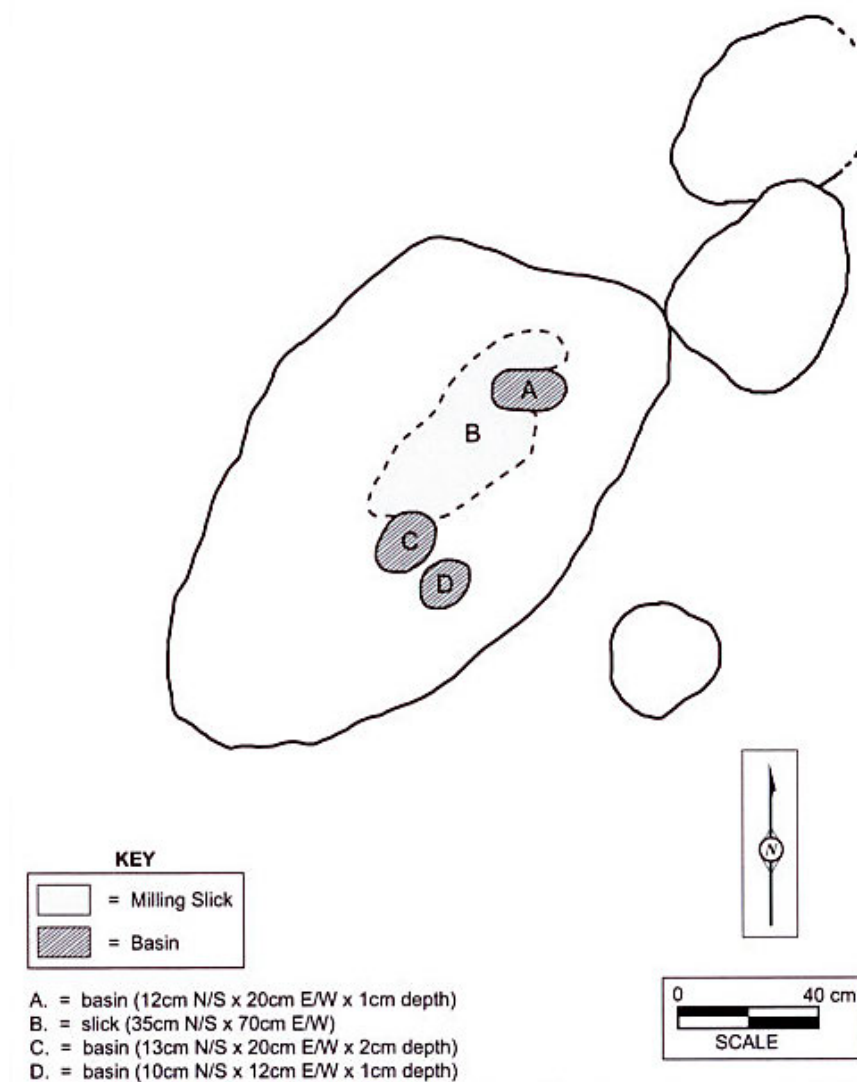
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Bedrock Milling Feature 1: Facing Northeast

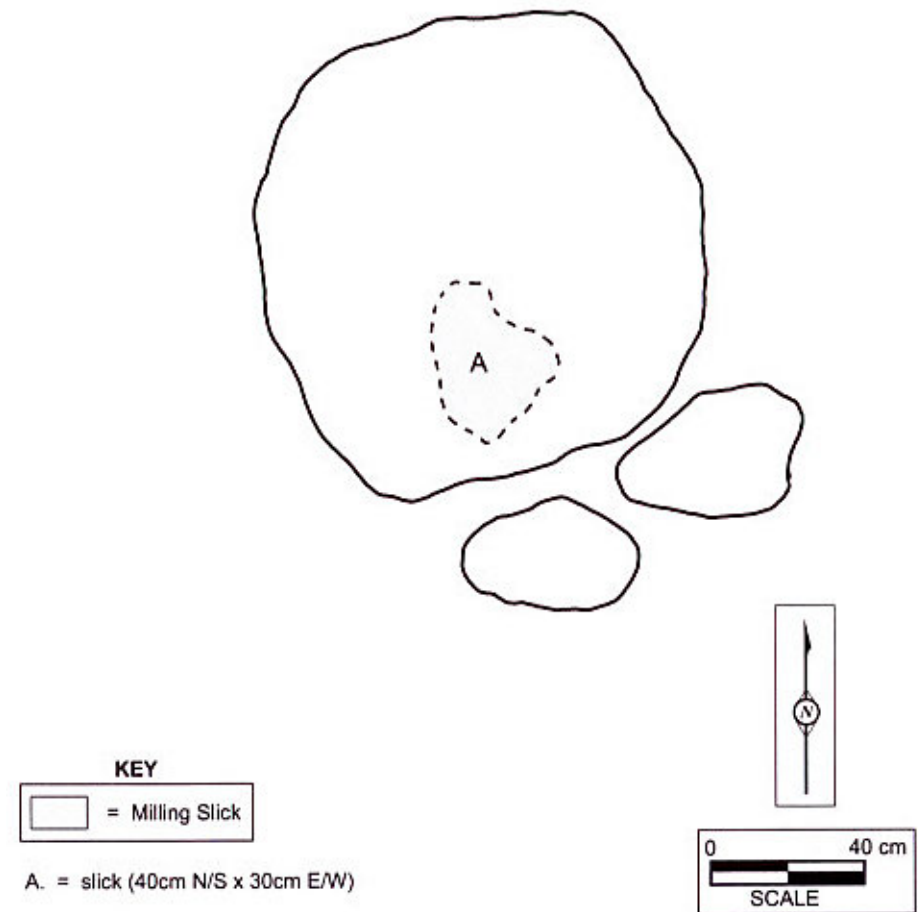


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Bedrock Milling Feature 2: Facing Southwest

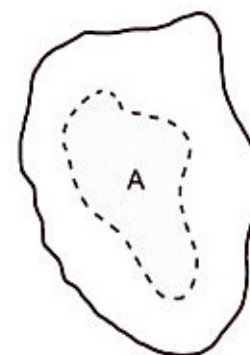


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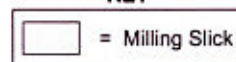
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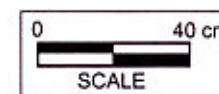
Bedrock Milling Feature 3: Facing East



KEY



A. = slick (60cm N/S x 30cm E/W)

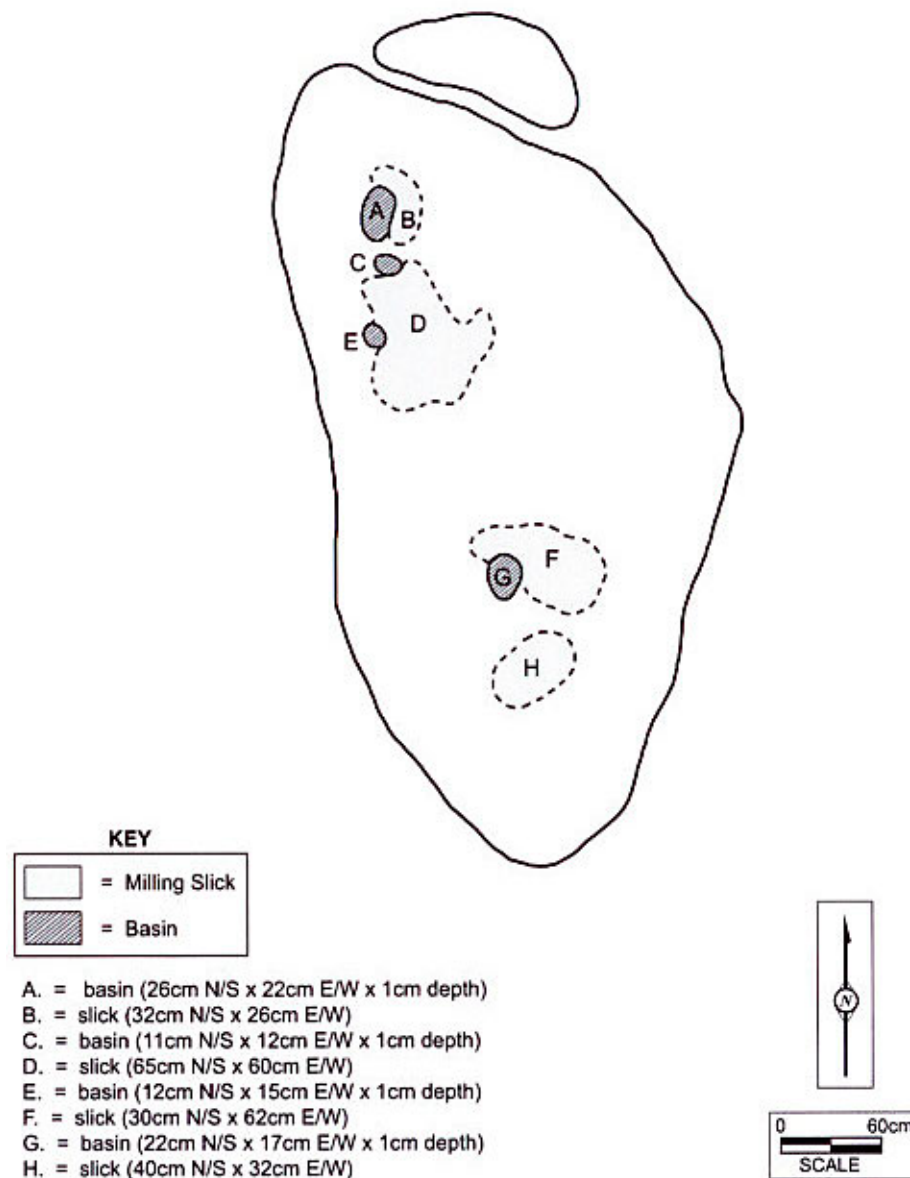


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Bedrock Milling Feature 4: Facing South



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4.2.2.3 CA-SDI-9822

Site CA-SDI-9822 (SDM-W-223-A) was originally recorded by Rogers (n.d.) as a habitation site, consisting of a dark midden, flakes, handstone fragments, a large amount of shell, and bedrock milling features. The southern portion of site CA-SDI-9822 has been highly disturbed by the construction of Deer Springs Road; however, an intact cultural deposit is present south of the road. CA-SDI-9822 was updated by Hedges (1977), and a heavily weathered and exfoliated red pictograph feature was identified on a rock face, situated in the northwest portion of the site. In 1990, the site was again updated by Crull (1990b). Palomar Community College conducted a field school from 1980 to 1989 under the direction of Dennis O'Neill. Approximately forty 1x2-meter test units, with an average depth of 120 centimeters, were excavated, and as a result, an extensive collection of over 80,000 primarily Late Period artifacts, including arrow points; pottery; ceramic pipe fragments; bone tools; milling tools; beads (bone, shell, stone, and glass); arrow shaft straighteners; stone tools for cutting, chopping, and scraping; obsidian; shell; bone; and cremations were recovered (Figure 4-12 and Table 4-7). Despite these efforts, the only written report on this site is the M.A. thesis on the faunal assemblage by Quintero (1987). Also, the site is reported (White and White n.d.) to have been radiocarbon dated to 540±60 years B.P.; however, no documentation was found to confirm the radiocarbon date.

During a field class survey, Palomar Community College students Diehl and Brown (1986) updated the site record for CA-SDI-9822; however, the site form update was never submitted to the SCIC. Ten bedrock milling features were recorded by Diehl and Brown (1986). One bedrock milling feature, ceramics, and shell were reported south of Deer Springs Road. The southern portion of the site has been impacted by the construction of Deer Springs Road and a trailer park south of Deer Springs Road. Crull (1990b) reported that the habitation area and milling features north of Deer Springs Road are protected by a chain-link fence; however, additional milling features, the pictograph feature, and surface artifacts are located outside of the fence.

Table 4-7
Cultural Material Recovered from CA-SDI-9822 During Previous Work

Cultural Material	Surface	1x2 m Units	Total*
Bone Awl	0	100	100
Bone Bead	0	14	14
Bone Hairpin	0	1	1
Bone Ornament	0	238	238
Bone Pipe	0	1	1
Bone Tool	1	18	19
Biface	0	16	16
Projectile Point	13	444	457

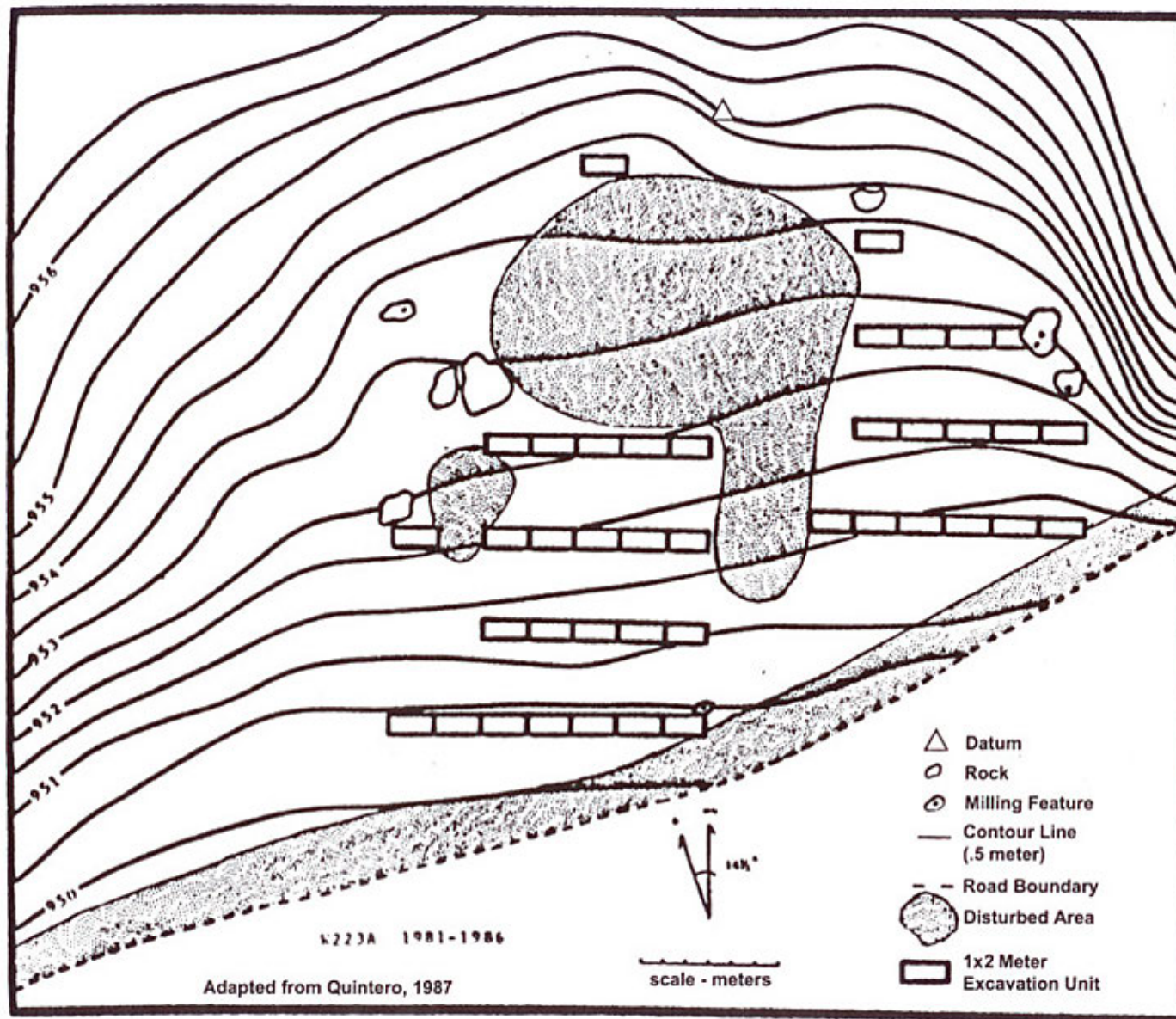
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Table 4-7
Cultural Material Recovered from CA-SDI-9822 During Previous Work

Cultural Material	Surface	1x2 m Units	Total*
Knife	8	69	77
Crescent	0	1	1
Uniface	1	0	1
Chopper	1	22	23
Scraper	13	374	387
Core/Hammer	0	1	1
Core	1	342	343
Multipurpose Stone Tool	0	3	3
Stone Awl	0	2	2
Retouched Flake	0	2	2
Utilized Flake	13	523	536
Flake Tool	0	15	15
Debitage	984	62713	63697
Stone Ornament	0	3	3
Stone Bead	0	29	29
Pounder	0	1	1
Hammerstone	1	10	11
Hammer/Grinding	0	21	21
Abrader	0	6	6
Arrow Shaft Straightener	0	4	4
Handstone	10	104	114
Pestle	2	10	12
Millingstone	5	39	44
Miscellaneous Groundstone	3	34	37
Ceramic Sherds	10609	8192	18801
Ceramic Pipe	1	33	34
Shell Bead	5	3327	3332
Shell Ornament	0	23	23
Glass Bead	0	116	116
Total	11671	76851	88522
Faunal Bone (g)	1120	270963	272083
Shell (g)	12007	72346	84353
Historic/Modern Glass Fragments	0	10031	10031

Note:

* The total is an approximation only; the original catalog is incomplete.



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Testing of CA-SDI-9822 for the current project included a pedestrian survey of the site; recording of bedrock milling features; GPS mapping of bedrock milling features and the pictograph feature; examination of the 1980–1989 Palomar Community College field notes, maps, and artifact catalogue; and, excavation of five shovel test pits (STPs) to determine the presence or absence of subsurface materials south of Deer Springs Road. A Trimble GPS unit was used to determine the location of the bedrock milling features and pictograph feature, thereby redefining the original site boundary. The site boundary was extended west, north, and east of the fenced site area to include additional bedrock milling features and the pictograph feature, and south to include the portion of the site south of Deer Springs Road (Figure 4-13, Confidential Appendix B). Surface artifacts noted include debitage, ceramic sherds, burned bone, and a clay pipe fragment. No surface artifacts were collected. Given the extensive excavation conducted by Palomar Community College in the portion of the site north of Deer Springs Road, no additional excavation was conducted. Rodent disturbance, foot traffic, and modern trash dumping were noted within the fenced area. The portion of site CA-SDI-9822 adjacent to and north of Deer Springs Road is currently eroding into the roadway and the original protective fence has been partially torn down along Deer Springs Road.

CA-SDI-9822 Milling Features and Pictograph Feature

A total of 12 bedrock milling features were documented at site CA-SDI-9822, consisting of a drawing, a photograph, and GPS mapping. BRM-1, BRM-2, BRM-3, BRM-4, BRM-5, and BRM-12 are located outside of the fenced site area, along the west- and south-facing slopes of the adjacent hills. BRM-6, BRM-7, BRM-8, BRM-9, BRM-10, and BRM-11 are located within the fenced site area (Figures 4-14 through 4-25). All milling features exhibit heavy weathering and many portions of the milling elements have exfoliated. Additional milling features may be present along the slopes of the adjacent hills, as dense vegetation covers the slopes. One pictograph feature, previously recorded by Hedges (1977), was documented as well (Figure 4-26).

Collection Status and Catalog of Palomar Community College Collection

At present, the current condition of all of the cultural material collected previously from site CA-SDI-9822 is unknown. However, part of the site assemblage was curated at Palomar Community College and was subsequently obtained by Dudek for the purposes of this project. Other portions of the collection may reside with Leslie Quintero (past archaeologist for this site) and other site material may have been repatriated/reburied.

Gallegos & Associates consolidated a series of four portions of older catalogs created by the Palomar Community College Archaeology Lab; the latter produced catalog cards that were recorded during the multitude of previous excavations conducted at CA-SDI-9822. A one-to-one

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comparison between catalog cards and the artifacts they represent was not conducted by Palomar Community College or by Gallegos & Associates. Dudek obtained Gallegos & Associates catalog and updated it by reprocessing the entire curated collection (except large groundstone items) providing curation appropriate artifact tags and bags. The present catalog has identified more than 7,000 entries (Confidential Appendix C). Updating the catalogs for CA-SDI-9822 identified a multitude of errors; not all errors could be corrected due to the fact that many artifact bags lacked provenience information, including catalog numbers. As such, a large portion of the existing assemblage can be used for comparative research only relating to the overall site deposit, rather than providing data on site structure and diachronic changes in assemblage composition. At a minimum, it is understood that forty 1x2-meter units were excavated at CA-SDI-9822, but no clear understanding of the prehistoric activities at CA-SDI-9822 has been achieved.

CA-SDI-9822 Test Results

Subsurface testing for the current project was conducted to determine the presence or absence of a subsurface cultural deposit south of Deer Springs Road. This work included the excavation of five shovel test pits (STPs), and was conducted within the County's easement. Three of the five STPs (STPs 1, 2, and 5) were positive (see Figure 4-13, Confidential Appendix B).

Analysis was conducted for materials recovered as a result of STP excavation at CA-SDI-9822. Cultural material recovered from the three positive STPs includes a range of artifacts including 68 debitage, 1 biface, 13 ceramic fragments, 1 *Olivella* sp. shell bead, 64.11 grams of shell, and 13.11 grams of bone (Tables 4-8 and 4-9). Special studies include analysis and interpretation of flaked lithic artifacts and analysis of faunal remains.

Table 4-8
Artifacts Recovered from STP Excavations at CA-SDI-9822

Cultural Material	STP			Total
	1	2	5	
Biface	1	0	0	1
Debitage	37	30	1	68
Ceramic	4	8	1	13
<i>Olivella</i> sp. Shell Bead	0	1	0	1
Bone*	7.98	5.13	0	13.11
Shell*	22.11	41.84	0.16	64.11
Total	42	39	2	83

* Weight in grams

** Total does not include bone or shell

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**Table 4-9
CA-SDI-9822: STPs by Depth**

Cultural Material		Depth						Total
		0-10cm	10-20cm	20-30cm	30-40cm	40-50cm	50-60cm	
STP 1	Biface	0	0	1	0	0	0	1
	Ceramic	1	1	1	1	0	0	4
	Debitage	7	12	9	9	0	0	37
	Bone*	2.9	1.65	1.92	1.51	0	0	7.98
	Shell**	6.71	3.52	5.92	5.96	0	0	22.11
STP 2	Biface	0	0	0	0	0	1	1
	Ceramic	6	1	0	0	1	0	8
	Debitage	14	7	4	1	4	0	30
	Bone*	1.66	0.22	1.64	0.44	0.67	0.5	5.13
	Shell**	7.32	8.04	9.58	7.3	8.9	0.7	41.84
STP 5	Biface	1	0	0	0	0	0	1
	Debitage	1	0	0	0	0	0	1
	Faunal*	0.16	0	0	0	0	0	0.16
Total		30	21	15	11	5	1	83

* Weight in grams

** Total does not include bone or shell

CA-SDI-9822 Lithic Analysis (with Tracy Stropes)

The lithic analysis was based upon replicative data and was conducted for all flaked stone artifacts recovered as a result of the subsurface site boundary assessment within the proposed right-of-way for CA-SDI-9822. Technological identifications were ascertained for all lithic artifacts recovered from the three positive STPs completed for the current project. All lithic artifacts were also examined on the basis of raw material types and reduction stage categories (Confidential Appendix C). Technological reduction stage flake categories were defined by comparing technological attributes of replicated artifacts from known stone tool reduction technologies to the recovered lithic assemblage. By comparing the recovered assemblage to the replicated assemblage in terms of manufacture, reduction stages were assigned to technologically diagnosticdebitage. Somedebitage, however, was considered technologically undiagnostic because of its fragmented condition.

Debitage classification attributes were divided into reduction-oriented technological categories, and then these categories were segregated into stages. By segregating the technologically diagnosticdebitage into technological categories that represent and identify reduction techniques, two different reduction sequences were defined as a result of this analysis (Confidential Appendix C). Both nodule core reduction and biface reduction were identified

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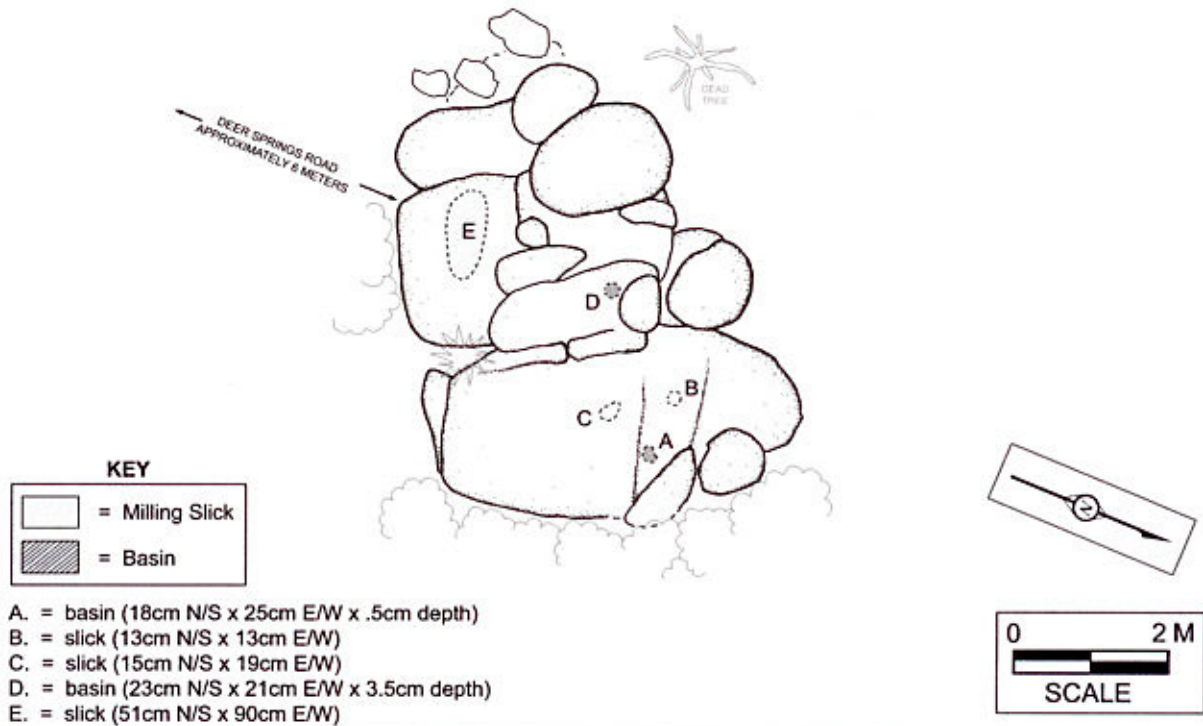
within the present assemblage. Nodule core debitage was recognized and grouped into technological categories based on the amount and location of dorsal cortex, platform attributes, dorsal arris count and direction, and flake cross/long-section shape (Confidential Appendix C). Debitage was classified according to three platform types identified among the flakes from nodule core reduction: natural/cortical platforms (NP), single-facet platforms (SFP), and multifaceted platforms (MFP). In addition, flakes were further subdivided according to the location of dorsal cortex (i.e., flake categories NP-1 through NP-11, SFP-1 through SFP-11). The reduction-oriented technological categories of diagnostic flakes were also separated out on the basis of geological material types (i.e., metavolcanic, quartzite, monocrystalline quartz, chert, obsidian, etc.). Flake fragments that lacked the necessary attributes to be placed in one of these categories were classified as undiagnostic fragments. Only raw material type and presence or absence of cortex were recorded for these artifacts. Interpretation of the reduction sequence from this site was determined using only the technologically diagnostic debitage, whereas discussions concerning lithic raw material types include all debitage and formed artifacts.

Often times it is possible that two different reduction sequences may or may not be part of a single interrelated reduction continuum. For instance, bifacial artifacts may have been manufactured from flake blanks produced from nodule cores and thus the collection may be viewed as a single continuum. For the present analysis these reduction-oriented technological categories were further segregated on the basis of geological material types such as metavolcanic, quartzite, monocrystalline quartz, chert, and obsidian. Interpretation of the reduction sequence from this site was determined using only the technologically diagnostic debitage.

All debitage recovered from the three positive STPs was analyzed, identified, and assigned to specific technological categories and stages. Technologically diagnostic debitage was assigned to a specific reduction category, and served as the basis for interpretation of lithic technology. Preliminary analyses indicate that artifacts recovered from the site are intra-site similar in technological character. As such, the sample of the entire excavated assemblage is considered homogeneous. No technological change was identified either horizontally through the site or vertically across the site. In light of this, all artifacts from the site were combined for the purpose of interpretation of the site's lithic technology.

Technological analyses of the artifact sample recovered during testing at CA-SDI-9822 identified two specific reduction technologies. The assemblage is composed of primarily two reduction technologies including nodule core reduction; and to a lesser extent, biface reduction. As stated previously, these reduction technologies may be part of the same continuum, for example, flakes from nodule core reduction may have been used as flake blanks for flake-based biface production. Nearly all of the lithic artifacts are made of local materials with just a few exceptions (i.e., Piedra de Lumbre chert and obsidian).

Drawing Oriented to Match Photo

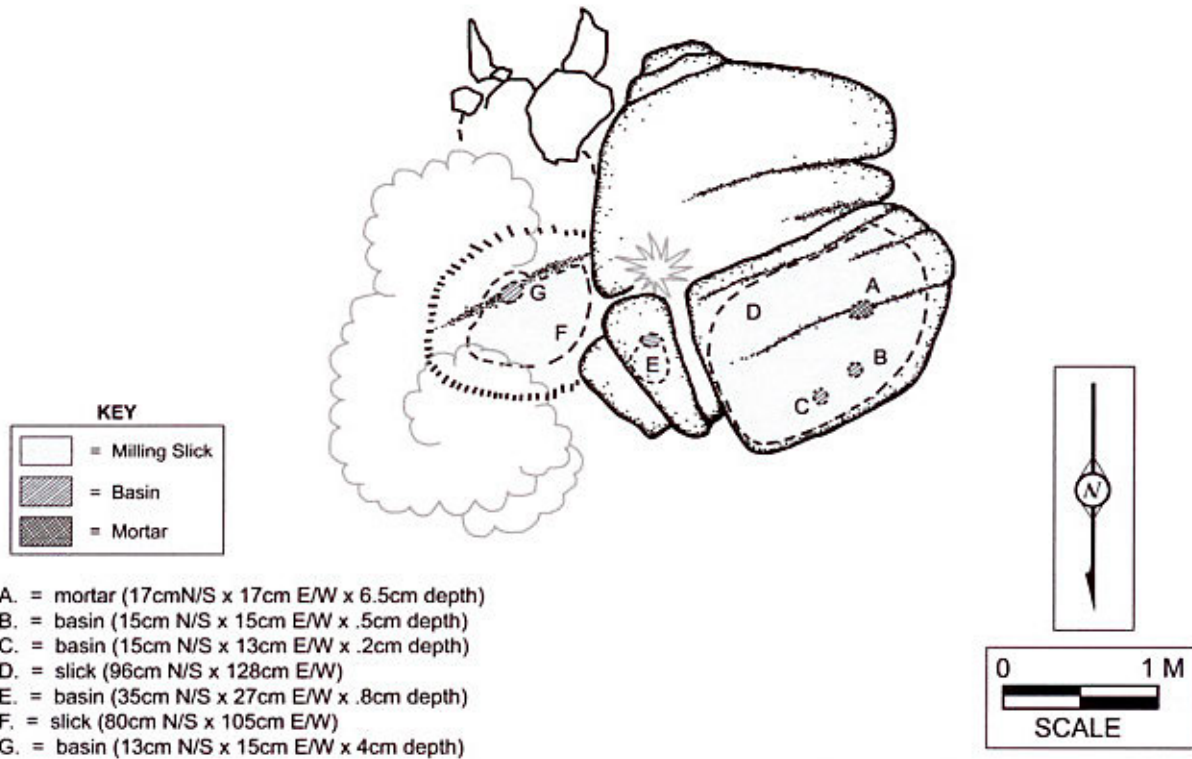


Overview Photograph of BRM-1: Facing West-Southwest

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Drawing Oriented to Match Photo

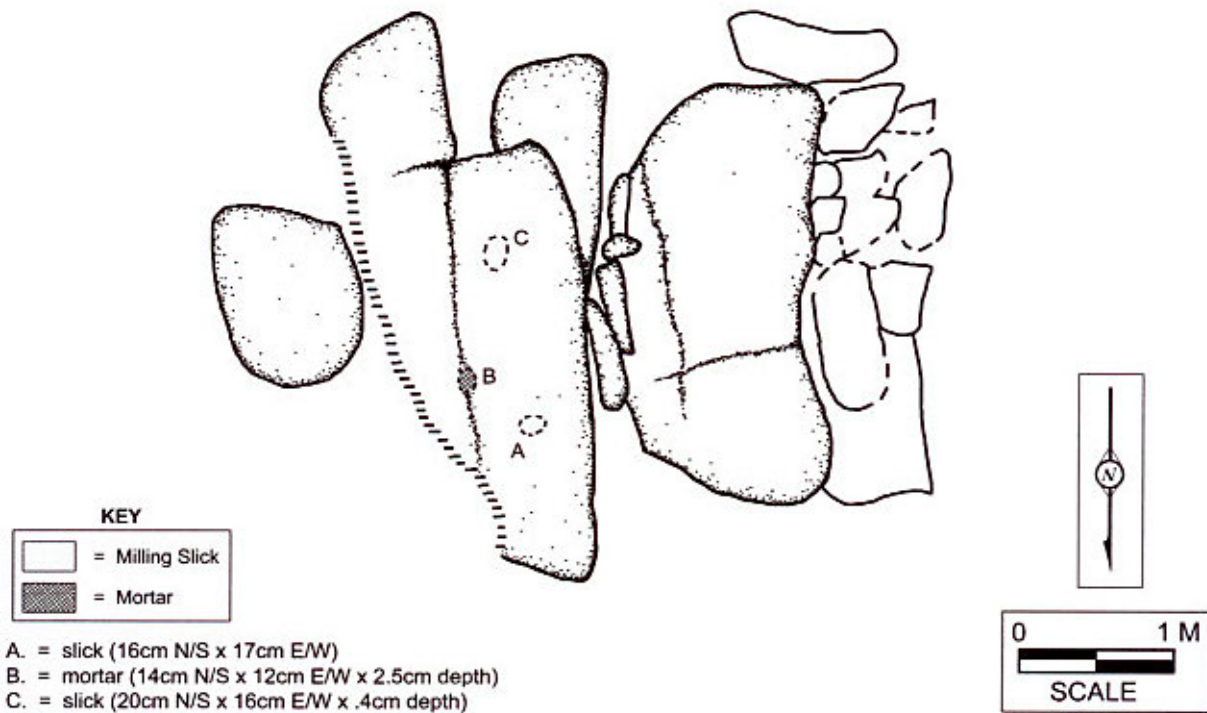


Overview Photograph of BRM-2: Facing South

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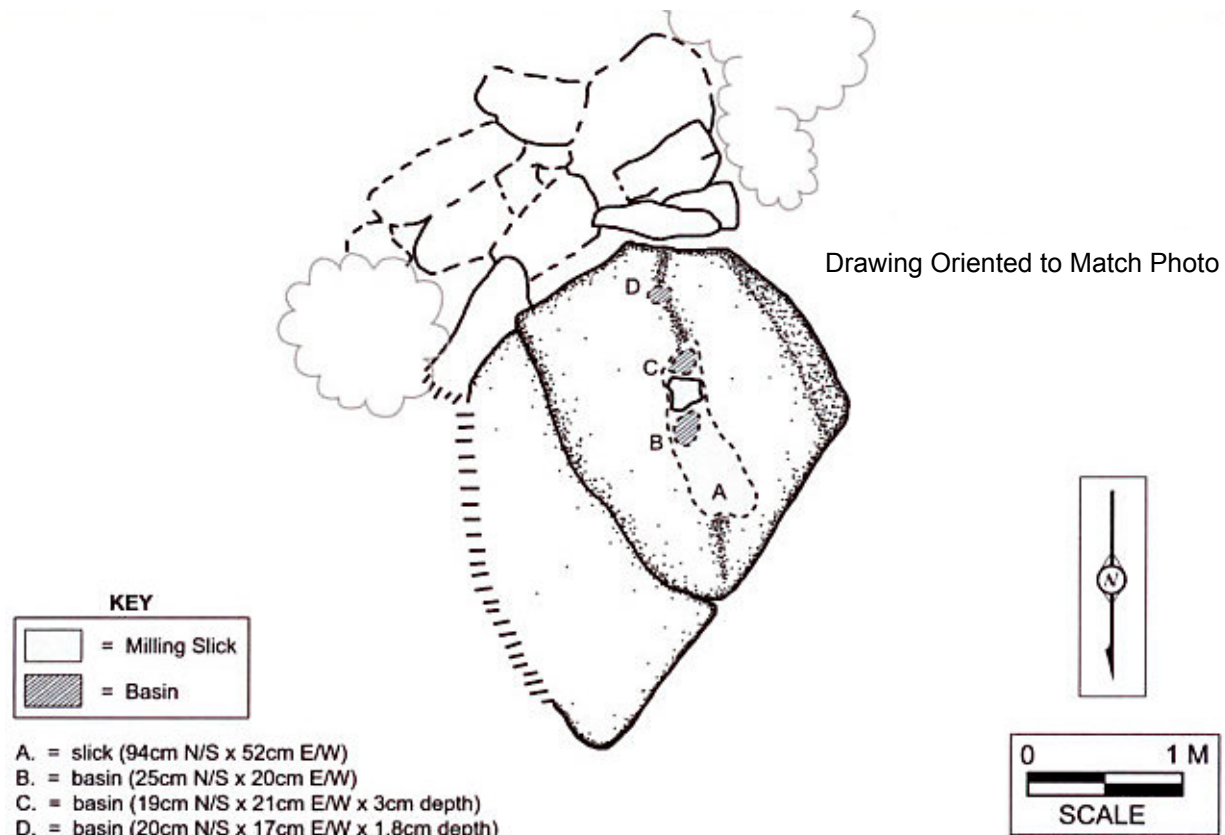
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Overview Photograph of BRM-3: Facing South

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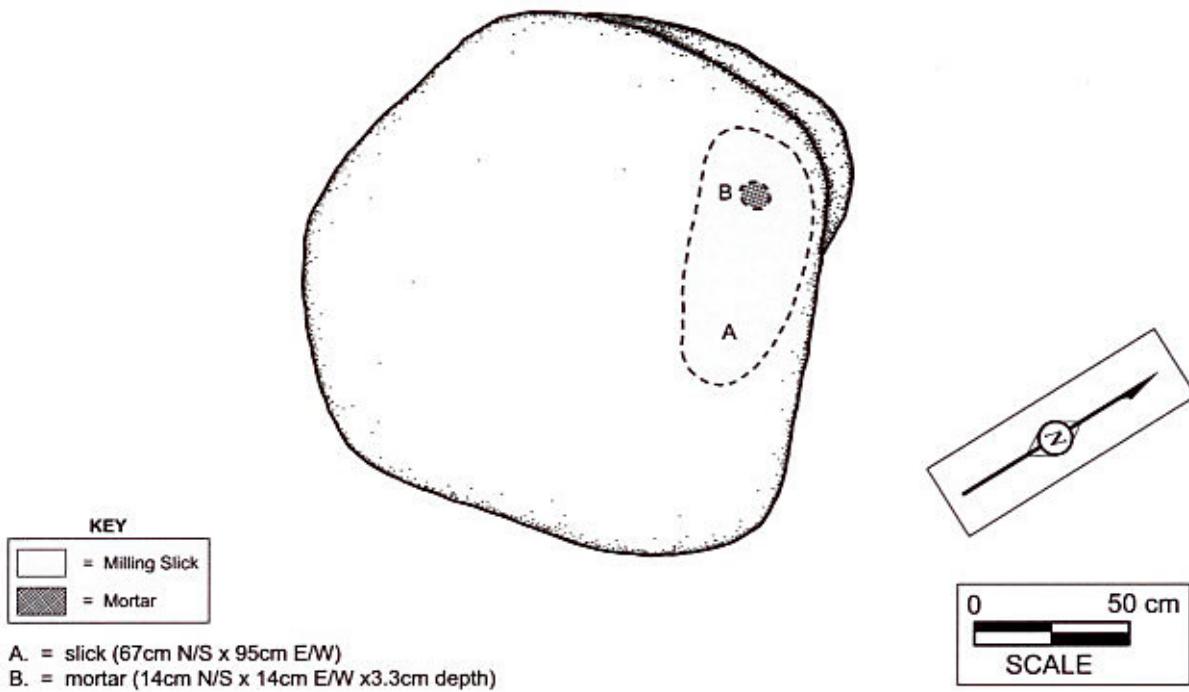


Overview Photograph of BRM-4: Facing South

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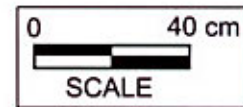
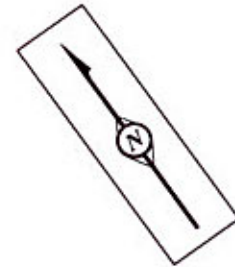
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Overview Photograph of BRM-5: Facing West-Northwest

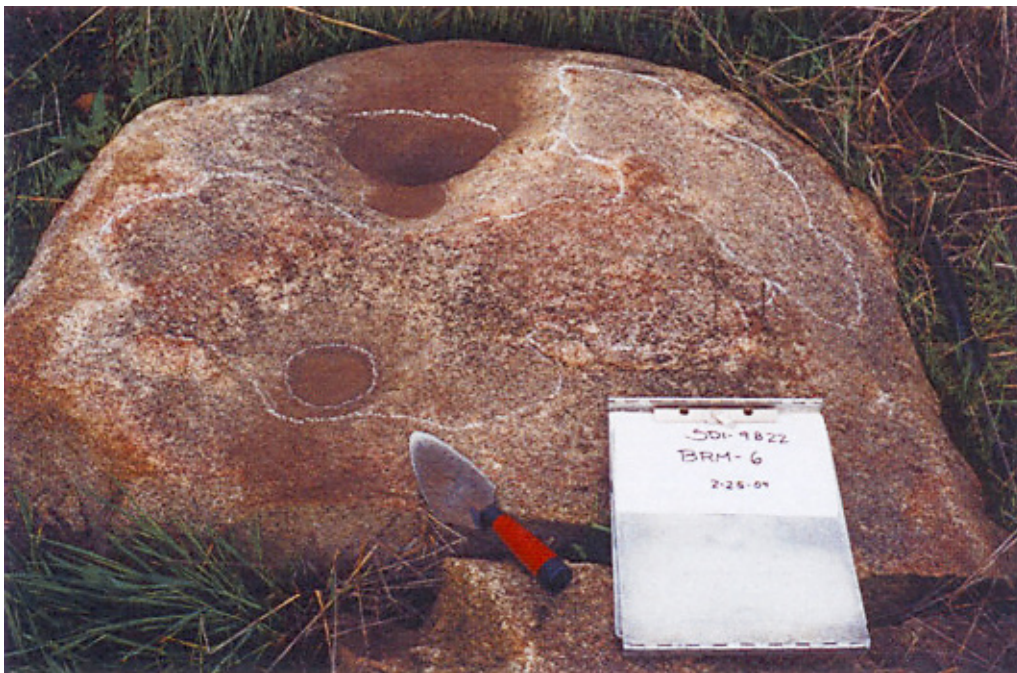
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 = Milling Slick
 = Basin
 = Mortar

- A. = basin (10cm N/S x 10cm E/W x 2cm depth)
B. = basin (10cm N/S x 10cm E/W x 1cm depth)
C. = mortar (16 N/S x 17 E/W x 8cm depth)
D. = slick (75cm N/S x 70cm E/W)

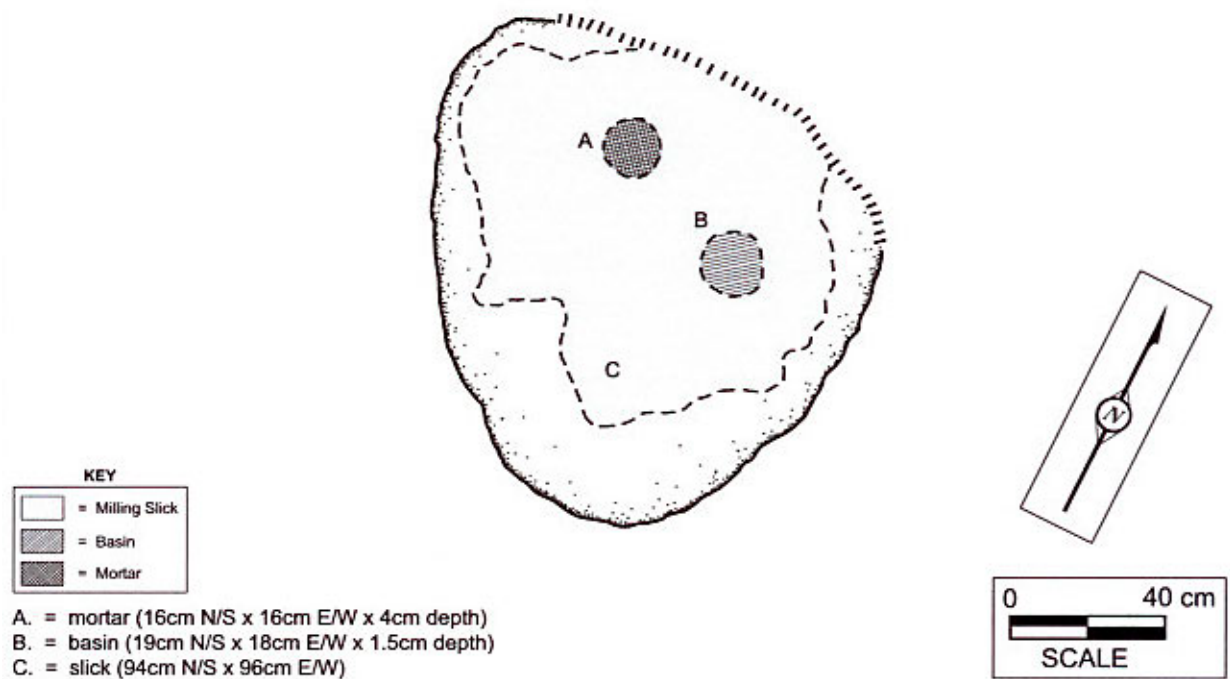


Overview Photograph of BRM-6: Facing Northeast

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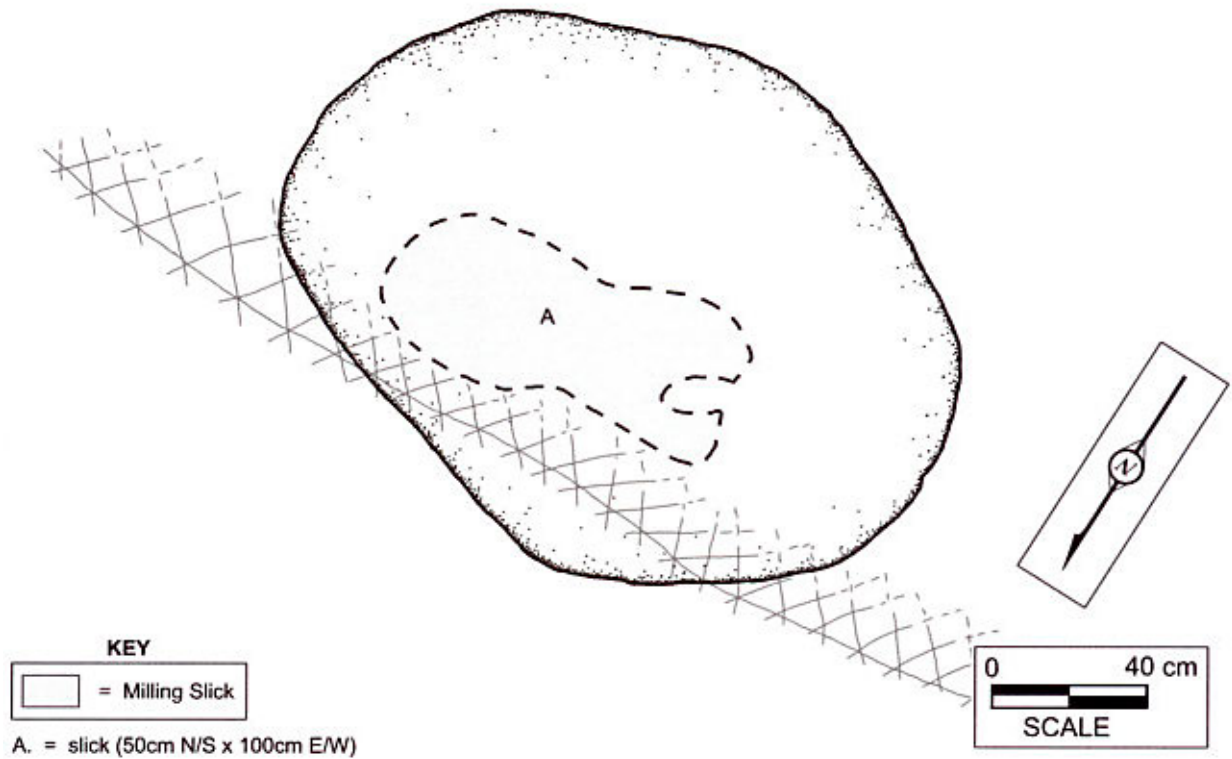


Overview Photograph of BRM-7: Facing North-Northwest

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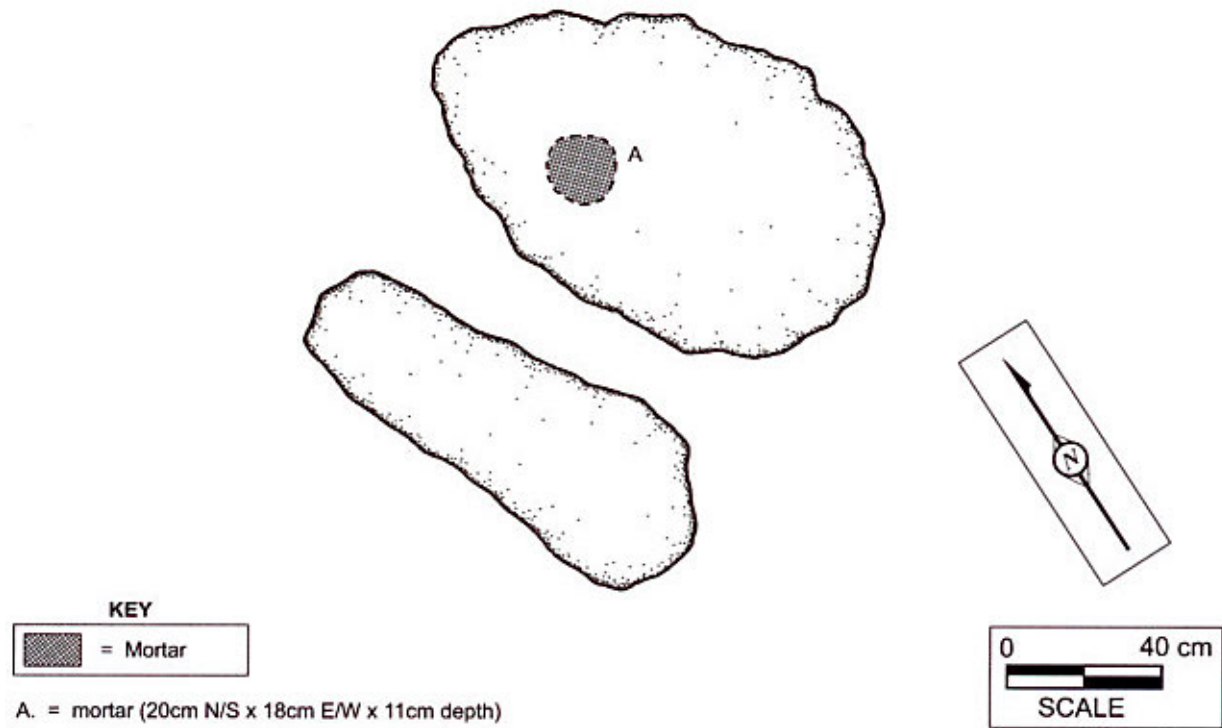


Overview Photograph of BRM-8: Facing South-Southeast

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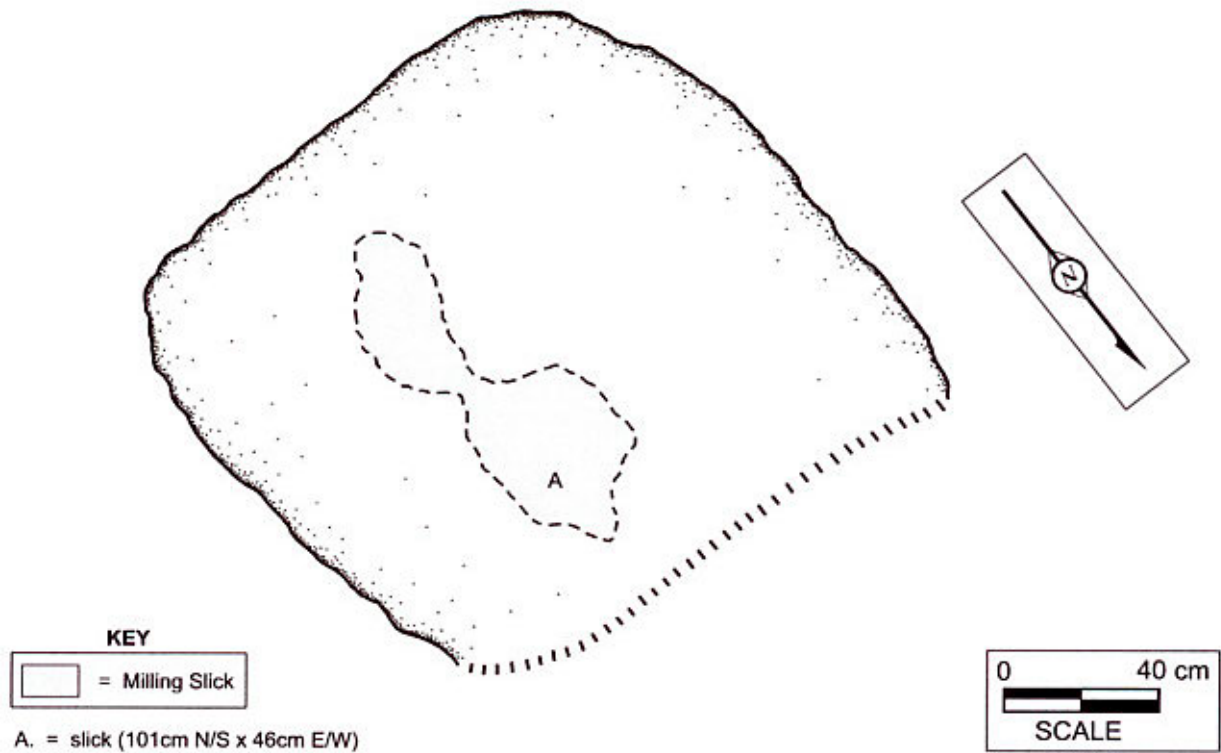


Overview Photograph of BRM-9: Facing Northeast

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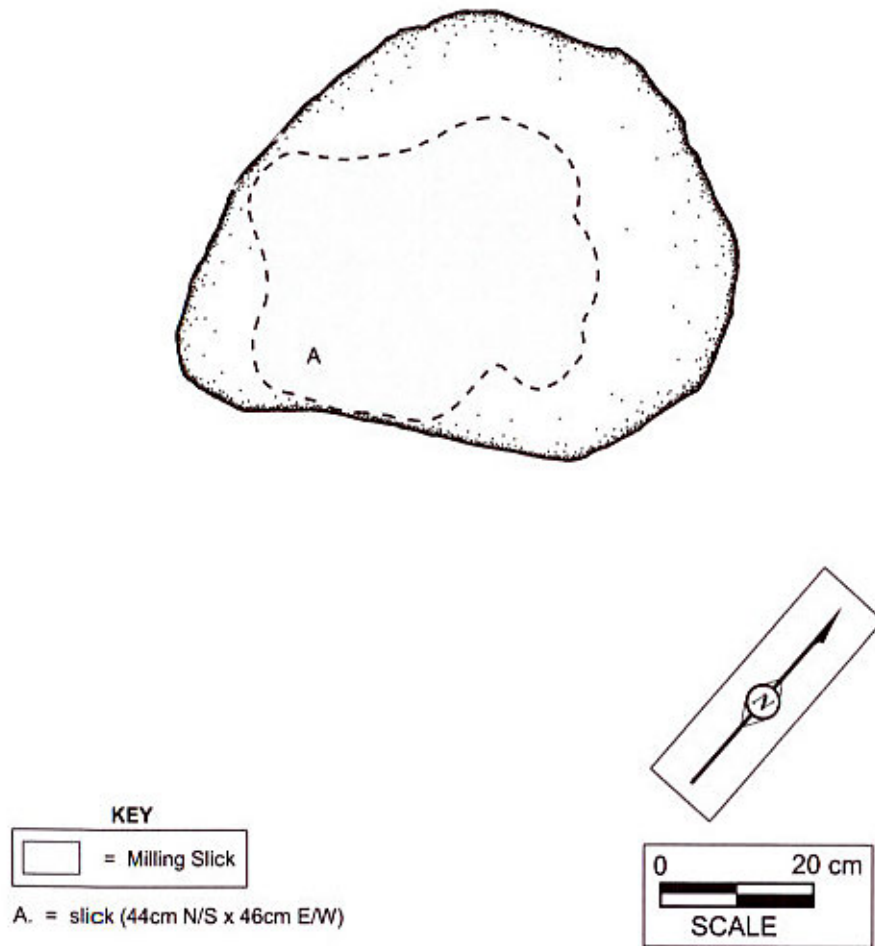
FIGURE 4-23
CA-SDI-9822: Bedrock Milling Feature 10

Cultural Resources Report for the Newland Sierra Project, San Diego County, California

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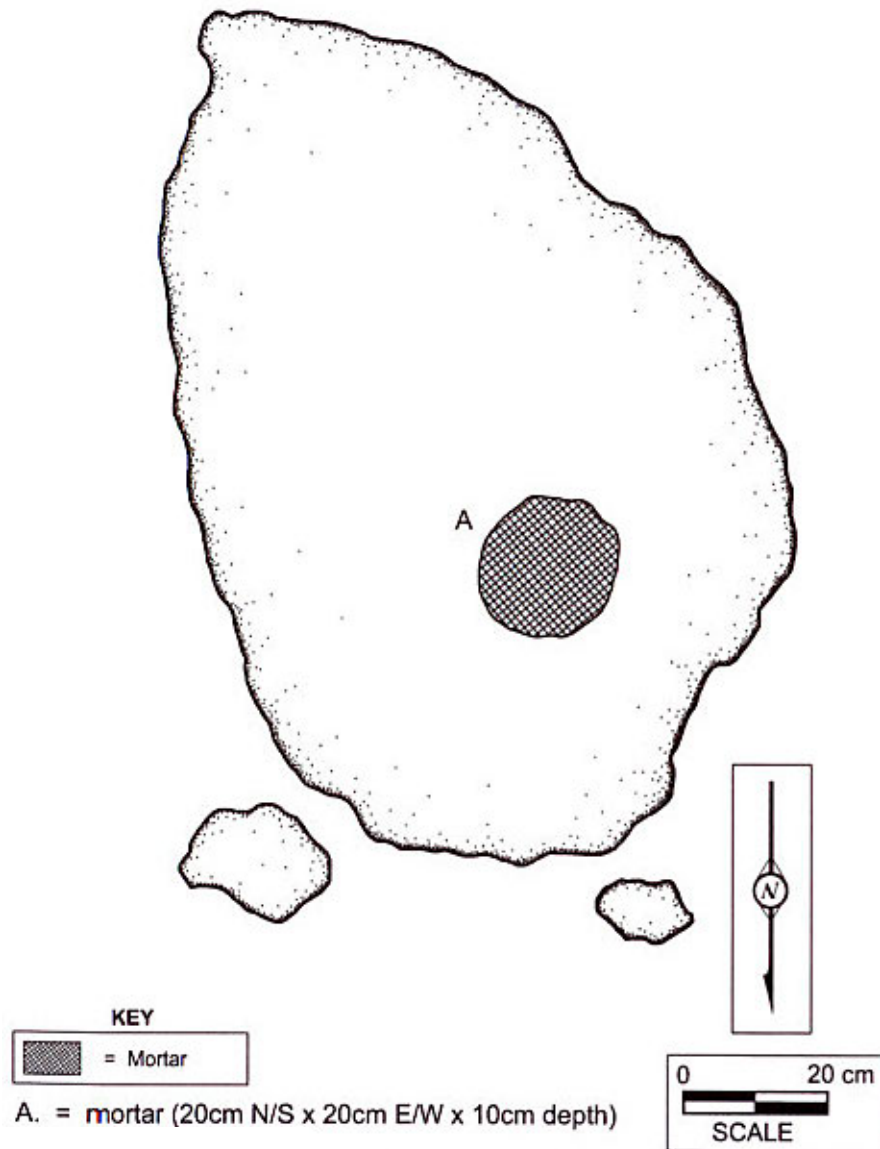


Overview Photograph of BRM-11: Facing Northwest

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Drawing Oriented to Match Photo



Overview Photograph of BRM-12: Facing South

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Photograph of Rock with Pictograph: Facing Northwest



Close-up Photograph of Pictograph: Facing Northwest

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All formed artifacts and debitage from CA-SDI-9822 were combined for the purpose of analysis. Of the 68 pieces of debitage, 10 (15%) were technologically diagnostic of 2 different reduction technologies (Table 4-10), while 58 (85%) were technologically undiagnostic (Table 4-11). Seven different lithic toolstone materials were represented in the CA-SDI-9822 assemblage (including both technologically diagnostic and undiagnostic debitage). These materials include 25 metavolcanic, 16 quartz, 5 quartzite, 12 volcanic, 1 chert, 5 Piedra de Lumbre chert, and 4 obsidian.

Table 4-10
CA-SDI-9822 Diagnostic Nodule Core Debitage by Material

Technology	Material				Total
	Metavolcanic	Volcanic	Obsidian	FDL	
Single-Facet Platform					
SFP-6	0	1	0	0	1
SFP-11	2	3	0	0	5
Subtotal, Single-facet Platform	2	4	0	0	6
(% Diagnostic Debitage)	20.00%	40.00%	0.00%	0.00%	60.00%
Biface					
203.E-	0	0	1	1	2
400.E-	1	0	1	0	2
Subtotal, Multi-faceted Platform	1	0	2	1	4
(% Diagnostic Debitage)	10.00%	0.00%	20.00%	10.00%	40.00%
Total	3	4	2	1	10
(% Diagnostic Debitage)	30.00%	40.00%	20.00%	10.00%	100.00%

Table 4-11
CA-SDI-9822 Undiagnostic Debitage by Material

Undiagnostic Flake Fragments	Material							Total
	Metavolcanic	Quartz	Quartzite	Volcanic	PDL	Chert	Obsidian	
Uw/icc	1	0	1	1	0	1	1	5
Uwo/c	21	16	4	7	4	0	1	53
Total	22	16	5	8	4	1	2	58
(% of Column)	37.90%	27.60%	8.60%	13.80%	6.90%	1.70%	3.40%	100.00%

The most common reduction technology identified in the assemblage was nodule core reduction. Six (60%) of the technologically diagnostic debitage supported nodule core reduction (see Table 4-10). Only one nodule core platform type was represented at CA-SDI-9822. Single-facet platform debitage was represented by all six debitage. This suggests that for this portion of CA-

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SDI-9822 a single-facet platform configuration was the primary means of platform preparation on cores. The collection is small however, and does not likely represent the full range of lithic technologies that occurred at CA-SDI-9822. The most frequently occurring single-facet platform debitage category was SFP-11 (n=5). While flakes in this category are ideal flake blanks, these specific flakes were broken or were too small for use and likely discarded.

For this analysis, biface reduction debitage was divided into five reduction-oriented technological categories (as defined by Flenniken 2002) that were, in turn, employed to define the reduction sequences used at CA-SDI-9822. These include core reduction (Category 1), edge preparation (Category 2), percussion bifacial thinning (Category 3), pressure bifacial thinning (Category 4), and undiagnostic fragments (Category 5).

However, in the present assemblage only Categories 2, 4, and 5 bifacial reduction debitage were identified. The following technological definitions have been offered by Flenniken (2002) for the previously mentioned bifacial technological categories:

1. Core reduction, that is, primary decortication debitage segregated on the basis of approximately 100% cortex on the dorsal surface and platform configuration; secondary decortication debitage separated based upon partial dorsal cortex and platform type; and interior debitage categorized by platform attributes, dorsal arris count and direction, flake cross/long-section configuration, and especially, absence of dorsal cortex;
2. Edge preparation, that is, bifacial reduction debitage classified on the basis of multifaceted platform configuration and location, location of remnant bulb of force, dorsal arris count and direction, flake termination, flake cross/long-section orientation, and presence or absence of detachment scar;
3. Percussion bifacial thinning, that is, debitage segregated on the basis of multifaceted platform configuration, size, lipping, and location, dorsal arris count and direction, flake termination, cross/long-section orientation, and presence or absence of detachment scar;
4. Pressure bifacial thinning, that is, debitage separated on the basis of multifaceted platform configuration and location, dorsal arris count and direction, flake termination, platform-to-long axis geometry, cross/long-section orientation, and presence or absence of detachment scar (Confidential Appendix C); and
5. Undiagnostic fragments, that is, potlids (995.PL), bipolar shatter (996.SH), and flake fragments, with cortex (including type [997.UP and 998.UI]) or without cortex (999.UN).

A limited number of technologically diagnostic flakes (n=4) were identified within the technologically diagnostic portion of the assemblage as biface reduction debitage (see Table 4-

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9). Two flakes were edge preparation flakes (203.E-), while the remaining two were early (400.E-) stage pressure flakes. The presence of these technological categories suggests bifacial tools were thinned and/or resharpened by pressure flaking at CA-SDI-9822.

A total of 58 technologically undiagnostic flake fragments were also identified from this assemblage (see Table 4-11). Only 5 fragments possessed cortex (Uw/icc), while 53 were cortex-free (Uwo/c). The cortex noted on these flakes includes only flakes with incipient cone cortex common on local lithic materials. The overall lack of cortex on debitage suggests that the cores used to produce flakes at CA-SDI-9822 had been prepared (decorticated and shaped) at another location away from this portion of CA-SDI-9822.

Nodule core reduction technology is the most common technology identified in this lithic sample from CA-SDI-9822. Products of nodule core reduction are the most abundant in the site as measured by percent of technologically diagnostic flakes. This simple and expedient technology was so commonly used because of the local abundance of nodule metavolcanic materials. Furthermore, this technology provided a simple and relatively effortless method to produce useful flake blanks intended for further reduction.

Variability among the analyzed assemblages can be studied at two scales: individual artifacts, and artifact assemblages. This variability is explained by several factors: the shape and size of raw material packages, stages of reduction, and site-specific knapping activities.

Pebbles, cobbles, and to a lesser extent, boulders were selected for size, shape, material quality, and platform location. Nodules with natural platforms were reduced directly by percussion in a circular manner around the natural platform. The location of dorsal cortex indicates the sequence of flake removals (Confidential Appendix C). Cores with faceted platforms are nodules that required platform preparation prior to reduction. This occurred usually when a nodule of high quality material was selected, but the nodule did not possess a suitably shaped platform. It was therefore necessary to create a functional platform by percussion flaking. The desired products of nodule core reduction were flake blanks that were thin in cross-section, long and narrow in plan-view, and effectively range from between 4 and 10 centimeters in length.

A source of intra-site variation may result from initial nodule core reduction conducted at one site, and then transported and later reduced at a second location or site. It appears that cores were not always entirely reduced at a single location; instead, initial shaping may have been performed at one site and subsequent core reduction performed at another. This idea is portrayed by the minimal number of early reduction stage flakes, and the higher frequency of late reduction stage flakes recovered from CA-SDI-9822. Alternatively, this pattern could be explained as a result of sampling bias resulting from incomplete or non-representative artifact collection.

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Intended end products of this technology (i.e., flake blanks and flake tools) were likely transported for use or further reduction outside of the study area, since the most useful blanks (NP/SFP/MFP-11s) were absent from the analyzed collection, and when present (i.e., SFP-11), were broken or too small to have served as useful tool blanks.

Biface reduction is not well represented at this site. The biface reduction debitage sample consists of four flakes previously discussed. The recovery of one biface fragment and four biface reduction debitage from the present excavation supports the manufacture of bifacial tools at CA-SDI-9822. This sample is small, however, and does not lend itself to a lengthy discussion concerning the employment of bifacial technology at CA-SDI-9822.

The single quartz biface fragment was recovered from STP 1 at the 20–30-centimeter level. The biface is the mid-section of an early stage bifacial preform that likely fractured during manufacture. This is evidenced by the presence of bending fractures near the distal and proximal sections of the biface. Bending fractures most commonly occur when the knapper fails to support the objective piece properly during the percussion stages of bifacial shaping. As is to be expected, the biface was likely abandoned at this juncture as no evidence of further reduction beyond the bending fracture is apparent (i.e., early/late stage pressure flaking). The biface fragment measures 26.5x28.3x12.7 millimeters with a weight of 11.58 grams. Although the final intended use for the specimen is unknown, the biface falls within the weight range of bifaces produced for most dart points (>3.5 g). However, this does not exclude the biface from the core or knife categories.

Based on the technological analysis of debitage from the excavations at CA-SDI-9822, the following anthropological descriptions of nodule core reduction are offered. First, nodules of primarily fined-grained metavolcanic materials were selected for direct free-hand percussion core reduction. All of these nodules were reduced using single-facet platforms. This suggests nodules were selected and prepared outside of the present site area. A single pattern of flake removal could not be identified within the present core reduction techniques. Interestingly, sizeable, useable flakes without dorsal surface cortex were not noted in this assemblage suggesting these flakes were produced at CA-SDI-9822, but transported elsewhere (such as the core area of the site). Nodule core reduction is the most commonly occurring technique noted at CA-SDI-9822. Biface reduction was poorly represented at CA-SDI-9822, as evidenced by the presence of four biface reduction flakes. These flakes and the biface fragment suggest bifaces were at least prepared and possibly used at CA-SDI-9822.

CA-SDI-9822 Ceramic Analysis

A total of 13 ceramic sherds were recovered during the boundary testing of site CA-SDI-9822. Of these 13 ceramic sherds, the majority were too highly fragmented to facilitate analysis. As such, because of the small size and fragmentary condition of the assemblage, no samples were

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submitted for thin-sectioning or source analysis. A visual analysis of the specimens indicates that the fragments are likely Tizon Brown Ware and portions of vessel bodies.

CA-SDI-9822 Shell Bead Analysis

For San Diego County, a processual understanding of manufacture, distribution, and use of shell artifacts has not been achieved. In addition, the range of morphological types of beads utilized in the San Diego region is not well understood. In contrast to other regions of California, there is little information concerning the process by which shell artifacts were manufactured and used, or the modifications these artifacts may have gone through over time. The analysis of shell artifacts from other regions of California (more notably the Chumash culture area) has demonstrated considerable anthropological value in the understanding of prehistoric economies, trade systems and networks, and the organization of wealth and status in prehistoric societies (Fenenga 1988). For these regions, particular styles of shell artifacts have been established as chronologically diagnostic in a number of archaeological sites. The shell artifact assemblage from this portion of CA-SDI-9822 is small in comparison to other sites in the north San Diego region. Although the present data will not answer some questions that may be resolved by a greater regional study of multiple archaeological sites, it will certainly contribute to the presently limited body of data, and will be of value to future research issues regarding shell artifacts.

For the present analysis, the typology developed by Gifford (1947) will be employed. A single shell artifact was recovered from the present excavations at CA-SDI-9822. The Gifford Type F5 *Olivella* sp. shell bead is identified as spire-ground. Although the two primary manufacturing techniques (spire-ground and spire-lopped) have often been split into separate types by various archaeologists (Bass and Andrews 1977; Bennyhoff 1986; Bennyhoff and Fredrickson 1967; Bennyhoff and Heizer 1958; Bennyhoff and Hughes 1987; Gibson 1973; King 1982), it is more likely that the difference in these beads is a matter of manufacturing preference rather than stylistic change. This is supported by the fact that the two manufacturing techniques often occur at the same time within the same assemblage. These specimens are primarily whole shells that have the spire end modified by grinding to produce a hole for stringing or attachment. These are a simple and time-efficient form of shell bead to manufacture. In general, whole *Olivella* sp. shell beads are not considered to be reliable time markers throughout California. However, spire-lopped/ground *Olivella* sp. shell beads are likely the oldest form of shell bead known from California (Fenenga 1988). Evidence from CA-SDI-11079 in Otay Mesa, California, suggests the employment of *Olivella* sp. shell for beads as early as 9,000 years ago (Kyle and Gallegos 1998), and ethnographic evidence demonstrates that their use continued throughout historic times (Dietz and Jackson 1981; Howard 1974; Roop and Flynn 1978).

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CA-SDI-9822 Invertebrate Faunal Analysis

Invertebrate remains recovered from the three positive STPs at CA-SDI-9822 totaled 64.11 grams. All shell recovered was identified to species, order, and class. A total of 3 species, 2 orders, and 1 class of invertebrate remains were identified within the three analyzed STPs. These shellfish species were representative of primarily a bay/lagoon/estuary environment. Each shell was weighed and examined to identify genus and species. All shell was speciated in order to determine habitat exploitation patterns, and to identify environmental setting.

The majority of the 64.11 grams of invertebrate remains was recovered from the 0–40-centimeter levels, decreasing in quantity from 40–50 centimeters, and becoming negligible from 50–60 centimeters (Table 4-12). Of the 64.11 grams of shell recovered, 47.23 grams were identifiable to species. The remaining 16.88 grams were determined to be too fragmentary or weathered for proper identification. Table 6-7 illustrates that the majority of the identifiable shellfish species recovered from the three STPs were *Chione* sp. (79.7%), *Argopecten* sp. (15.7%), and *Ostrea lurida* (4.6%). This data indicates a primary exploitation focus on bay/lagoon/estuary habitats by the inhabitants of CA-SDI-9822.

In summary, the invertebrate shell data suggests that the inhabitants of CA-SDI-9822 primarily exploited bay/lagoon/estuary habitats for shellfish. It is likely that this exploitation pattern represents a focus on primarily one environment. Given the results of shellfish analysis for CA-SDI-9822, the inhabitants likely exploited the nearest lagoon habitat (Buena Vista Lagoon). However, as with the lithic analysis, the present sample is small and may not be representative of shellfish exploitation for CA-SDI-9822.

Table 4-12
Shell by Depth

STP	Depth						Total	Percent
	0-10cm	10-20cm	20-30cm	30-40cm	40-50cm	50-60cm		
1	6.71	3.52	5.92	5.96	0	0	22.11	34.49%
2	7.32	8.04	9.58	7.3	8.9	0.7	41.84	65.26%
5	0.16	0	0	0	0	0	0.16	0.25%
Total	14.19	11.56	15.5	13.26	8.9	0.7	64.11	100.00%
Percent	22.13%	18.03%	24.18%	20.68%	13.88%	1.09%	100.00%	—

* Weight in grams

** Note: STPs 3 and 4 were negative

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CA-SDI-9822 Vertebrate Faunal Analysis

The 13.1 grams of bone fragments recovered from CA-SDI-9822 lack the morphological features that would allow them to be identified to a taxonomic category greater than their class. The present specimens are representative of primarily small to medium size mammals. The category of small mammals (10.3 grams of the collection) roughly equates to all undiagnostic vertebrate fragments whose sizes are between a mouse and a jackrabbit. Those fragments defined as medium size mammal (2.8 grams of the collection) roughly equate to undiagnostic vertebrate fragments wherein sizes are larger than a jackrabbit but smaller than a deer. Evidence of burning was present on only two of the specimens. These specimens were calcined suggesting direct exposure to a fire hotter than 800° Celsius (Ubelaker 1978). This may represent bone that was severely burned during preparation, or may also be the result of having been discarded in a fire hearth (Wing and Brown 1979).

CA-SDI-9822 Summary

The boundary assessment program for this portion of CA-SDI-9822 included the excavation of five STPs. In all, the present phase of work produced 68 debitage, 1 biface, 13 ceramic fragments, 1 *Olivella* sp. shell bead, 64.11 grams of shell, and 13.11 grams of bone. Disturbance from construction and bioturbation was noted in all STPs. Flake production from locally available nodules suggest flake tool use and/or biface production. Most likely, these tools were manufactured and used at the site. The remains and the range of small to medium size mammal bone demonstrate the range of foods collected, hunted, and processed. In addition, the presence of shellfish and obsidian indicates trade/travel from the inland location of CA-SDI-9822 to the coast, as well as travel to such areas as the Salton Sea to acquire obsidian. The current study resulted in the extension of the site boundary to the west, north, and east of the fenced site area to include additional bedrock milling features and the pictograph feature; and to the south to include the newly identified portion of CA-SDI-9822 south of Deer Springs Road. Examination of the archaeological collection from previous work efforts resulted in the conclusion that it lacks provenience and cannot be used for interpretation of site structure or to address issues of diachronic change in assemblage composition. It does, however retain value as a comparative collection and as a broad index of the site constituents.

4.2.2.4 CA-SDI-10747H

Site CA-SDI-10747H was originally recorded by Cardenas (1986b) for the Sycamore Ridge project. Site CA-SDI-10747H is located adjacent to the west edge of site CA-SDI-9253 (see Section 4.2.2.2 for description of CA-SDI-9253). Site CA-SDI-10747H represents the remnants of a post-1930s homestead, consisting of a three-room house, a rock and mortar hearth/chimney structure, a stone and concrete one-room foundation, and a partially collapsed wood structure

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(Cardenas 1986b). White and White (n.d.) conducted a patents record search for Stonegate Development and identified one homestead patent issued in Section 13 of Township 11 South, Range 3 West. White and White (n.d.) stated that CA-SDI-10747H is most likely associated with homestead patent #0046358 issued to Orland Arthur Rush in 1931.

CA-SDI-10747H Test Results

Testing included historical research and GPS mapping of the structure foundations (Figure 4-27, Confidential Appendix B). The location for the structure foundations does not appear on early USGS maps, and the structure foundations appear to be more recent than 1930s. Background historical research confirmed that Orland Arthur Rush homesteaded the property located at CA-SDI-10747H. Rush acquired 400 acres from the government on October 5, 1931, under the 1916 Homestead Entry-Stock Raising statute. Disturbance at the site includes foot traffic on the adjacent trail, modern trash dumping, and some off-road vehicle activity.

CA-SDA-10747H Summary

Testing included historical research and GPS mapping of the structure foundations present at the site. Site CA-SDI-10747H consists of the remnants of a post-1930s three-room house, a rock and mortar hearth/chimney structure, a stone and concrete one-room foundation, and a partially collapsed wood structure. None of the early maps reviewed (1901 Escondido 15', 1901 San Luis Rey 15', 1942 Escondido 15', 1948 San Marcos 7.5', and 1968 San Marcos 7.5') identified a historic structure in this area. Additionally, no structure at this location is present on aerial photos from 1967 or earlier. Therefore, on the basis of foundation remnants and absence of a structure on early maps and photographs, it appears that the extant remains at CA-SDI-10747H represent structures that are less than 50 years old. These remains may have replaced earlier structures at the site which were not noted on historic maps, or simply do not have distinguishing characteristics that clearly identify them as at least 50 years old. Although clear evidence is not available to date the extant foundations, the 1916 Homestead Act did require improvements to any granted homestead within three years of the claim; as no other structures were identified in the area which could correspond to an early 1930s homestead, it appears this is the location of the Rush homestead, even if nothing remains of the original buildings/structures. Disturbance at the site includes foot traffic on the adjacent trail, modern trash dumping, and some off road vehicle activity.

4.2.2.5 CA-SDI-17264

Site CA-SDI-17264 consists of a lithic scatter located in the southwest portion of the project area (Figure 4-28, Confidential Appendix B). This site consists of one debitage, two handstones, and one millingstone fragment located within a dirt road. Because of the dense vegetation the site boundary is unknown. Site CA-SDI-17264 was tested for the current project to determine site significance.

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CA-SDI-17264 Test Results

Testing included collection of surface artifacts, excavation of 12 STPs, and artifact cataloging and analysis (see Figure 4-28, Confidential Appendix B and Table 4-13). Cultural material recovered from the test program included one debitage, two handstones, and one millingstone fragment. Disturbance at the site included off-road vehicle traffic and previous grading of the road.

Four surface artifacts were collected from site CA-SDI-9253 (see Table 4-13). Cultural material recovered from the surface collection included one debitage, two handstones, and one millingstone fragment.

Table 4-13
Cultural Material Recovered from CA-SDI-17264

Cultural Material	Surface	Total
Debitage	1	1
Handstone	2	2
Millingstone	1	1
Total	4	4

Twelve shovel test pits (STPs) were excavated to determine the presence or absence of subsurface materials and extent of the subsurface deposit (see Figure 4-28, Confidential Appendix B). STP excavation resulted in twelve negative STPs.

CA-SDI-17264 Lithic Analysis (with Tracy Stropes)

The artifact assemblage from CA-SDI-17264 consists of a narrow range of artifact types including one debitage, two handstones (one complete and one fragment) and one millingstone fragment. All artifacts were recovered from the surface of CA-SDI-17264.

A single piece of volcanic debitage was identified in the present collection. The single undiagnostic specimen gives little indication of the flintknapping activities that may have occurred at the site. It is likely that because of the small size of the present sample, the specimen represents the maintenance and/or minimal reduction of a prepared nodule core(s).

CA-SDI-17264 Groundstone Analysis

All groundstone materials recovered from CA-SDI-17264 were selected for analysis and interpretation. Groundstone implements may include a wide range of objects used to or created by the processes of abrasion, impact, or polishing (Adams 2002). Often, groundstone tools are

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associated with the processing/milling of plants, seeds, nuts (i.e., acorns, walnuts, holly leaf cherry), and small mammals. In addition, ethnographic evidence indicates that bone, clay, and pigments may also have been processed with the same tools (Gayton 1929; Kroeber 1925; Spier 1978). Implements of this type may be identified by the pattern of wear developed through milling stone against stone. This process often results in a smooth and/or polished surface, depending on the substance ground and the lithic material type. Often these surfaces are pecked or resharpened when ground too smooth. These implements are sometimes shaped into a desired form by pecking, grinding, or flaking. Thus, tool identification is based on the presence of ground or smooth surfaces, pecked or resharpened surfaces, and evidence of shaping of the tool form. Tools are then separated into three groups: handstones/millingstones, unidentifiable groundstone fragments, and battered implements. Unidentifiable groundstone is defined herein as a fragment of lithic material with a minimum of a single ground surface, but with no technologically identifiable characteristics to indicate tool form.

Two handstones were recovered from the surface of CA-SDI-17264. Of the two handstone specimens recovered, one is complete or nearly complete and one is fragmentary. Both handstones recovered are granitic nodules. Bifacial use-wear and extended use is apparent on specimen CA-SDI-17264-1. Both handstones show evidence of shaping, suggesting extended use or curation of the handstones. There is end battering present on one of the specimens, which also exhibits a pecked grinding surface. The end battering visible on the specimen may indicate that the handstones were also used as hammers to sharpen millingstone grinding surfaces when they became too slick to grind. The overall curvature of each handstone face is slight indicating that the opposing milling surface the handstones were ground against (i.e., millingstone, milling slick) was not very deep in form. In addition, the grinding patterns evident on the faces of each handstone indicate that the handstones are basin handstones used primarily in a reciprocal stroke manner in concert with shallow basin millingstones (Adams 2002). The relatively small milling assemblage recovered from CA-SDI-17264 suggests that the inhabitants of the site had only a minimal dependence on food packages that required milling for processing (i.e., grass seeds) or that the present integrity of the site is poor.

Millingstones and millingstone fragments are identified based on the presence of at least one concave ground surface. Only one block style granitic basin millingstone fragment was identified within the present collection. Block millingstones are too heavy to transport and are defined by Binford (1980) as “site furniture.” The presence of a large block millingstone may be evident of a longer period of site occupation. The block millingstone is unifacial and retains a shallow grinding surface. Flat basins retain a more planer grinding surface and may have been used to process less oily products such as fibers (Kowta 1969), while the shallow basins may have been used for the processing of products such as hard seeds. The present basin morphology identified for the millingstone fragment suggests primarily a reciprocal stroke. The specimen also

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demonstrates evidence of pecking to rejuvenate the grinding surface in addition to evidence of shaping in the form of pecking, flaking and or grinding generally around the outer circumference. Flaking and pecking would have acted to remove unnecessary mass and aid in producing the desired shape. Final grinding may have helped to even the overall surface but was not always necessary.

CA-SDI-17264 Summary

Testing at CA-SDI-17264 produced one debitage, two handstones (one complete handstone and one handstone fragment), and one millingstone fragment. Disturbance from both bioturbation and organic materials (i.e., roots) was noted in the excavated STPs. The present sample is too small to make any definitive statements concerning the past activities of the inhabitants of CA-SDI-17264. It is probable that the site represents an artifact scatter where milling of plants and seeds and a brief period of occupation may have taken place.

4.2.2.6 CA-SDI-17265

Site CA-SDI-17265 consists of a single bedrock milling feature (BRM-1) located in the west portion of the project area, within a flat valley (Figure 4-29, Confidential Appendix B and Figure 4-30). BRM-1 is a flat, low-lying boulder and consists of a large slick, approximately 60x30 centimeters in area. Heavy weathering and exfoliation of the bedrock were noted. Disturbances included off-road vehicle activity and previous grading adjacent to the site.

CA-SDI-17265 Test Results

Testing included excavation of eight STPs, and documentation of one bedrock milling feature (see Figure 4-29). Cultural material recovered from the test program included one debitage.

Eight shovel test pits (STPs) were excavated to determine the presence or absence of subsurface materials and extent of the subsurface deposit (see Figure 4-29). STP excavation resulted in one positive and seven negative STPs. One debitage was recovered from STP 2 within the 10–20-centimeter level.

CA-SDI-17265 Summary

Testing at site CA-SDI-17265 included excavation of eight STPs and documentation of one bedrock milling feature. In all, testing at site CA-SDI-17265 produced one debitage. Seven STPs were negative and one STP was positive. The present sample is too small to make any definitive statements concerning the past activities of the inhabitants of site CA-SDI-17265. Disturbance noted included off-road vehicle activity and previous grading adjacent to the site.

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Overview of Site CA-SDI-17265 Showing Outcrop with Milling. Facing West-Southwest



Site CA-SDI-17265: Close-up Showing Outcrop with Milling. Facing West-Southwest

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4.2.2.7 CA-SDI-5951

Site CA-SDI-5951 is a habitation site located at the south end of the project area in the Deer Springs Road off-site improvement area (Figure 4-31, Confidential Appendix B). This site consists of 14 bedrock milling features, a midden deposit, projectile points, flakedstone tools, cores, lithic debitage, ceramics, groundstone tools, vertebrate and invertebrate remains, a ceramic bow pipe fragment, and possible human remains in a 49 x 92 m area. Site CA-SDI-5951 was tested for the current project to determine site significance. Two potential midden areas were identified at the site: one in the center of the site on a north south trending terrace between two narrow, steep-walled drainages, and the second at the southeast corner of the site. The remainder of the site consists of decomposing granite and granite bedrock/outcrops. Dense chaparral vegetation covers the site, with tall, dense grass present between shrubs which limited ground surface visibility to less than 25%. Extensive disturbances were noted, particularly in the eastern portion of the site.

CA-SDI-5951 Test Results

Testing included collection of surface artifacts, excavation of nine STPs and one STU, documentation of bedrock milling, and artifact cataloguing and analysis (see Figure 4-31, Confidential Appendix B and Table 4-14). Cultural material recovered from the test program included 332 pieces of debitage, three cores, one flake tool, eight projectile point fragments, two hammerstones, and four handstone fragments, one pestle, two indeterminate groundstone fragments, 117 ceramic fragments, 125.6 grams of fire-affected rock, charcoal samples, 105.3 grams of bone, and 56.0 grams of shell. Surface artifacts were predominantly recovered from a disturbed/cleared area adjacent to a utility pole, with a limited number collected from immediately north of the disturbed area. Disturbances at the site included installation of the utility pole, rodent burrows, construction of Deer Springs Road, and grading on the east end of the site which involved pushing large boulders into the site. The site likely extended further south, as midden soil and artifacts can be observed in the bank of the road.

Sixty-four (64) surface artifacts were collected from site CA-SDI-5951 (see Table 4-14). Cultural material recovered from the surface collection included 35 pieces of debitage, one core, one flake tool, two projectile points, one percussing tool (hammerstone), three handstones, one pestle, one indeterminate groundstone fragment, 19 ceramics, 0.4 grams of invertebrates, and 4.7 grams of vertebrates.

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Table 4-14
Cultural Material Recovered from CA-SDI-5951

Cultural Material	Surface	STPs	STUs	Total
Debitage	35	141	156	332
Cores	1	1	1	3
Flake Tools	1	-	-	1
Projectile Points	2	2	4	8
Percussing Tools	1	1	-	2
Handstones	3	1	-	4
Pestles	1	-	-	1
Indeterminate Groundstone	1	1	-	2
Ceramics	19	64	34	117
Total	64	211	195	470
Fire-Affected Rock (g)	-	-	125.6	125.6
Charcoal Samples (g)	-	11.3	5.6	16.9
Invertebrates (g)	0.4	32.0	23.6	56.0
Vertebrates (g)	4.7	37.2	63.4	105.3

Nine shovel test pits (STPs) and one shovel test unit (STU) were excavated to determine the presence or absence of subsurface materials and extent of the subsurface deposit (see Figure 4-28, Confidential Appendix B). All STPs were positive except STP 2 and 3, which did not produce any cultural material. STP 2, excavated adjacent to Feature 14, contained midden-like dark brownish-grey silty loam to a depth of 40 cm which contained an abundance of modern bottle glass fragments from the ground surface to terminal depth. STP 3 was excavated in the road cut adjacent to Feature 14, as midden-like soil was observed eroding down the slope into the road. STP 3 contained similar soil to a depth of 26 cmbs, and was underlain by light brown silty loam to a depth of 50 cmbs.

STP 1, located in the cleared area adjacent to the utility pole, was excavated to a depth of 30 cmbs, where the unit was terminated due to the presence of decomposing granite. STP 1 produced 7 pieces ofdebitage, one core, one percussing tool, four ceramic sherds, 2.3 grams of vertebrates, and 1.0 gram of invertebrates. All materials were recovered from the upper 20 cmbs, except 0.6 g of shell. Soil in STP 1 consisted of loose, black silty loam midden to a depth of 30 cm, underlain by decomposing granite.

STP 4 contained the same soil as STP 1 to a depth of 20 cm and was also underlain by decomposing granite. STP 4 produced 10 pieces ofdebitage, one handstone, four ceramic sherds, 0.6 grams of vertebrates, and 16.0 grams of invertebrates.

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STP 5, 6, 7, and 8 contained the same midden soil as STPs 1 and 4, and were excavated to depths of 40 cm, 25, 40, and 75 cm, respectively. All four STPs were terminated at bedrock. STP 5 produced 30 pieces of debitage, four ceramic sherds, 9.6 grams of vertebrate remains, 5.8 grams of invertebrate remains, one charcoal sample, and one historic can. STP 6 produced 27 pieces of debitage, two groundstone fragments, one ceramic fragment, 4.1 grams of invertebrates, and 2.0 grams of invertebrates. STP 7 produced 57 pieces of debitage, 11 ceramic fragments, 2.7 grams of vertebrates, 5.1 grams of invertebrates, and two charcoal samples. STP 8 contained 57 pieces of debitage, 2 projectile points, 40 ceramic sherds, 17.3 grams of vertebrate remains, 2.1 grams of invertebrate remains, and three charcoal samples.

STP 9 was excavated to a depth of 20 cm, whereupon decomposing granite bedrock was encountered. STP 9 contained light brown sandy loam and produced 9 pieces of debitage, 0.6 gram of invertebrate remains, and one charcoal sample.

STU 1 was excavated approximately 20 m north of STP 1, in an area where midden soil was observed at the surface and appeared likely to contain a deep accumulation of midden. STU 1 was excavated to a depth of 50 cm and produced 156 pieces of debitage, one core, four projectile points, 34 ceramics, 63.4 grams of vertebrate remains, 24.1 grams of invertebrate remains, 125.6 grams of fire-affected rock, and 5.6 grams of charcoal. Artifact density remained relatively constant throughout the unit with midden soil (10YR 2/1 black) silty loam with 30% pebbles present throughout. Scattered pieces of fire-affected rock were observed in the unit during excavation; however no pattern/organization of the FAR was observed from 0-40 cm. A few pieces of FAR were collected as a sample, but the majority were discarded. Excavation of the unit was terminated at 50 cm when an increase in charcoal and FAR was observed, particularly in the southeast corner of the unit. No pattern could be discerned in the FAR, but based on the quantity of charcoal, it was determined that an intact feature may be present but further excavation of the STU would not be able to delineate and characterize it properly. Additional excavation during data recovery efforts will examine the potential feature. Charcoal samples from STU 1 were not submitted for radiocarbon dating at this time, as all samples were recovered while screening. If, during data recovery, further excavation of the feature fails to produce in situ charcoal deposits suitable for dating, then one or more of the samples will be submitted for dating.

Fourteen bedrock milling features (see Figure 4-30, Confidential Appendix B), all of which are situated on granite boulders/outcrops, were recorded at the site. Many of the bedrock outcrops are overgrown by dense vegetation and/or are obscured by accumulated soil/sediment, so it is possible additional features are present. The 14 bedrock milling features contain a total of 3 saucer mortars, one basin, and 15 slicks. Not all milling features were completely cleared of vegetation/sediment, so additional milling elements are highly likely; during data recovery

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excavations each milling feature will be cleaned and recorded in full. Milling features are predominantly clustered immediately north and west of the primary midden deposit.

CA-SDI-5951 Lithic Analysis

The lithic assemblage from CA-SDI-5951 contains a variety of artifact classes including debitage, cores/core tools, hammerstones, a retouched flake, and projectile points (and fragments thereof).

A sample of 209 pieces of debitage from STPs 1-4 and STU 1, and the surface collection were analyzed by flake type and flake size to determine flakedstone production choices (see Tables 4-15 and 4-16). The debitage assemblage is split evenly between diagnostic flakes (types 1-8; n=106; 50.7%) and non-diagnostic shatter (types 10-13; n=103; 49.3%). High percentages of shatter are typical for expedient cobble-core reduction, particularly the initial stages of core reduction or from hard, low-quality volcanic and quartz materials. At this site, the materials chosen for tool production are the cause of the high percentage of shatter, considering the near absence of cortical debitage (n=6; 2.9%). A substantial portion of debitage are pressure flakes (n=48; 23.0%), indicating late stage tool production and/or maintenance was an important task performed at the site. Flake size confirms late stage tool production and maintenance, as virtually all debitage (n=194; 92.8%) is less than 3 cm. Quarrying and/or cobble procurement was likely performed off-site, with cores and bifaces transported to the site for final production. The near-absence of decortification flakes (n=3; 1.4%) and cortical shatter (n=1; 0.5%) confirms initial cobble-core reduction was only a minor task occurring at the site.

The vast majority of debitage (90.9%) consists of locally available quartz and volcanic specimens. These materials dominate the lithic assemblages of almost all archaeological sites in San Diego County. Chert debitage sourced to the Piedre de Lumbre source are the only other material type recovered in more than trace amounts from the site (6.2%). Piedre de Lumbre chert is sourced to an outcrop in northern San Diego County west of the site; although limited in geographic origin, it is found widely dispersed in northern San Diego County, particularly in Luiseno territory.

The wonderstone and obsidian pieces of shatter indicate long distance trade, as neither are locally available. One source for wonderstone is known along the eastern shore of the Salton Sea, and the other is located in northern Baja California, south of Imperial County. The nearest source for obsidian is Obsidian Butte, also located near the Salton Sea; however, this piece does not contain the white inclusions typical of Obsidian Butte material. The obsidian shatter recovered here is more likely from the Coso source, in Inyo County, although the artifact was not tested to identify its specific source at this time.

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Given the limited sample size and volume of excavated matrix, it is possible that the sample is not representative of the overall site. However, the unanalyzed portion of the assemblage is generally similar to the analyzed sample (i.e., dominated by quartz and volcanic shatter) and, overall, the total collection is similar to the assemblages at CA-SDI-9822 and CA-SDI-4558; given the proximity and similar geology between the three, the current assemblage is likely an accurate representation of the overall site.

Table 4-15
Debitage by Flake Type and Material (CA-SDI-5951)

Material	Flake Type*										Total (n)	Total (%)
	1	2	3	4	6	8	10	11	12	13		
Volcanic	1	2	8	21	-	20	1	2	34	7	96	45.9%
Quartz	-	-	6	14	1	23	-	-	50	-	94	45.0%
Chert	-	-	-	-	-	2	-	-	-	-	2	1.0%
PdL Chert	-	1	-	3	-	3	-	-	6	-	13	6.2%
Quartzite	-	-	-	-	-	-	-	-	1	-	1	0.5%
Obsidian	-	-	-	-	-	-	-	-	1	-	1	0.5%
Rhyolite	-	-	-	1	-	-	-	-	-	-	1	0.5%
Wonderstone	-	-	-	-	-	-	-	-	1	-	1	0.5%
Total (n)	1	3	14	39	1	48	1	2	93	7	209	100%
Total (%)	0.5%	1.4%	6.7%	18.7%	0.5%	23.0%	0.5%	1.0%	44.5%	3.3%	100%	

Note*: 1, primary decortification; 2, secondary decortification; 3, early interior; 4, late interior; 6, early biface thinning; 8, finishing/pressure; 10, cortical chunk; 11, cortical non-diagnostic shatter; 12, interior non-diagnostic shatter; 13, Indeterminate

Table 4-16
Debitage by Flake Size and Material (CA-SDI-5951)

Material	Flake Size (cm)										Total (n)	Total (%)
	1	2	3	4	5	6	7	8	9	10		
Volcanic	38	31	16	7	3	1					96	45.9%
Quartz	42	42	7	3							94	45.0%
Chert		2									2	1.0%
PdL Chert	4	8		1							13	6.2%
Quartzite			1								1	0.5%
Obsidian	1										1	0.5%
Rhyolite			1								1	0.5%
Wonderstone			1								1	0.5%
Total (n)	85	83	26	11	3	1	0	0	0	0	209	100%
Total (%)	40.7%	39.7%	12.4%	5.3%	1.4%	0.5%	0%	0%	0%	0%	100%	

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The single retouched volcanic secondary flake has two worked edges displaying a combination of microflaking, polish, unifacial flaking and step-fracturing. Some post-depositional damage was noted as well on the second edge. As only a single flake tool was recovered, it is difficult to extrapolate preferences regarding tool use and manufacture. However, its maximum length of 87.11 mm is itself an oddity, as no debitage at the site is longer than 6 cm. this could suggest even flake tools, should others be present, were also transported to the site as blanks/raw flakes, and then sharpened/re-touched on site or nearby. The absence of formed flake tools, such as scrapers, and non-projectile point bifaces is odd, considering the percentage of late-stage debitage, and may be a reflection of the small sample size.

Eight projectile point fragments were recovered from the site. Four are tip fragments, likely for Cottonwood or Desert Side-Notched points based on their size, particularly their thickness (Cat. 2, 32, 33, and 131), one is a Cottonwood point concave base (Cat. 36), and three are almost complete Cottonwood points with concave bases (Cats. 3, 145, and 147). All are made from locally available quartz and volcanic material. Two of the point tips (Cat. 32 and 131) are unifacial points, while the remainder are all bifacial. Due to the fragmentary nature of the points, detailed metrics are not presented here. Cottonwood projectile points date the Late Prehistoric Period (A.D. 500-1769) and Ethnohistoric Period (post-A.D. 1769) and were used for hunting with the bow and arrow.

Two volcanic hammerstones were recovered, one from the surface collection grab sample, and one from STP 1. One of the hammerstones (Cat. 10) was likely used as a core, based on the number of visible partial flake scars, and subsequently used as a hammerstone with battering on the end. However, it is a small fragment, so it could not be determined if it was a core, or if flakes were removed simply for shaping. Cat. 113 shows battering on the end and margin on interior surfaces and was either likely discarded into a fire pit/hearth as it has been fire-affected. Volcanic hammerstones like these were used for hard-hammer percussion, typically indicative of cobble-reduction and early-stage tool production. Late-stage tool production generally used soft-hammer percussion and pressure flaking tools, such as bone and antler. The absence of soft-hammer and percussion tools is not surprising, even considering the abundance of pressure flakes and single biface thinning flake, as generally such materials are perishable.

CA-SDI-5951 Groundstone Analysis

Five groundstone artifacts recovered from CA-SDI-5951 were analyzed for morphological and use-wear patterns (see Table 4-17). These include four handstone fragments, and one indeterminate fragment. The pestle and second indeterminate groundstone are not included in this analysis. Other types of groundstone not present in the current assemblage include millings and mortars.

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Three handstones and the indeterminate fragment were recovered from the ground surface and the remaining handstone was recovered from STP 4. All five are granite and fragmentary: two are margin fragments, two are end fragments, and one is indeterminate. The indeterminate fragment is a thin portion of just the ground surface of the tool, similar to a flake, which may represent re-sharpening or re-shaping of the tool. Bifacial use-wear is present on one fragment (Cat. 5), while the others are either unifacial or indeterminate. The four larger fragments show evidence of shaping, but due to the fragmentary nature, the degree of shaping cannot be determined. Shaping of groundstone tools is indicative of a choice to invest more time and effort into the tool, compared to unshaped tools which would indicate expediently collected, used, and discarded tools.

All ground surfaces are polished, with only a few evidencing striations and pecking. End blunting and polish are not present on the two end fragments, indicating at least those portions were not used for grinding or as hammerstones. Two of the fragments recovered from the ground surface have been burned, suggesting either they were recycled into thermal features after breaking, which is quite common in southern California, or were burned during a wildfire. The relatively small groundstone assemblage is likely a function of the limited volume of excavated sediment, as the number of milling features indicates a substantial reliance on food processed via grinding.

Table 4-17
Groundstone Attributes (CA-SDI-5951)

Groundstone		
# Specimens	5	%
<i>Condition</i>		
Indeterminate	1	.20
End	2	.40
Margin	2	.40
<i>Shaping Degree</i>		
Unshaped	0	.00
Minimal	0	.00
Moderate	0	.00
High	0	.00
Indeterminate	4	1.00
<i>Surface Frequency</i>		
1	4	.80
2	1	.20
Total # Surfaces	6	
<i>Surface Shape</i>		
Flat	2	.33
Convex	4	.67

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Table 4-17
Groundstone Attributes (CA-SDI-5951)

Groundstone		
Indeterminate	0	.00
<i>Texture</i>		
Smooth	6	1.00
Irregular	0	.00
<i>Polish</i>		
Present	6	1.00
Absent	0	.00
<i>Striae</i>		
Present	2	.33
Absent	4	.66
<i>Pecking</i>		
Present	4	.67
Absent	2	.33
<i>Other Attributes</i>		
Fire Affected	2	.40

CA-SDI-5951 Ceramic Analysis

As with the lithic assemblage, only a sample of the ceramic assemblage was fully analyzed. The analyzed sample includes one pipe fragment, two rim sherds, and 58 body sherds. All ceramics are Tizon brownware and, with the exception of the pipe fragment and three body sherds which are buffware.

The pipe fragment consists of the small flanged handle from a bow (curved) pipe. A small notch is present at the bottom where cordage could have been tied. Ethnographic and archaeological evidence in San Diego County are inconclusive as to the origin, extent, and use of ceramic pipes (Laylander 2005). As the pipe flange is a buffware, it likely originates in the Colorado Desert, suggesting trade with the Kumeyaay or Cahuilla inhabitants of the desert. The same can be said for the other three buffware sherds. A few sherds show evidence of remnant coils along the breakages, consistent with coiling and paddle/anvil production methods observed throughout southern California ceramics and as described in ethnographic studies (Kroeber 1925).

The two rims sherds are both Tizon brownware; one has a square lip and recurved rim (Cat. 60), and the other is a square lip with a straight rim (Cat. 34). The recurved rim is a thick sherd with a large diameter opening, and is heavily burned on the exterior, suggesting it is likely a cooking pot. The

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straight rim (Cat. 34) is a much smaller fragment, so extrapolating rim diameter and therefore vessel type is much more difficult. It likely has a large diameter opening, indicative of a cooking pot.

Other notable sherds include one body sherd (Cat. 121) which has a biconically drilled hole along one of the broken edges and seven burned sherds (in addition to the burned sherds noted above). Drilled holes in ceramic sherds are indicative of attempted repairs wherein broken vessels were tied together with cordage. The burned shreds have charcoal and soot on the exterior surfaces, likely from use as cooking pots. One probably edge-ground brownware sherd was also collected from the ground surface (Cat. 209). Due to its small size, it is not possible to determine the purpose of artifact (such as a pendant or gaming piece) or if the artifact was repurposed from a different kind of vessel.

Ceramic artifacts arrive in San Diego in the Late Prehistoric Period (post-A.D. 500) and are generally thought to originate from the east. While they are found in greater abundance in southern and eastern San Diego County than in the north, many sites in traditional Luiseno territory contain substantial ceramic assemblages.

CA-SDI-5951 Faunal Analysis

A complete faunal analysis on the vertebrate and invertebrate collection was not performed at this time. A basic analysis was performed identifying invertebrates to the family or genus level, and categorizing the vertebrates to generalized categories such as large/medium mammal, small mammal/rodent, reptile, and fish. This analysis was performed on a sample of the recovered remains from STP 1-4, STU 1, and the surface collection (40.6 grams of invertebrates and 71.0 grams of vertebrates).

Invertebrate remains include *Argopecten* sp. (17.4 grams), *Chione* sp. (15.3 grams), *Donax* sp. (6.7 grams), *Chiton* (0.3 grams), and 0.9 grams of unidentifiable fragments. Shellfish species indicate that inhabitants procured directly or traded for marine resources for subsistence, some 14 miles to the west. Although somewhat limited compared to coastal and lagunal sites in southern California, the invertebrate assemblage is quite diverse for inland sites, and shows evidence that site inhabitants were accessing (through trade or direct procurement) a variety of marine locations, as these species inhabit different environments (i.e., tidal mudflats and sandy beaches). Vertebrate remains consist of predominantly small mammal and rodent remains (such as mouse and jackrabbit), with one snake vertebrate, and one rib bone of a medium/large sized mammal (likely deer). No bone tools were identified. Many of the vertebrate, and some invertebrate, remains have been burned, likely from cooking during meal preparation. The sites location along a large drainage would have attracted a wide variety of animals, and therefore would have provided a local source of food for site inhabitants. A more detailed analysis of vertebrate remains will be performed as part of mitigation efforts which should be able to elicit

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more nuances regarding animal procurement subsistence practices, particularly if data recovery excavation is performed which will increase the sample size.

CA-SDI-5951 Human Remains

Of the burned bone fragments identified within the collection, multiple specimens were separated from the general collection, as they displayed characteristics consistent with cremated human remains, and could not positively be identified as non-human by Dudek's forensic anthropologist Samantha Murray. These specimens were separated from the general faunal collection, and were brought to Dr. Madeline Hinkes to determine if they were human. Dr. Hinkes identified eight specimens as possibly human (none were positively identified as human) on July 13, 2016. As a result of this identification, Dr. Hinkes notified the San Diego County Coroner, Julio Estrada, who in turn notified the NAHC. The NAHC determined the San Luis Rey Band of Mission Indians as the most Likely Descendant on July 14, 2016. Seventeen additional potential human remains were identified during additional field efforts on September 27, 2016. These remains were analyzed by Dr. Hinkes November 3, 2016. Of these, only two bones were identified as possibly human. All 10 of the potentially human bones have been burned, indicating they were cremated. Consultation regarding treatment and disposition of the human remains is in progress; this report will be updated upon completion of the consultation process. Documentation regarding human remains is included in Appendix F.

CA-SDI-5951 Summary

Testing at CA-SDI-5951 produced eight projectile point fragments, one flake tool, three cores, 332 pieces of debitage, two hammerstones, four handstone fragments, one pestle, two indeterminate groundstone fragment, 117 ceramic sherds, fire-affected rock, charcoal samples, 105.3 grams of bone, and 56.0 grams of shell. Of the bone, 10 individual specimens were identified as being potential human remains. The artifact assemblage indicates that flakedstone tool production, finishing, and re-sharpening occurred at the site from cores procured and initially processed off-site. Given the geographic proximity and similarity in artifact assemblage, as well as the overlapping chronological period, it is reasonable to assume that occupation at this site is related to the occupation at site CA-SDI-9822. As this site is smaller, and appears to contain a more limited deposit, it may be a concurrent satellite site, or possibly an occupation site prior to occupation at CA-SDI-9822. The presence of European trade beads at CA-SDI-9822, but not at CA-SDI-5951, suggests that this location may have been abandoned prior to European contact; further excavation at CA-SDI-5951 could confirm or reject that possibility.

Disturbance from both bioturbation, grading (both for the construction of Deer Springs Road and leveling of the adjacent parcel), and installation of utility poles have impacted the site. Although

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disturbances to the site are substantial, the majority of the midden deposit appears to be intact and contains a considerable variety and quantity of artifacts that have the potential to provide information relating to trade, subsistence, and settlement patterns in San Diego prehistory. The likely thermal feature identified in STU 1, also has the potential to provide an absolute date for the site, as intact charcoal deposits are one of the best ways to date a site, and also has the potential through detailed faunal analysis, to address questions relating to subsistence practices.

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5 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

5.1 Resource Importance

Twelve cultural resource sites (CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, CA-SDI-17265, and the 1901 historic structure/location) and two isolates (SDM-W- 3880C and P-37-025968) were identified within the Newland Sierra Project area. Six sites (CA-SDI-4558, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265) were tested to determine site significance in compliance with County of San Diego and California Environmental Quality Act (CEQA) guidelines. Sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, and CA-SDI-5640 were not tested, as these sites have been destroyed by development or were incorrectly mapped and are located outside of the project area. Isolate finds are identified as not significant. The testing program included a review of previous work, surface collection, documentation of milling features, excavation of STPs and test units, artifact analysis, and a determination of site significance.

No structures, features, or other remains were identified at the mapped location for a historic structure shown on early maps (1901 Escondido and San Luis Rey USGS maps). As no evidence for the structure or potential associated features was identified, no evaluation was performed at this time. If subsurface features are present they may be able to provide important information on early homesteading in north San Diego County. Therefore, implementation of a subsurface exploratory research program for the 1901 historic structure/location will be performed to identify any potential features and will address historical archaeological research issues such as functional artifact pattern recognition and consumerism studies to determine the types of activities represented, and therefore, provide a contribution to the early history of the San Marcos/San Diego region.

San Diego County is the lead review agency, and therefore all archaeological sites within the project area have been evaluated for eligibility to the CRHR under CEQA Guidelines, as well as being evaluated for importance under the County Guidelines. While sites may be recommended as eligible or not eligible for listing on the CRHR, under the County Guidelines, all sites are considered “important.” Although all sites are considered important under the County Guidelines, the “importance” of sites recommended as not eligible for listing on the CRHR can be exhausted through recordation, testing, curation of artifacts (if recovered), and grading monitoring.

Evaluation of significance requires the development of an understanding of each identified resource in such a way that its historical significance can be assessed. CEQA mandates the

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consideration of the historical significance of a resource in an effort to gauge whether it has the potential to be listed on the CRHR. Criteria 1–4 of CEQA are a set of standards for determining the eligibility of a resource to be considered a historical resource eligible for listing on the CRHR. These criteria were discussed in Chapters 1 and 2.

The following sections provide a discussion of eligibility to the California Register of Historic Places, site testing results, research value, and significance determination for sites CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, CA-SDI-10747H, CA-SDI-17264, CA-SDI-17265, and the 1901 historic structure/location.

5.1.1 Site Integrity

Current archaeological methods allow a great deal of information to be extracted from cultural resources, providing certain criteria are met. Generally speaking, archaeological sites useful for addressing important research questions must retain a minimum amount of stratigraphic integrity and/or an assemblage that can be confidently assigned to a cultural group. If these criteria are not in place, cultural materials recovered within the course of an excavation cannot be differentiated by time period or by culture. This greatly diminishes the value of the resource as a record of the human story. However, for a single deposit locality, integrity is not as critical as a multi-deposit site. Site integrity for CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265 is poor, as these sites are shallow and disturbed from off-road vehicle activity, previous grading, foot traffic, bioturbation, and modern trash dumping.

Site integrity for site CA-SDI-4588 is fair to good, although disturbance at the site includes road and residential construction, and previous disking. Cook et al. (1977) stated that a substantial cultural deposit, with a depth of 130 cm, was present.

Site integrity for CA-SDI-5951 is fair to good. Disturbances, which include construction of Deer Springs Road, installation of a utility pole, and some grading of the adjacent parcel are primarily located along the edges of the site. The central portion of the site where the primary deposit is located is relatively undisturbed, other than some rodent burrowing. The evaluation excavation performed at this time identified a substantial cultural deposit to a minimum depth of 50 cm.

Site integrity for CA-SDI-9822 is also fair to good. Previous excavations by Palomar Community College identified a significant cultural deposit with a depth of 120 cm. Major disturbance at the site includes previous work by Palomar Community College, and the construction of Deer Springs Road and the trailer park to the south of Deer Springs Road.

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Site integrity for the 1901 historic structure/location is fair to good. Disturbance at the historic location includes foot traffic on the adjacent trail, minor modern trash dumping, and some off-road vehicle activity. Nevertheless, the historic location is situated in an undeveloped valley area and buried foundations and associated features may still be present.

Sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, and CA-SDI-5640 were not relocated at their mapped locations as a result of prior disturbances or being mapped incorrectly. In either case, none of these five sites retain any integrity.

5.1.2 Research Potential

The current field survey and test program identified nine previously recorded cultural resources (CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, and CA-SDI-10747H), two new cultural resource sites (CA-SDI-17264 and CA-SDI-17265), and a 1901 historic structure/location within the project area and off-site improvement areas. Sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, CA-SDI-5640, and the 1901 historic structure/location were not relocated and may have been destroyed by road and residential development. Therefore, they cannot provide any information regarding the research questions. Because of the paucity of cultural material present at sites CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265, research questions regarding chronology, trade and travel, and settlement and subsistence could not be addressed.

However, research questions regarding the above topics were addressed for sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822. For site CA-SDI-4558, previous work by Cook et al. (1977) and the current study were used to address the research questions. For site CA-SDI-5951, the current study was used to address the research questions. For site CA-SDI-9822, previous work by Palomar Community College was used to address the research questions.

Although it appears that the 1901 historic structure/location may have been previously destroyed, subsurface features (i.e., privy pits, wells, refuse dumps, and architectural foundations associated with the 1901 occupation) may still be present. As such, research topics regarding historic activities including community development and economic and social concerns of the Merriam Mountains region from the late 1800s to the early 1900s may be addressed through completion of a subsurface exploratory program to identify, document, and excavate any potential features.

5.1.3 Resource Importance and Significance Evaluation

San Diego County is the lead review agency for the project, therefore the sites have been evaluated for eligibility to the CRHR under CEQA Guidelines as well as evaluated for importance under the County Guidelines.

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Under the County guidelines all evaluated sites (CA-SDI-4558, CA-SDI-5951, CA-SDI-9253, CA-SDI-9822, and CA-SDI-10747H, CA-SDI-17264 and CA-SDI-17265) are considered “important.” Although all sites are considered important under the County Guidelines the “importance” of the sites recommended as not eligible for listing in the CRHR will be considered mitigated through testing, documentation, curation or archaeological materials, and archaeological monitoring of initial ground disturbance for the entire project area.

Sites CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265 have poor site integrity, and produced a low amount of artifactual and ecofactual materials to adequately address the research questions posed. Given the results of the testing program, additional work at sites CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265 would not significantly contribute to our understanding of these sites or past use of the site locations or the site occupants. Given the poor site integrity and low amount of artifactual and ecofactual materials recovered, sites CA-SDI-9253, CA-SDI-10747H, CA-SDI-17264, and CA-SDI-17265 are recommended as not significant under County RPO and CEQA, and not eligible for listing in the CRHR and local register; however, they are considered important under County Guidelines.

Sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, and CA-SDI-5640 are all milling stations (single features comprised of only one or two elements) that have been destroyed by development. As these four sites are either destroyed or mapped incorrectly they are recommended as not significant under County RPO and CEQA, and not eligible for listing in the CRHR and local register and are not considered important under County guidelines.

Sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 are identified as significant under CEQA. Site CA-SDI-4558 was also identified as significant and eligible for placement on the National Register of Historic Places (Cook et al. 1977; White 2005). Given the presence of possible human cremated bone at CA-SDI-5951, the presence of human cremated bone and a pictograph feature at CA-SDI-9822, and that CA-SDI-4558 was identified as eligible for placement on the National Register of Historic Places, all three sites are identified as RPO significant. Based on current work and previous work by Cook et al. (1977) and Palomar Community College, sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 have fair to good site integrity, and produced a large amount of diverse artifactual materials that can be used to address important research questions.

In addition, it is clear that the analysis and comparison of site CA-SDI-4558 with sites CA-SDI-5951 and CA-SDI-9822 give archaeology a rare opportunity to compare and contrast a primarily Early Period site (CA-SDI-4558) with primarily Late Period sites (CA-SDI-5951 and CA-SDI-9822), situated in the same environmental setting. This opportunity is especially important for the northeastern portion of the San Diego region, as few habitation sites have been carefully analyzed and compared to one another. This situation provides a rare opportunity to compare

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Early and Late Period trade patterns, subsistence patterns, settlement patterns, lithic technologies, and to answer a range of other research questions for San Diego County.

No material remains of the 1901 historic structure/location have been found, therefore this location is considered under County guidelines to be not significant under CEQA. However, there is still a potential for encountering historic subsurface features (i.e., privy pits, refuse dumps, and architectural foundations) at this location which could be associated with the first historic settlers of the Merriam Mountains area, as well as material remains of later era residents. Such data could provide valuable information on early settlement in north San Diego County.

5.1.4 Native American Heritage Values of Tested Sites

Native American consultation is currently being performed by the County and is on-going. Any information provided by the NAHC or Tribes in the area regarding archaeological sites or potential Traditional Cultural Properties (TCP) or Tribal Cultural Resources (TCRs) will be documented as an addendum to this report after such details are provided by the County. To date, no formal TCPs are recorded within the project area.

During the current archaeological evaluation, artifacts and remains were identified or recovered that could be reasonably associated with such practices. Aside from human bone, evidence of ceremony or items of cultural patrimony include burned beads (shell, stone, glass) and projectile points, pottery whirls, and pipe fragments, among other unique objects. Sites SDI-5951 and SDI-9822 have especially dense concentrations of these materials and thus the importance of these locations as places to which Native Americans attach religious or cultural significance should be self-evident.

Pechanga Ethnography

The Pechanga Band of Luiseno Indians provided an ethnography tethered to the Newland Sierra Project area to the Applicant. The unmodified ethnography, summarized here, is attached to this report as Confidential Appendix G.

The Pechanga tribe has noted that the Project site intersects a named landscape of traditional cultural importance to the Luiseño, known as *Pavxin*. Ethnographic/ethnohistoric information relating to *Pavxin* was compiled by the Pechanga Band of Luiseño Indians and submitted for the record concerning the Project (Woodward 2017).

The Pechanga Ethnography provides substantial detail regarding manner in which local Indians interacted with the land in and around the Project site. According to that ethnography, the

Luiseño traditional territory encompasses approximately 2,000 square miles, including all of Western Riverside County and northwestern San Diego County. The Luiseño aboriginal territory

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is determined by our oral traditions (i.e., songs and historical accounts) and is defined by place names, rock art, pictographs, petroglyphs, and an extensive artifact record.

(Pechanga Ethnography (2017), p. 3.)

The Luiseño creation story centers around a wise man named *Wuyóot*, who was both a teacher and protector of his people. The Pechanga Ethnography states that “through his creation, travels, and death, *Wuyóot* drew the design for the Luiseño ancestral territorial landscape.” (Pechanga Ethnography (2017), p. 5, citing Applegate 1979; Curti 2013; Pechanga Band 2016; White 1957:4-5, 1963:361.) As explained in the Pechanga Ethnography, the Luiseño understand time not as a linear progression of events, but “as a circular re-folding, where past, present, and future continually co-exist in and through different stories, relations, places, and activities.” (Pechanga Ethnography (2017), p. 6.) In addition, history, identity, and spirituality are intimately tied to specific environment, geographical features, landmarks, and landscapes, even though the boundaries of these landmarks and landscapes are sometimes not clearly delineated.

According to the Pechanga Ethnography, the southern portion of the proposed Project encompasses a tribal cultural resource known as *Pavxin* which served functions important to Luiseño lifeways and practices. Information provided by the San Luis Rey Band of Mission Indians also supports this view. Based on consultation with both Tribes and with the applicant, the County has determined that, for purposes of this cultural resources inventory, the area known as *Pavxin*, anchored locally by CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822, will be deemed eligible for listing as a Traditional Cultural Property (TCP) as that term is used under state and federal law. Accordingly, project-related impacts to *Pavxin* may be considered significant and require mitigation.

5.2 Impacts Analysis

Thresholds of Significance

The significance criteria listed below are derived from Appendix G of the CEQA Guidelines, and CEQA Guidelines section 15064.5. The criteria were used to determine the significance of Project impacts on historical resources and unique archaeological resources. The criteria includes whether Project impacts would disturb any human remains, including those interred outside of formal cemeteries (e.g., at historic homesteads, as part of an archaeological site).

For purposes of CEQA, the term “historical resources” includes a resource listed in, or determined to be eligible for listing in, the CRHR. The CRHR listing criteria includes whether the resource: (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

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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 pre-history or history.

A “historical resource” is also defined as a resource included in a local register of historical resources, as defined in CEQA Guidelines section 15064.5(a)(2), or identified as significant in a historical resources survey meeting the criteria in section 5024.1(g) of the California Public Resources Code.

A “unique archaeological resource” is defined under CEQA (Public Resources Code section 21083.2(g)) to mean an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability it meets any of the following criteria:

1. The archaeological artifact, object, or site contains information needed to answer important scientific questions, and there is a demonstrable public interest in that information;
2. The archaeological artifact, object, or site has a special and particular quality, such as being the oldest of its type or the best available example of its type; or
3. The archaeological artifact, object, or site is directly associated with a scientifically recognized important prehistoric or historic event or person.

An archaeological artifact, object, or site that does not meet the above criteria is a non-unique archaeological resource (California Public Resources Code section 21083.2(h)). An impact on a non-unique resource is not a significant environmental impact under CEQA (CEQA Guidelines section 15064.5(c)(4)).

In general, impacts to the recorded archaeological resources would be less than significant if the resource has been evaluated and determined not to be significant or was previously destroyed. No mitigation is required for impacts to sites that are not significant or where resources are not present. Moreover, impacts to the site would be considered significant if the recorded archaeological resource has been determined to be significant as either a “historical resource” or a “unique archaeological resource” as defined under CEQA.

Regarding human remains, implementation of the proposed Project would have a significant adverse impact if it would disturb any human remains, including those interred outside of formal cemeteries. CEQA Guidelines sections 15064.5(d) and (e) assign special importance to human remains and specify procedures to be used when Native American remains are discovered. These

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procedures are detailed further under California Public Resources Code section 5097.98 and California Health and Safety Code section 7050.5.

Guidelines for the Determination of Significance

For the purposes of this EIR, any of the following will be considered a significant impact to cultural resources:

1. The project, as designed, causes a substantial adverse change in the significance of a historical resource, as defined in Section 15064.5 of the CEQA Guidelines. This shall include the destruction, disturbance, or alteration of characteristics or elements of a resource that causes it to be significant in a manner not consistent with the Secretary of Interior Standards.
2. The project, as designed, causes a substantial adverse change in the significance of an archaeological resource, as defined in Section 15064.5 of the State CEQA Guidelines and Public Resources Code section 21083.2(g). 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. It also includes disturbance to any human remains, including those interred outside formal cemeteries.
3. Activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance are proposed and the project fails to preserve those resources.

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

- Guideline 1 and 2 are derived directly from CEQA, as well as the County of San Diego Guidelines for Determining Significance for Cultural Resources (County of San Diego 2007b). Sections 21083.2 of the Public Resources Code and 15064.5 of the CEQA Guidelines requires that cultural resources on a project site be evaluated for significance. If any resources qualify as significant, CEQA then requires that the project under review be assessed for its potential to significantly impact those resources. Any significant impact identified through this evaluative process would then have to be mitigated, unless mitigation is infeasible. Additionally, CEQA Guidelines section 15064.5(d) and (e) assign special importance to human remains and specify procedures to be used when Native American remains are discovered.
- Guideline 3 was selected because cultural resources are protected under the County RPO. The County RPO does not allow non-exempt activities or uses damaging to significant prehistoric lands on properties under County jurisdiction. The only exempt activity is

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scientific investigation (County of San Diego 2007a). The project is required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria for prehistoric sites. Non-compliance would result in a project that is inconsistent with County standards.

Cultural Resources Considered Eligible for Listing in the California Register

Three archaeological sites have been evaluated and recommended eligible for listing in the CRHR: CA-SDI-4558, -5951, and -9822. CA-SDI-5951 and CA-SDI-9822 contain rich archaeological deposits dating primarily to the Late Prehistoric period (post A.D. 500) and include large amounts of glass, shell, and stone beads, projectile points, ceramic sherds, pipe fragments, and other relatively rare aboriginal artifacts encapsulated in dense midden soils. Together, artifacts from both sites can help address research questions focusing on aboriginal socioeconomics just prior to and after Euro-American contact because many non-aboriginal artifacts were found at these sites, such as glass trade beads. The density and diversity of artifacts at CA-SDI-5951 and CA-SDI-9822 is rare in San Diego County and qualifies them as a “unique archaeological resource” under CEQA guidelines. The rock art at CA-SDI-9822 underscores this site’s uniqueness as well.

CA-SDI-4558 is one of the best known examples of a Pauma Complex site (Archaic period; pre A.D. 500) with only minor amounts of Late Prehistoric artifacts. The Pauma Complex is considered an inland San Diego County manifestation of the Millingstone Pattern that appears in California from the beginning of the Holocene 10,000 years ago and persisting until approximately 1500 years ago. Single-component Pauma Complex archaeological deposits are rare. For these reasons, CA-SDI-4558 is considered eligible for CRHR listing and also considered a “unique archaeological resource” under CEQA.

Impact Analysis (Guidelines 1 and 2: Historical Resources)

The 1901 historic structure/location was not re-located, and the structure appears to have been destroyed. However, because subsurface features may be present that can provide information on early homesteading in north San Diego County, and because project-related construction activities may encounter the 1901 historic structure/location, development of the proposed project may result in **potentially significant impacts** to a historic resource (**Impact CR-1**).

Impact Analysis (Guidelines 2 and 3: Archaeological and Tribal Cultural Resources)

As presently planned, the project would directly or indirectly affect eight archaeological sites and two isolates: sites CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9822, and CA-SDI-17264, and isolates SDM-W- 3880C and

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P-37-025968. Three other sites, CA-SDI-9253, CA-SDI-10747H, and CA-SDI-17265, would be avoided through incorporation into open space. After evaluating the sites that would be impacted, Dudek determined that only three sites are eligible for listing in the CRHR, and thus qualify as significant under CEQA or the County RPO: CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822. These same sites also qualify as tribal cultural resources, and are significant for that reason as well. In addition, these sites, along with the roadbed material beneath Deer Spring Road which connects them, form an integrated TCP and are significant for that reason as well. The dimensions of the TCP impact area are shown in the confidential Tribal Treatment Plan.

Sites Located on the Project Site Deemed Significant

CA-SDI-4558

Site CA-SDI-4558 is located within the area identified for the proposed widening of Deer Springs Road. However, only certain portions of the site contribute to its CRHR and CEQA significance, and the project proposes to preserve and protect these portions within a natural park. There is still the possibility to inadvertently disturb significant archaeological deposits within the Deer Springs Road improvement area; impacts to these deposits would be considered significant absent mitigation. The natural park, including public trails, has been designed to avoid the significant portions of the site. During past archeological excavations, a wide range of artifacts were recovered, including cobble and flake tools, bifaces, milling tools, bone tools, a crystal, ceramics, shell, and bone that primarily dated to the Archaic period (i.e., pre AD 500). As described in Section 2.5.1.4, CA-SDI-4558 contains or has the potential to contain information important to prehistory. CA-SDI-4558 is identified as significant under CEQA and RPO criteria. However, the RPO protections do not apply to this site because the County has identified the proposed Deer Springs Road improvements as an essential public facility that includes public use (County of San Diego 2007a). However, even if the RPO did apply, no significant impact has been identified because the proposed road widening would not affect the significant portions of the site. Instead, the Deer Springs Road improvements would affect only that portion of site CA-SDI-4558 deemed not significant.

Consistent with the preservation-in-place provisions of CEQA Guidelines Section 15125.4(b)(3), the proposed project would avoid the significant archaeological deposits located at CA-SDI-4558 by incorporating the periphery of the significant deposits into a park or greenspace (preservation in place option 2) with a trail planned through the greenspace park. Incorporation of the periphery of the significant parts of the site into a greenspace park was selected as the preferred option because it achieves complete avoidance of significant deposits and helps the project fulfill its open space allocation and public access requirements. Extending the greenspace park over the

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significant site deposits (option 2), capping (option 3) and deeding the site into a conservation easement (option 4) are not feasible. The proposed mitigation would reduce the Project's impacts on the site to a less than significant level. The proposed mitigation also represents a feasible means of preserving the integrity of the site's role within the Pavxin TCP. In addition, pursuant to the Tribal Treatment Plan, cultural material from the site may be removed and reburied at the agreed-upon repatriation/reinternment area within the Project site.

Improvements to Deer Springs Road may result in the inadvertent damage to significant archaeological deposits not yet identified. These impacts would be **potentially significant direct impacts absent mitigation (Impact CR-2)**.

CA-SDI-5951

Site CA-SDI-5951 is located at the south end of the proposed project Site within the area identified for the widening of Deer Springs Road. Significant archaeological deposits containing a diverse range of artifacts, including glass, shell, and stone beads; ceramics (sherds and pipe fragments); multiple forms of stone tools; and food remains (faunal bone and marine shell), were identified in two locations within the transportation corridor impact area. Multiple bedrock milling features and less-dense archaeological deposits are located outside of the impact area to the north. The significant archaeological deposits located within the impact area contribute to the site's CRHR eligibility, and qualify it as a historical resource and a "unique archaeological resource" under CEQA, and it is considered significant under the RPO. However, because the County has identified Deer Springs Road off-site improvement as an essential public facility that includes public use, the RPO does not apply for this type of impact.

Consistent with the preservation-in-place provisions of CEQA Guidelines Section 15125.4(b)(3), the project can feasibly avoid portions of the significant portions of CA-SDI-5951 (option 1). Such avoidance would be accomplished by constructing a retaining wall along the north side of Deer Springs Road to reduce the amount of archaeological deposits that are disturbed. General avoidance is preferable over incorporation into greenspace or capping because it preserves the avoided areas of the archaeological site in its native state. The use of a conservation easement would put restrictions on the area that are not compatible with future visitation by local Native American tribal members.

The remaining significant portions of CA-SDI-5951, however, cannot be feasibly preserved in place by any of the four methods described in CEQA Guidelines Section 15126.4(b)(3), because the at-grade alignment and expansion of Deer Springs Road would intersect those parts of the site and potentially disturb significant archaeological deposits located there. Consequently, impacts to such resources would be mitigated to a less-than-significant level through data

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recovery, as permitted under CEQA Guidelines Section 15126.4(b)(3)(C). Note also that improvements to Deer Springs Road are considered exempt under the RPO, and are included in the County's 2011 General Plan Update. The General Plan Update includes provisions for expanding Deer Springs Road to six lanes (County of San Diego 2011); however, the current project circulation element lessens impacts with a four-lane expansion of Deer Springs Road. In this way, impacts to CA-SDI-5951 would be reduced to the extent feasible.

For purposes of CEQA, the direct impacts to those portions of site CA-SDI-5951 within and north of Deer Springs Road would be **significant** absent mitigation (**Impact CR-3**). The proposed mitigation would reduce the Project's impacts on the site to a less than significant level. The proposed mitigation also represents a feasible means of preserving the integrity of the site's role within the Pavxin TCP. In addition, pursuant to the Tribal Treatment Plan, cultural material from the site may be removed and reburied at the agreed-upon repatriation/reinternment area within the Project site.

CA-SDI-9822

Site CA-SDI-9822 is located within the area identified for the widening of Deer Springs Road. As described above, five STPs were excavated at CA-SDI-9822 as part of the investigation for this project. Three STPs were positive and two STPs were negative. The positive STP results represent a significant intact subsurface deposit, adjacent to and south of Deer Springs Road. In addition, Palomar College preformed academic-oriented excavations at the site some years ago, generating a collection that includes tens of thousands of artifacts, including glass, shell, and stone beads; bone artifacts; ceramic artifacts (including pipe fragments); myriad stone tools; and large amounts of food remains (i.e., animal bone, marine shell). Numerous burned artifacts and possible cremated human remains are also contained in the collection generated by Palomar College. On the basis of previous and current work, and the presence of a pictograph feature and cremations, site CA-SDI-9822 is identified as significant under CEQA and RPO criteria, and it qualifies as a historical resource and a "unique archaeological resource" under CEQA. As the County has identified Deer Springs Road off-site improvements as an essential public facility that includes public use, the RPO does not apply for this type of impact.

Pursuant to CEQA Guidelines Section 15126.4(b)(3), the project can feasibly avoid the significant portions of CA-SDI-9822 (preservation in place option 1). This can be accomplished by constructing a retaining wall along the north side of Deer Springs Road to reduce the amount of archaeological deposits that are disturbed. General avoidance is preferable over incorporation into greenspace (option 2) or capping (option 3), because it preserves the avoided areas of the archaeological site in its native state. The use of a conservation easement (option 4) would put restrictions on the area that are not compatible with future visitation by local Native American

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tribal members. The remaining significant portions of CA-SDI-9822 cannot be feasibly preserved in place by any of the four methods described in CEQA Guidelines Section 15126.4(b)(3), because the at-grade alignment and expansion of Deer Springs Road would intersect those parts of the site and potentially disturb significant archaeological deposits located there. Consequently, impacts to such resources would be mitigated to a less-than-significant level through data recovery, as permitted under CEQA Guidelines Section 15126.4(b)(3)(C). Note also that improvements to Deer Springs Road are exempt from the RPO, and are included in the County's 2011 General Plan Update. The General Plan Update includes provisions for expanding Deer Springs Road to six lanes, but the current project circulation element would lessen impacts with a four-lane expansion of Deer Springs Road. In this way, impacts to CA-SDI-9822 have been reduced to the extent feasible.

For the purposes of CEQA, direct impacts to those portions of site CA-SDI-9822 south of, within, and north of Deer Springs Road would be **significant** absent mitigation (**Impact CR-4**).

The remaining portion of CA-SDI-9822 would be preserved in place, as it would be located within open space. Construction-related dust may affect the pictograph at the site. This would be a temporary but potentially **significant** indirect impact absent mitigation (**Impact CR-5**).

Archaeological materials were collected during the Palomar College excavations in the 1980s from the area of CA-SDI-9822 that would be largely avoided through the use of a retaining wall. These archaeological materials have not been properly cataloged or analyzed, creating a **significant impact** to the scientific value of the site absent mitigation (**Impact CR-6**).

As shown below, the proposed mitigation would reduce the Project's impacts on the site to a less than significant level. The proposed mitigation also represents a feasible means of preserving the integrity of the site's role within the Pavxin TCP. In addition, pursuant to the Tribal Treatment Plan, cultural material from the site may be removed and reburied at the agreed-upon repatriation/reinternment area within the Project site.

Impacts to Non-Site Deposits within the TCP

Roadbed Materials

Deer Springs Road was constructed prior to the implementation of local, state, and federal regulations regarding the treatment of cultural resources. Given the density of archaeological materials at sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822, and given that archaeological materials are visible in deep road cut exposures along Deer Springs Road, it is possible that archaeological deposits deriving from these sites and associated with the broader Pavxin TCP are embedded in the subsurface roadbed. Widening Deer Springs Road, as contemplated by the

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County General Plan and this Project, would disturb any such deposits. This would result in a **significant impact** to the cultural values of the Pavxin TCP absent mitigation (**Impact CR-7**).

Unexpected Encounters with Cultural Resources

Given the overall cultural sensitivity of the project Site and vicinity, construction-related impacts to currently-unknown/unrecorded archaeological deposits are possible. In addition, although the boundaries for sites CA-SDI-5951, CA-SDI-9822, and CA-SDI-4558 have been delineated based on extensive archaeological and cultural investigations, it is possible that archaeological deposits connected to or associated with CA-SDI-5951, CA-SDI-9822, and/or CA-SDI-4558 exist outside the currently-delineated boundary of those sites. Construction-related activities could adversely affect these resources. Such unexpected encounters with cultural resources would be considered **significant impacts** absent mitigation (**Impact CR-8**). Increased Accessibility to Cultural Resources through Public Awareness

The portions of sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822 that would be avoided (placed within open space) may result in increased public access, possibly resulting in impacts from pot-hunters and looters. These would be **potentially significant indirect impacts** absent mitigation (**Impact CR-9**).

Sites Located on the Project Site Deemed Not Significant

CA-SDI-4370

Site CA-SDI-4370 is located within the proposed development impact area. No further work is recommended for this site, as this isolate bedrock milling feature has been destroyed by previous grading for ranching and housing development.

CA-SDI-4371

Site CA-SDI-4371 is an isolate milling station composed of one milling slick, and is recorded at the south end of the proposed project Site. Prior survey records indicate that CA-SDI-4371 exists primarily outside of the project Site; however, the milling feature was not re-located and, therefore, may be within the project Site. It is more likely, however, that the feature has been destroyed by road construction, or is located adjacent to, but outside of, the project Site.

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CA-SDI-5639

Although site CA-SDI-5639 is located within the proposed development impact area, its two bedrock milling features have been destroyed by previous development. Thus, no further work is recommended for this site.

CA-SDI-5640

Although site CA-SDI-5640 is located within the proposed development impact area, this isolate bedrock milling feature has been destroyed by previous development. Thus, no further work is recommended for this site.

CA-SDI-9253

Site CA-SDI-9253 is located within the open space easement within the project Site, and would not be affected. Site CA-SDI-9253 is identified as not significant, and no further work is recommended.

CA-SDI-10747H

Site CA-SDI-10747H is located within the open space easement within the project Site, and would not be impacted. Site CA-SDI-10747H is identified as not significant, and no further work is recommended.

CA-SDI-17264

Site CA-SDI-17264 is located within the proposed development impact area for the project, but does not qualify as significant. Thus, no further work is recommended.

CA-SDI-17265

Site CA-SDI-17265 is located within the open space easement within the project Site and would not be affected. This site is identified as not significant, and no further work is recommended.

P-37-025968

Although located within the proposed development impact area for the project, isolate P-37-025968 does not constitute a site by California definition, and, therefore, is not significant. No further work is recommended.

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SDM-W-3880C

Although located within the proposed development impact area, isolate SDM-W-3880C does not constitute a site by California definition, and, therefore, is not significant. No further work is recommended.

Human Remains

Guidelines for the Determination of Significance

For the purposes of this EIR, an impact is considered significant if it disturbs any human remains, including those interred outside of formal cemeteries.

Under County of San Diego Guidelines for Determining Significance for Cultural Resources (County of San Diego 2007b), Guideline 1, human remains must be treated with dignity and respect. State law, including CEQA, requires consultation with the MLD as identified by the NAHC for any project for which human remains have been identified. In addition, Public Resources Code Section 5097.98 and CEQA Guidelines Section 15064.5 also protect human remains from disturbance.

Analysis

During ground disturbing work, there is potential for the discovery of additional human remains (**Impact CR-10**). In the event that human remains are discovered during ground-disturbing activities, the project must comply with CEQA Section 15064.5 and Public Resources Code Section 5097.98. Under these statutes, if human remains are encountered, work in the area of the find must halt until the Coroner has made the necessary findings as to origin. If determined to be Native American, consultation with the MLD would be required. The MLD may make recommendations and engage in consultations concerning the treatment of the remains. Therefore, the project would be in compliance with PRC Section 5097.98 and CEQA Section 15064.5.

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6 MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

6.1 Unmitigated Impacts

There are no unmitigated impacts associated with the project design.

6.2 Mitigable Impacts

As presently planned, eight sites (CA-SDI-4370, CA-SDI-4371, CA-SDI-4558, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, CA-SDI-9822, and CA-SDI-17264), two isolates (SDM-W-3880C and P-37-025968), and one historic structure/location on a 1901 USGS map will be directly and/or indirectly impacted by the proposed development (Figure 6-1: Confidential Appendix B; Table 6-1). Three sites (CA-SDI-9253, CA-SDI-10747H, and CA-SDI-17265) will be placed within an Open Space Easement and will not be impacted.

CA-SDI-4558

Site CA-SDI-4558 is located within the proposed development impact area. CA-SDI-4558 is identified as significant under CEQA and RPO criteria (see Table 6-1). As Deer Springs Road improvements are identified as “an essential public facility or project or recreational facility which includes public use,” RPO protection does not apply (see Section 6.2.1). As planned, the significant portion of CA-SDI-4558 is avoided from direct impacts by surrounding it with a greenspace park, but unanticipated discoveries of significant deposits in the road shoulder are still possible (see Confidential Appendix E). For the portion of site CA-SDI-4558 that will be potentially directly impacted by Deer Springs Road improvements, mitigation of impacts will be achieved through either the proposed At-grade option of data recovery or the Alternative option of avoidance. It is anticipated that the data recovery program will involve the excavation of 35 1x1-m units at CA-SDI-4558, artifact analysis, special studies, and a report of finding.

If the Alternative option is chosen, the site will be mitigated of potential direct impacts through index sampling and capping with surcharged fill. All road-widening construction shall occur on the fill, rather than on site CA-SDI-4558 to lessen impacts. Utility lines will be placed either outside of the archaeological site or within the fill soil. Three feet or more of clean fill will be placed between the archaeological midden and the utility line(s) for water or sewer. A minimum of 1 foot of fill will be placed between the archaeological midden and electrical or telephone lines. The major portion of site CA-SDI-4558 will be avoided. An index sample excavation will be completed to characterize the deposit. This sample, along with an analysis of previous work, will provide a database to address research questions in a technical report of finding.

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For the portion of site CA-SDI-4558 that will be avoided, indirect impacts will occur from increased accessibility, and the potential for pot-hunters/looters. Mitigation of indirect impacts will be achieved through temporary fencing during construction followed by permanent ranch-style fencing after construction. The avoided portion of the site will be cleared of non-native vegetation; however, native vegetation will remain. Non-native trees will be cut down to level with the roots left in place. Non-native grasses and brush will be cleared by hand or weed-whacker. A one-time hydro seeding with native plant seeds may be conducted. No sprinkler system or watering system will be used to promote native vegetation.

The project will also cause a direct impact to the Pavxin TCP through removal of roadbed sediments adjacent to the site that may contain cultural material. These impacts will be mitigated through repatriation of the roadbed sediments adjacent to the site underneath Deer Springs Road in an area permanently set aside for repatriation (see Confidential Appendix E).

In order to ensure that agreed upon site treatment is fulfilled, the County, Applicant, and consulting tribes will enter into a monitoring agreement, and develop a long term management plan.

CA-SDI-5951

Site CA-SDI-5951 is located within the proposed development impact area. As part of the current study, the site was evaluated and found significant under CEQA and County RPO criteria (see Table 6-1). As Deer Springs Road improvements are identified as “an essential public facility or project or recreational facility which includes public use,” RPO protection does not apply (see Section 6.2.1). The impacted portion of the site has been reduced through implementation of a soldier-pier retaining wall, preserving as much as 60% of the site deposit that would have been destroyed (see Confidential Appendix E). For the portion of site CA-SDI-5951 that will be potentially directly impacted by Deer Springs Road improvements, mitigation of impacts will be achieved through either the proposed At-grade option of data recovery of impacted portions, or the Alternative option of avoidance. It is anticipated that the data recovery program will involve the excavation of 35 1x1-m units at CA-SDI- 5951, artifact analysis, special studies, additional documentation of milling features, and a report of finding.

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If the Alternative option is chosen, the site will be mitigated of potential direct impacts through index sampling and capping with surcharged fill. All road-widening construction shall occur on the fill, rather than on site CA-SDI-5951. Three feet or more of clean fill will be placed between the archaeological midden and the utility line(s) for water or sewer. A minimum of 1 foot of fill will be placed between the archaeological midden and electrical or telephone lines. The major portion of site CA-SDI-5951 will be avoided. An index sample excavation will be completed to characterize the deposit. This sample, along with an analysis of previous work, will provide a database to address research questions in a technical report of finding.

For the portion of site CA-SDI-5951 that will be avoided (placed within open space), indirect impacts will occur from construction, increased accessibility, and the potential for pot-hunters/looters. Mitigation of indirect impacts will be achieved through temporary fencing during construction followed by permanent ranch-style fencing after construction.

The project will also cause a direct impact to the Pavxin TCP through removal of roadbed sediments adjacent to the site that may contain cultural material. These impacts will be mitigated through repatriation of the roadbed sediments adjacent to the site underneath Deer Springs Road in an area permanently set aside for repatriation (see Confidential Appendix E).

In order to ensure that agreed upon site treatment is fulfilled, the County, Applicant, and consulting tribes will enter into a monitoring agreement, and develop a long term management plan.

CA-SDI-9822

Site CA-SDI-9822 is located within the proposed development impact area. As part of the current study, presence/absence testing was conducted for the portion of site CA-SDI-9822 south of Deer Springs Road.

Presence/absence testing of the southern portion of site CA-SDI-9822 included excavation of five STPs. In all, testing produced 1 biface, 68 debitage, 13 ceramic sherds, 1 *Olivella* sp. shell bead, 13.11 grams of bone, and 64.11 grams of shell. Three STPs were positive and two STPs were negative. The positive STP results represent a significant intact subsurface deposit, adjacent to and south of Deer Springs Road. On the basis of previous and current work and the presence of a pictograph feature and cremations, site CA-SDI-9822 is identified as significant under CEQA and RPO criteria (see Table 6-1). As Deer Springs Road off-site improvements are identified as “an essential public facility or project, or recreational facility which includes public use,” RPO does not apply for this type of impact (see Section 6.2.1 for RPO explanation). The impacted portion of the site requiring data recovery has been significantly reduced through design of a soldier-pier retaining wall that preserves as much as 60% of the significant site deposits, as well as the rock art

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(see Confidential Appendix E). Mitigation of potential direct impacts for portions of site CA-SDI-9822 south of, within, and north of Deer Springs Road will be achieved through either the Proposed At-grade option of data recovery, or the Alternative option of avoidance. It is anticipated that the data recovery program will involve the excavation of at least 100 1x1-m units at CA-SDI-9822, artifact analysis, reanalysis of previously collected materials (Palomar Community College), special studies, laser scanning of a sample of artifacts, and a report of finding.

If the Alternative option is chosen, the site will be mitigated of potential direct impacts through index sampling, artifact analysis, reanalysis of previously collected materials (Palomar Community College), a report of finding, and capping with surcharged fill. All road-widening construction shall occur on the fill, rather than on site CA-SDI-9822 to lessen impacts (County of San Diego 1991). Utility lines will be placed either outside of the archaeological site or within the fill soil. Three feet or more of clean fill soil will be placed between the archaeological midden and the utility line(s) for water or sewer. A minimum of 1 foot of fill will be placed between the archaeological site midden and electrical and/or telephone lines. For CA-SDI-9822, an index sample excavation will be completed to characterize the deposit. This sample, along with an analysis of previous work, will provide a database to address research questions in a technical report of finding.

Indirect impacts include increased accessibility and the potential for pot-hunters/looters, as well as the potential for dust to damage the pictograph during earth moving activities. For the portion of site CA-SDI-9822 (portions within open space) that will be indirectly impacted by Deer Springs Road improvements, mitigation of impacts will be achieved through temporary fencing and minor capping with clean soil as needed. Minor capping will only cover the surface of the site; however, bedrock milling features and the pictograph will not be capped.

Dust, which may be created during earth moving activities, could potentially be cast onto the pictograph, and could damage the images. Every reasonable effort shall be made to control dust that may indirectly or directly affect the pictograph at CA-SDI-9822. Best management practices for dust control shall be determined by the Project Applicant's contractor in consultation with the Project Archaeologist, the County of San Diego, and consulting Native American organizations. Mitigation of impacts to the pictographs will be achieved by installing a protective covering over the pictograph while construction activities in the vicinity of the pictograph which could create dust occur. The covering will consist of a PVC framework or other material as deemed appropriate to enclose the boulder with the rock art. Canvas sheets will be placed over the frame for the duration of the grading program for the Terraces and the commercial component of the project, and along the Deer Springs Road improvement within 500 feet of the rock art. Photo documentation of the pictograph feature will also be conducted and computer enhancement if necessary, to better define the rock art image.

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The fuel modification program as part of the fire management plan for the project will involve removal of some vegetation at the site. This process may potentially impact the site, if the vegetation roots are removed. Mitigation of impacts as a result of this process will be achieved through archaeological and Native American monitoring.

The project will also cause a direct impact to the Pavxin TCP through removal of roadbed sediments adjacent to the site that may contain cultural material. These impacts will be mitigated through repatriation of the roadbed sediments adjacent to the site underneath Deer Springs Road in an area permanently set aside for repatriation (see Confidential Appendix E).

In order to ensure that agreed upon site treatment is fulfilled, the County, Applicant, and consulting tribes will enter into a monitoring agreement, and develop a long term management plan.

1901 Historic Structure/Location

The 1901 historic structure/location is within the proposed development impact area (Figure 6-2). The 1901 historic structure/location was not relocated and the structure appears to have been destroyed. As no remains of this structure/location have been identified, it is considered not significant under County guidelines. However, subsurface features may still be present that can provide information on early homesteading in north San Diego County. A subsurface exploratory program will be performed to locate potential buried features, analyze any materials recovered, and document the results in a report.

6.3 Effects Found Not to Be Significant

As presently planned, sites CA-SDI-4370, CA-SDI-4371, CA-SDI-5639, CA-SDI-5640, CA-SDI-5951, and CA-SDI-17264 and isolates SDM-W- 3880C and P-37-025968 will be directly and/or indirectly impacted by the proposed development (Figure 6-1, Confidential Appendix B; Table 6-1). However, all of these resources have been evaluated and determined to be not eligible for listing in the CRHR under CEQA and not significant under County RPO. Therefore, direct/indirect impacts to these resources are found not to be significant.

CA-SDI-4370

Site CA-SDI-4370 is located within the proposed development impact area. No further work is recommended for this site, as this isolate bedrock milling feature has been destroyed by previous grading for ranching and housing development.

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CA-SDI-4371

Site CA-SDI-4371 is an isolate milling station comprised of one milling slick, and is recorded at the south end of the proposed Newland Sierra project area. This site is recorded as primarily outside of the project area; however, the milling feature was not relocated within the project area. It is likely that the feature has been destroyed by road construction, or is located adjacent to, but outside of the project area. As this site is identified as not significant, no further work is recommended.

CA-SDI-5639

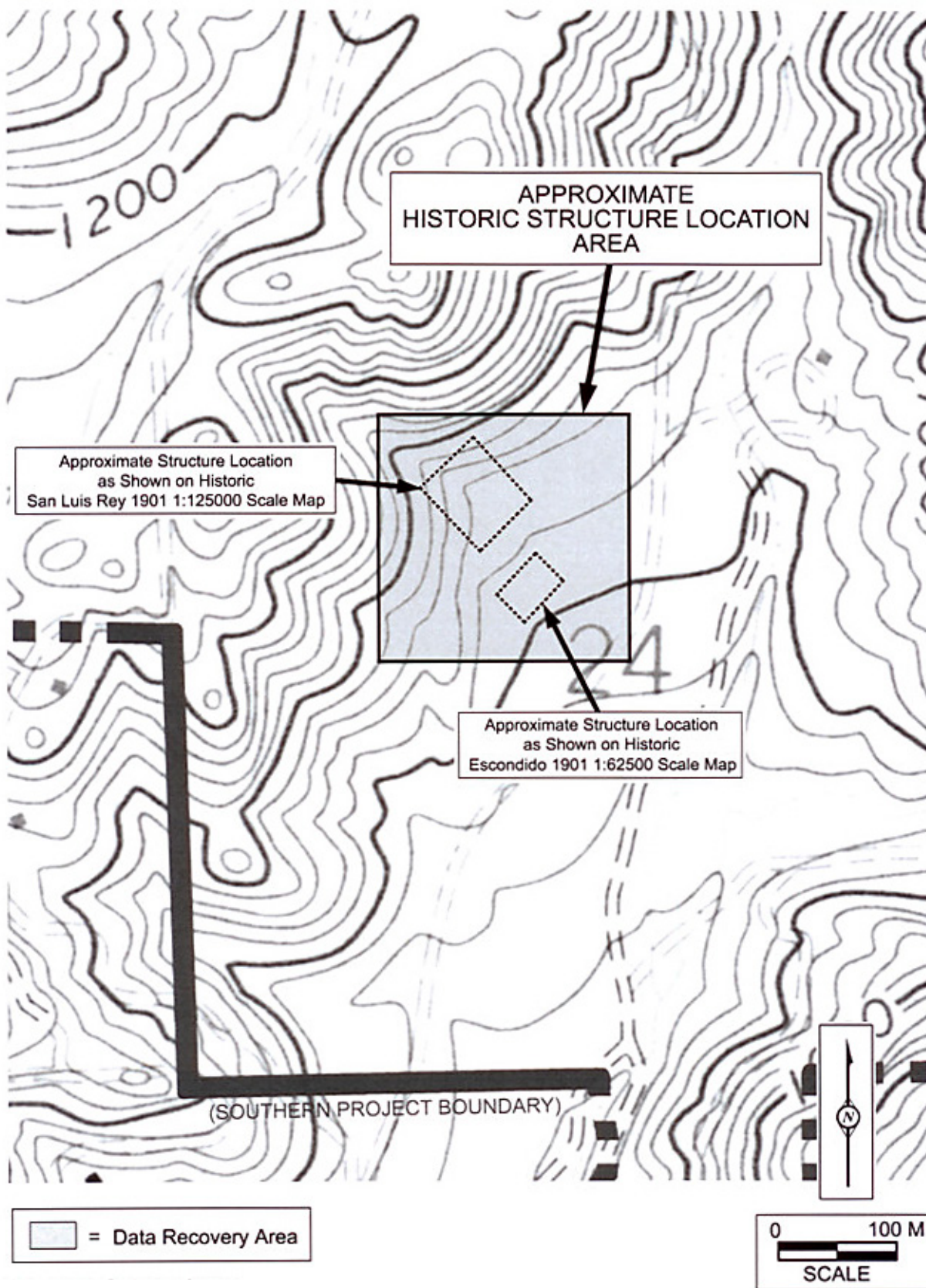
Site CA-SDI-5639 is located within the proposed development impact area. No further work is recommended for this site, as the two bedrock milling features have been destroyed by previous development.

CA-SDI-5640

Site CA-SDI-5640 is located within the proposed development impact area. No further work is recommended for this isolate bedrock milling feature within the Twin Oaks North–South off-site improvement area, as it has been destroyed by previous development.

CA-SDI-9253

Site CA-SDI-9253 is located within the Open Space Easement, and will not be impacted. Site CA-SDI-9253 is identified as not significant and no further work is recommended.



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CA-SDI-10747H

Site CA-SDI-10747H is located within the Open Space Easement, and will not be impacted. Site CA-SDI-10747H is identified as not significant and no further work is recommended.

CA-SDI-17264

Site CA-SDI-17264 is located within the proposed development impact area. Site CA-SDI-17264 is identified as not significant and no further work is recommended.

CA-SDI-17265

Site CA-SDI-17265 is located within the Open Space Easement and will not be impacted. This site is identified as not significant and no further work is recommended.

P-37-025968

Isolate P-37-025968 is located within the proposed development impact area. Isolate P-37-025968 does not constitute a site by State of California definition, and is identified as not significant. No further work is recommended.

SDM-W-3880C

Isolate SDM-W-3880C is located within the proposed development impact area. Isolate SDM-W-3880C does not constitute a site by State of California definition, and is identified as not significant. No further work is recommended.

Summary of Impacts Prior to Mitigation

Impact CR-1: Project-related construction activities may encounter the 1901 historic structure/location, and development of the proposed project may result in potentially significant impacts to a historic resource.

Impact CR-2: Improvements to Deer Springs Road may result in direct impacts to unanticipated significant archaeological deposits from CA-SDI-4558 located beneath the surface along the current road shoulders.

Impact CR-3: Improvements to Deer Springs Road would result in direct impacts to those portions of site CA-SDI-5951 within and north of Deer Springs Road.

Impact CR-4: Improvements to Deer Springs Road would result in direct impacts to those portions of site CA-SDI-9822 south of, within, and north of Deer Springs Road.

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- Impact CR-5:** Construction-related dust may temporarily affect the pictograph at site CA-SDI-9822.
- Impact CR-6:** Archaeological materials were collected during the Palomar College excavations during the 1980s from the area of CA-SDI-9822 that would be largely avoided for the proposed project through the use of a retaining wall. These archaeological materials have not been properly cataloged or analyzed, causing a significant impact to the scientific value of the site.
- Impact CR-7:** Improvements to Deer Springs Road would result in direct impacts to roadbed soils that connect sites CA-SDI-4558, -5951, and -9822 in an integrated traditional cultural property (TCP).
- Impact CR-8:** Construction-related impacts to unanticipated, unknown, or unrecorded cultural resources, including archaeological deposits are possible.
- Impact CR-9:** The portions of sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822 that would be avoided may result in increased accessibility, possibly resulting in impacts from pot-hunters and looters.
- Impact CR-10:** During excavation, there is potential to discover human remains.

6.4 Mitigation Measures and Design Considerations

For the following discussion, mitigation measures are summarized in Table 6-1 for each resource directly or indirectly impacted by the Proposed Project.

Mitigation Discussion

As sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 are identified as RPO significant sites, the only mitigation measure is avoidance. However, avoidance of impacts to these three sites may not be possible as both sites are located within an off-site improvement area (Deer Springs Road improvements) that is proposed to include public projects under the 2011 County General Plan update (i.e., underground utility, roadway improvement, and water extension). These types of public projects are considered essential and include public use, and are therefore considered exempt from the Resource Protection Ordinance, according to Article V of the Resource Protection Ordinance.

- (c) Any essential public facility or project, or recreation facility which includes public use when the authority considering an application listed at Article III, Section 1 above makes the following findings:

- 1) The facility or project is consistent with adopted community or subregional plans;

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- 2) All possible mitigation measures have been incorporated into the facility or project, and there are no feasible less environmentally damaging location, alignment, or non-structural alternatives that would meet project objectives

The Newland Sierra project is consistent with the San Diego County General Plan to accommodate the rapid population growth in the north county region. Specifically, services such as water, sewer, fire protection and schools must be available to sustain the annual growth rate of north San Diego County. The Newland Sierra off-site improvements (underground utility, roadway improvement, sewer, and water extension) at Deer Springs Road are required given that the development of the Newland Sierra master-planned community will increase the residential and commercial use of the area. To accommodate this type of growth, public projects (identified in this report as off-site improvement areas) must be achieved.

All feasible less environmentally damaging alternatives were examined to avoid direct impacts to sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822. One alternative included modifying Deer Springs Road further south than its current route; however, this would only avoid direct impacts to CA-SDI-4558. Site CA-SDI-9822, which extends south of the road, would still be impacted, and there would be direct impacts to significant biological resources adjacent to the road. Another alternative consisted of modifying the road further to the north; however, from an engineering perspective, it was unfeasible to build a road against the steep mountain slope. Moreover, site CA-SDI-4558 would not be avoided of direct impacts. Further alternatives were considered; however, significant biological resources adjacent to the road, the design and curvature of the current road, traffic lane issues, and private property disqualified these alternatives.

Consequently, all possible mitigation measures were incorporated into the chosen Deer Springs off-site improvement alternative. Measures to lessen direct impacts to sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 include the Proposed At-grade option using data recovery and the Alternative option of constructing road improvements upon 30 feet of surcharged fill. The proposed At-grade mitigation option of a data recovery program will involve the excavation of 35 1x1-meter units at CA-SDI-4588, 45 1x1-meter units at CA-SDI-5951, and 100 1x1-meter units at CA-SDI-9822. Artifact analysis, special studies, a reanalysis of previously collected materials for CA-SDI-9822, and a report of finding for all three sites will also be conducted for either mitigation option.

The Alternative mitigation option of index sampling and capping will protect the primary site area of CA-SDI-9822, and leave the northern edge of the site (the pictograph and bedrock milling features) within open space. The fill will protect the portion of site CA-SDI-4558 within Deer Springs Road while the remaining site area (the majority) will be avoided. Examples of capping archaeological sites include Moosa Canyon archaeological materials from sites CA-SDI-4807, CA-SDI-4808, and

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CA-SDI-4556 under Interstate 15 (I-15), and U.S. Army Corps of Engineers projects as cited in “The Archaeological Sites Protection and Preservation Notebook” (U.S. Army Corps of Engineers 1990). A brief summary of the I-15 site burial and results is provided below:

Construction of I-15 north of San Diego led to the discovery of prehistoric archeological sites within the highway right-of-way. A local Indian group requested that in lieu of excavation (data recovery), these sites be buried underneath the embankment. Archeologists were concerned that such burial underneath deep fill would pose an adverse effect to the cultural resources. As a result the California Department of Transportation (Caltrans) conducted both laboratory and field experiments to test the effects of such burial on the buried artifacts. An artificial archeological site was constructed by Caltrans and then buried under a 75-ft embankment. Reinvestigation of the site by means of a culvert-lined access tunnel permitted evaluation of the nature and degree of damage to the archeological materials resulting from soil compaction...The results of the field study supported the laboratory study, which suggested that a loading equivalent to 75-ft of embankment over archeological sites would produce limited damage to the artifacts... (U.S. Army Corps of Engineers 1990).

For the Alternative, mitigation will include the excavation of an index sample, wherein six to twelve 1x1-meter units will be excavated to characterize the portion of site CA-SDI- 9822 that is to be preserved/protected through capping. In addition to the index sample, a reanalysis of materials previously collected by Palomar Community College and photo documentation of the pictograph feature will be conducted. For the portions of sites CA-SDI-4558 and CA-SDI-5951 that are to be preserved/protected through capping, an index sample program will also be conducted. The index sample program will involve the excavation of six to twelve 1x1-meter units prior to capping. These samples, along with previous work, will serve as a database to address research questions in technical reports of finding for these sites.

For both the Proposed At-grade and the Alternative, mitigation should include permanent ranch-style fencing (minimum 4-feet height) to ensure that off-road vehicles are kept out of these areas (CA-SDI-4558, Ca-SDI-5951, and CA-SDI-9822). The ranch-style fencing should also be used to protect areas of the sites where capping is not practical (i.e., bedrock milling features). Capping of archaeological sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 should include a permeable geotextile fabric (i.e., Amoco cloth) placed over the site, followed by at least six inches of sterile sand, followed by one to three feet of un-compacted fine- grained soil (i.e., decomposed granite), followed by clean fill soil. It is also necessary that the clean fill soil “feather” out ten feet beyond the defined boundary of the capping area to create a buffer. For the purpose of site protection and interpretative use, only shallow-rooted native plant seeds will be used within the site boundaries.

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Vegetation growth across the protected area will maintain the cap's integrity. Utility and irrigation lines will be placed either outside of the archaeological sites or within the fill. A minimum of 3 feet of fill will be placed between the archaeological midden and the utility line(s).

For either the Proposed At-grade or Alternative, there is still the potential for indirect impacts for the portions of sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 that will be avoided (placed in open space), and thus minor capping will occur. Minor capping shall consist of 3 to 6 inches of clean soil over the site area. For all three sites, seeding for shallow-rooted native plants will be used within the boundaries to provide a protective layer to the site. If construction is to be conducted near sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822, then temporary fencing will be constructed and the areas designated as environmentally sensitive. Construction equipment will be directed away from these sites, and construction personnel will be directed to avoid entering the areas.

If mitigation through the Proposed At-grade data recovery or the Alternative using capping of surcharged fill and index sampling is requested and approved for the widening of Deer Springs Road and/or placement of utility lines, then a data recovery or index sampling plan for sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 will be submitted to the County of San Diego for review and approval prior to starting this work.

As part of the fire management plan for the project, a fuel reduction zone is proposed which partially overlaps site CA-SDI-9822. Removal of vegetation at the site may potentially impact the site if reduction efforts require the removal of roots and subsurface part of the vegetation, or require machinery that could disturb site sediments, artifacts, or features. Archaeological and Native American monitors will be present for these activities to ensure features are not disturbed and to reduce any potential impacts to less than significant.

As no comprehensive reports for previous excavations at CA-SDI- 9822 has been completed, it is recommended that a report of finding be prepared for CA-SDI-9822. This work should include reanalysis of previously recorded cultural material and/or additional field (i.e., index sample) and laboratory work necessary to complete a report documenting previous work for these sites, as well as special studies, and a report of finding. Monitoring of the project area during ground disturbing activities by a qualified archaeologist and a Native American is necessary to ensure that if features (i.e., human remains, hearths, historic deposits) are present, they will be handled in a timely and sensitive manner.

As presently planned, the 1901 historic structure/location within the Newland Sierra Project development area will be impacted by the proposed mass grading. Mitigation of potential impacts will be achieved through the completion of a subsurface exploration program to locate

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previously unidentified extant buried features, analysis of materials recovered, and completion of a report of finding. This program will include a controlled backhoe excavation to determine the presence and/or absence of buried historic resources. If subsurface features and artifacts are identified, then a data recovery program will be conducted and will include excavation of 1x1-m. units, block excavations, feature excavation, and analysis of artifacts. Special studies may include, but will not be limited to, glass, ceramic, metal, and faunal analyses.

Protection of Sites within the Open Space Easements

If construction is to occur near sites within the open space easements, then temporary fencing should be constructed and the areas should be designated as environmentally sensitive. Construction equipment will be directed away from these sites, and construction personnel will be directed to avoid entering the areas. If necessary, during construction phase, after-hours monitoring of the open space easements by a private security company will be employed to maintain a high visibility presence and observe through patrols for signs of trespassing, vandalism, pot-hunting, or other site damage; then, taking action and/or reporting any incidents to their client, employer, and the County of San Diego. Significant sites located within open space easements (i.e., pictographs) will also require long-term management and site stewardship to prevent trespassing, vandalism, pot-hunting, or other site damage. Specific activities prohibited within the open space easements should include (but not be limited to) construction of homes and buildings, surface mining activities, industrial uses, and commercial uses. In addition, periodic inspection of the property to verify compliance with the open space easement guidelines should be conducted by the County of San Diego or a qualified archaeologist.

Mitigation Measures

The following mitigation measures would be applied and/or agreed to prior to the approval of any plan and issuance of any permit, and prior to occupancy or use of the premises in reliance of any permit.

The mitigation framework provided below is consistent with CEQA Guidelines Section 15126.4(b), 15364, and 15370. Pursuant to Section 15126.4(b)(3)(A), and as provided for below, preservation-in-place is the preferred manner of mitigating impacts to significant or unique archaeological resources. However, Section 15126.4(b)(3)(C) also recognizes that, under certain circumstances, preservation-in-place is not feasible, in which case data recovery through excavation is an acceptable mitigation option. In addition, lead agencies may determine that some other form of mitigation is appropriate given the nature of the resource in question and the infeasibility of preserving it in place. For example, the cultural resources that constitute the *Pavxin* TCP cannot feasibly be preserved in place, as large portions of the TCP are located

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within the roadbed of Deer Springs Road, which is slated for upgrades and widening. None of the four preservation-in-place techniques listed in Section 15126.4(b)(3)(B) – avoidance, incorporation into greenspace, capping with sterile soil, or deeding the site into a conservation easement – provides a feasible mitigation option for impacts to the TCP. Much of the roadbed soils from the TCP cannot be subjected to data recovery because to do so would be infeasible and/or culturally inappropriate. Moreover, the consulting Tribes have indicated they would prefer that such soils, including the cultural materials that may be interred within them, be reburied at an agreed-upon location within the Project site. Accordingly, through consultation with the affected Tribes, the County and the applicant have elected to mitigate the Project's TCP impacts through a Tribal Treatment Plan which would require, among other things, that the applicant, in consultation with the Tribes, reburies all affected TCP resources within an identified and mutually-agreed upon reinternment area on the Project site. No ground-disturbing activities, including underground trenching, would be permitted at the reinternment area. (See **M-CR-8 through M-CR-10**).

M-CR-1 Pre-Grade and Data Recovery for Historic 1901 Structure Location Features (Impact CR-1). In order to mitigate for potential impacts to the 1901 Historic Structured/ Location that is a significant cultural resources pursuant to Section 15064.5 of the California Environmental Quality Act (CEQA) but is not determined to be significant pursuant to Section 86.602.o of the Resource Protection Ordinance (RPO), a pre-grade data recovery program shall be implemented. The Pre-Grade and Data Recovery Program shall include pre-grade excavations to locate possible buried features and analyze features and materials recovered; a report of any findings shall be prepared. This plan shall also include a ground-penetrating radar survey and controlled backhoe excavation to assess the area for ground anomalies and subjectively explore other areas to determine the presence and/or absence of buried historic resources. If subsurface features and artifacts are identified, a data recovery program shall be conducted, to include excavation of 1- by 1-meter units, block excavations, feature excavations, and analysis of artifacts. Special studies may include glass, ceramic, metal, and faunal analyses.

M-CR-2 Open Space Easement for Sites CA-SDI-5951 and CA-SDI-9822 (Impacts CR-3 and CR-4). In order to protect sensitive Cultural Resources at CA-SDI-5951 and CA-SDI-9822, a Cultural Resource Open Space Easement shall be granted over the portions of these sites that are outside of the Deer Springs Road right-of-way. The open space easement 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; installation of wet or dry

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infrastructure, including irrigation systems; or use for any purpose other than as open space. The sole exceptions to this prohibition are:

- a. Placement and burial of the cultural site resources and soils that are excavated as part of the development per specifications that are executed in agreement with the Pechanga and San Luis Rey Tribes.
- b. 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.
- c. 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 PDS.
- d. Access shall be provided for Luiseño tribes.

M-CR-2a Natural Park Preserve-in-Place for Site CA-SDI-4558 (Impacts CR-2, and CR-9).

In order to protect sensitive Cultural Resources at CA-SDI-4558, those portions of the site outside the Deer Springs Road right-of-way shall be preserved in place within a natural park pursuant to CEQA Guidelines section 15126.4(b)(3)(B), option 2. No development or ground disturbance will be permitted within those portions of the park that are located within site 4558, and all park trails shall be located outside the delineated boundary of site 4558. Once the park is established, it will be conveyed and dedicated to the County as a public park, at which point the County will take responsibility for maintaining the park and protecting the resources within it.

M-CR-3 Temporary Fencing (Impacts CR-2, CR-3, CR-4, CR-9 and CR-10). In order to mitigate for potential impacts to sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822 during construction, a temporary fencing plan shall be implemented pursuant to the County of San Diego Guidelines for Determining Significance for Cultural Resources and CEQA Section 15064.5. The temporary fencing shall include the following requirements:

- a. Provide evidence to the Director of Planning & Development Services that the following notes have been placed on the Grading and/or Improvement Plan:
 1. In the event that construction activities are to take place within 100 feet of archaeological site(s) CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822, the

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temporary fencing plan shall be implemented under the supervision of a County approved archaeologist that consists of the following:

- i. The project archaeologist shall identify the site boundaries in consultation with the San Luis Rey Band and Pechanga Band.
- ii. The project archaeologist shall determine an adequate buffer for the protection of the site(s) in consultation with the County archaeologist, the San Luis Rey Band and the Pechanga Band. Upon approval of buffers, install fencing under the supervision of the project archaeologist and San Luis Rey and Pechanga Native American monitor.
- iii. Submit to the Planning & Development Services for approval, a signed and stamped statement from a California Registered Engineer, or licensed surveyor that temporary fences have been installed in all locations of the project where proposed grading or clearing is within 100 feet of the archaeological site(s), CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822.
- iv. Fencing may be removed after the conclusion of construction activities.

M-CR-4 Permanent Fencing (Impact CR-2, CR-3, CR-4, CR-9 and CR-10). In order to mitigate for the potential long-term, indirect impacts to sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822, permanent fencing shall be implemented pursuant to the County of San Diego Guidelines for Determining Significance for Cultural Resources and CEQA Section 15064.5. The permanent fencing type shall be determined during the development of the Treatment Plan Agreement and Preservation Plan, and in consultation with the San Luis Rey Band and Pechanga Band. The fence, if deemed appropriate by the County, the San Luis Rey Band and Pechanga Band shall be installed under the supervision of the County approved archaeologist and the San Luis Rey and Pechanga Native American Monitors prior to any occupancy or final grading release. Fencing may include a vegetation barrier.

M-CR-5 Data Recovery Program (Impacts CR-2, CR-3, CR-4, CR-6 and CR-10). In order to mitigate for potential impacts to significant cultural resources that are (i) not subject to Section 86.602.o of the Resource Protection Ordinance (RPO) and (ii) cannot be feasibly avoided or preserved in place pursuant to Section 15126.4(b)(3) of the CEQA Guidelines, a data recovery and index sampling plan shall be implemented. (CEQA Guidelines, § 15126.4(b)(3)(C).) ~~In order to mitigate for potential impacts to significant cultural resources that cannot be feasibly avoided or preserved in place, pursuant to Section 15064.5 of the~~

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~~California Environmental Quality Act (CEQA), which are not subject to Section 86.602.0 of the Resource Protection Ordinance (RPO), a data recovery and index sampling plan shall be implemented.~~ The Data Recovery and Index Sampling Plan shall comply with research design and performance standards provided in Appendix D of the cultural study, shall be agreed to by the San Luis Rey and Pechanga Tribes and shall include the following requirements:

- a. Phase I and Phase II data recovery including artifact analysis, column samples, soil samples, floatation, and analysis of features.
- b. Specialized studies may include pollen and phytolith analysis, lithic, groundstone, ceramic, shell, obsidian hydration and sourcing, groundstone use wear and residue, and radiocarbon dating.
- c. Re-analysis of the Palomar College collection.
- d. High-resolution, 3-dimensional scanning of a sample of artifacts.
- e. Reinternment of Native American cultural materials.
- f. Curation of historic materials (Non-Native American).
- g. Preparation of a final report.

The Data Recovery and Index Sampling Plan will be a part of the Treatment Plan Agreement and Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band. Data recovery, sampling index and archaeological testing will not apply to TCP resources, tribal cultural resources and Native American human remains and burial goods.

M-CR-6 Dust Control Plan (Impact CR-5). In order to mitigate for potential impacts to the pictograph at site CA-SDI-9822, during any grading or ground-disturbing activities, dust control measures shall be implemented pursuant to the County of San Diego Guidelines for Determining Significance for Cultural Resources and CEQA Section 15064.5. The Dust Control Plan shall be prepared and implemented by the contractor in consultation with the project archaeologist and the San Luis Rey Band and Pechanga Band of Luiseño Indians. The Dust Control Plan shall include the following requirements:

- a. Prior to placing protective material to shield the pictograph, photo-document the condition of the existing pictograph.

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- b. Place appropriate cloth or material to shield the pictograph and mitigate impacts from dust. The covering must be of a material that will not cause damage to the pictograph.
- c. Periodic inspections of the pictograph shall be conducted to evaluate the status of the protective covering and to determine whether maintenance of the covering or replacement is necessary.
- d. Upon conclusion of construction, the protective cover may be removed and the pictograph shall be photo-documented to determine the status of the resource.
- e. After construction has concluded, the Project Archaeologist shall prepare a final letter report that details how the dust control plan was implemented and the condition of the pictograph at the beginning and end phases of construction.

The Data Recovery and Index Sampling Plan will be a part of the Treatment Plan Agreement and Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band.

M-CR-7 Archaeological Monitoring Program/Treatment of Human Remains (Impacts CR-7, CR-8, CR-10). In order to mitigate for potential impacts to undiscovered archaeological resources and human remains, including those that may be encountered in the TCP, 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). The Archaeological Monitoring Program shall be developed in consultation with the San Luis Rey Band and Pechanga Band and shall include the following requirements:

a. Pre-Construction

The Project Applicant shall contract with a County approved archaeologist to perform Archaeological Monitoring and a contract with a Luiseño Native American monitor to conduct Native American monitoring for the project.

The pre-construction meeting shall be attended by the Project Archaeologist, the Luiseño Native American monitor, and a representative from the San Luis Rey and Pechanga Bands.

b. Construction

- 1. Monitoring. Both the Project Archaeologist and Luiseño Native American monitor are to be on site during all earth disturbing activities. The frequency and location of monitoring of native soils will be determined by

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the Project Archaeologist and the Luiseño Native American monitor. The Project Archaeologist and the Luiseño Native American monitor shall evaluate fill soils, whether imported, exported or from an on-site borrow location, to ensure that they are negative for cultural resources.

2. **Controlled Grading and Grubbing.** All grubbing shall be controlled in areas of concern as determined by the Project Archaeologist and the Luiseño Native American monitor, and as reflected in the Treatment Agreement and Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band, and shall be inspected by the Project Archaeologist and Luiseño Native American monitor prior to initiating grading for those areas. Grading shall be controlled within the area of CA-SDI-4558, CA-SDI-5951, and CA-SDI-9882 using a slope board or similar equipment to allow soil to be removed in increments of only a few inches at a time. Other areas which may require controlled grading shall be determined by the Project Archaeologist and the Luiseño Native American monitor, as reflected in the Treatment Agreement and Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band.
3. **Milling Features.** Milling features shall be relocated to on-site open space or landscaped areas prior to disturbance, if feasible, and as reflected in the Treatment Agreement and Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band.
4. **Deer Springs Road Right-of-Way.** Soils from Deer Springs Road right-of-way, as indicated on the Deer Springs Road Right-of-Way exhibit located in the confidential appendix of the cultural study, shall be reinterred on site in the designated location that was approved by the County of San Diego, the applicant, the San Luis Rey Band of Mission Indians, and the Pechanga Band of Luiseño Indians (the “reinternment area”). Prior to final reinternment, the soils shall be treated in accordance to the terms reflected in the Treatment Agreement and Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band. Once the cultural materials are placed in the reinternment area, a cap shall be placed over the resources and hydroseeded with a native plant mix, developed in consultation with the San Luis Rey Band and Pechanga Band, to prevent erosion. Note that no subsurface ground disturbance activities or subsurface facilities will be permitted within the reinternment area, including utility trenches and irrigation systems (except for surface drip systems.)

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5. Inadvertent Discoveries:

- Both the Project Archaeologist and the Luiseño Native American monitor have the authority to divert or temporarily halt ground disturbance operations in the area of the discovery.
- The Project Archaeologist shall contact the County Archaeologist.
- The Project Archaeologist in consultation with the County Archaeologist and the Luiseño Native American shall determine the significance of discovered resources.
- If appropriate, 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 and collected by the Project Archaeologist. Native American isolates shall be reinterred on site and historic (Non-Native American) isolates shall be curated or culled.
- If cultural resources are determined to be significant by the Tribes, the County Archaeologist and/or the Project Archaeologist, a Research Design and Data Recovery Program shall be prepared by the Project Archaeologist in consultation with the San Luis Rey and Pechanga Tribes, and approved by the County Archaeologist. The preferred option is preservation (avoidance).

6. Human Remains Discovered Outside the Recorded Sites and the Deer Springs Road Right-of-Way.

- The Property Owner or their representative shall contact the County Coroner and the PDS Staff Archaeologist.
- If the human remains are reasonably believed to be Native American, then the human remains are to remain *in situ* (“in place”), or in a secure location in close proximity to where they were found, and shall be examined in the field, in the presence of a Luiseño Native American monitor, by a forensic anthropologist or osteologist, if feasible. Any transportation of the remains shall be done in the presence of a Luiseño Native American monitor. 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.

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- 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.
7. Fill Soils. The Project Archaeologist and Luiseño Native American monitor shall evaluate fill soils (including, but not limited to, exported, imported and borrow-site soils) to determine that they are clean of cultural resources.
8. Reporting. The Project Archaeologist shall submit monthly status reports to the Director of Planning and Development Services starting from the date of the Notice to Proceed to the termination of implementation of the archaeological monitoring program. The report shall briefly summarize all activities during the period and the status of progress on overall plan implementation. Upon completion of the implementation phase, a final report shall be submitted describing the plan compliance procedures and site conditions before and after construction. Rough Grading. A copy of the monitoring report shall be provided to the South Coastal Information Center, the San Luis Rey Band of Mission Indians, the Pechanga Band of Luiseño Indians, and any culturally-affiliated tribe who requests a copy.
9. The County Archaeologist shall make a determination for any disagreements between the Project Archaeologist, Luiseño Native American monitor, the San Luis Rey Band and Pechanga Band related to archaeological monitoring.
- c. Final Grading
1. 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,

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the San Luis Rey Band of Mission Indians, the Pechanga Band of Luiseño Indians and any culturally-affiliated tribe who requests a copy.

d. Disposition of Cultural Material.

The final report shall include:

1. Evidence that all Native American cultural materials have been repatriated to the San Luis Rey Band and Pechanga Band, or the MLD, if applicable, and reinterred on site as reflected in the Preservation Plan developed in consultation with the San Luis Rey Band and Pechanga Band.
2. 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.

The Archaeological Monitoring Program/Treatment of Human Remains will be a part of the Tribal Treatment Plan (See **M-CR-10**, below) that shall be developed in consultation with the San Luis Rey Band and Pechanga Band.

M-CR-8 Environmentally Sensitive Area - Cultural Open Space (Impact CR-7). In order to provide an on-site location for the reinternment of cultural materials including cultural soils removed from the TCP, an Environmentally Sensitive Area (ESA) Open Space Easement shall be developed in consultation with the San Luis Rey Band and Pechanga Band, and granted to the County by the applicant. The open space easement 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. No subsurface ground disturbance activities or subsurface facilities will be permitted within the Open Space Easement, including utility trenches and irrigation systems (except for surface drip systems and the preparation of the reinternment area.) The sole exceptions to this prohibition are:

- a. Preparation of the reinternment area that may require earth-disturbing activities such as grading; excavation; placement of soil, sand, rock, gravel, or other material; and clearing of vegetation.
- b. Reinternment of cultural materials and cultural soils which may require earth-disturbing activities such as grading; excavation; placement of soil, sand, rock, gravel, or other material; and clearing of vegetation.

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- c. Capping and hydroseeding the reinternment area for the purposes of erosion control.
- d. 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.
- e. 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 PDS.
- f. Access shall be provided for Luiseno tribes.

M-CR-9 Cultural Resources Treatment Agreement and Preservation Plan (“Tribal Treatment Plan”) (Impact CR-2, CR-3, CR-4, CR-7, CR-8, CR-9 and CR-10). In order to mitigate for impacts to Traditional Cultural Properties (TCPs) and impacts to tribal cultural resources, the applicant shall develop in consultation with the San Luis Rey Band of Mission Indians and the Pechanga Band of Luiseño Indians a Cultural Resources Treatment Agreement and Preservation Plan (“Tribal Treatment Plan”). The Tribal Treatment 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, the Luiseño Native American monitors, County, and the San Luis Rey Band and Pechanga Band.
- c. Project grading and development scheduling, and terms of compensation for the monitors, including overtime and weekend rates, in addition to mileage reimbursement.
- d. Authority of the Native American Monitors to stop and redirect grading in the immediate area of a find in order to evaluate the find and determine the appropriate next steps, in consultation with the Project archaeologist. Such evaluation shall include culturally appropriate temporary and permanent treatment pursuant to the Tribal Treatment Plan.
- e. Requirements of the Archaeological Monitoring Program, which shall be incorporated into the Treatment Plan, shall include unanticipated discoveries. The requirements shall address grading and grubbing requirements including controlled

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grading and controlled vegetation removal in areas of cultural sensitivity, analysis of identified cultural materials, and on-site storage of cultural materials.

- f. Treatment of identified Native American cultural materials.
- g. Treatment of Native American human remains and associated grave goods.
- h. Incorporation of portions of CA-SDI-4558 (i.e., those areas located outside the Deer Springs Road right-of-way) into a natural park, as described above in **Mitigation Measure M-CR-2a**, ~~Incorporation of CA-SDI-4558 into a passive park~~ including the method of vegetation removal (e.g., tree removal). The landscape design shall be developed in consultation with the San Luis Rey Band and Pechanga Band.
- i. Requirements for the Dust Control Plan (CA-SDI-9822), Temporary Fencing (CA-SDI-4558, CA-SDI-5951, and CA-SDI-9811), Permanent Fencing (CA-SDI-5951 and CA-SDI-9822), Data Recovery Plan (portions of CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822), Bedrock Milling Relocation, and Trail System Design for Oak Park.
- j. Interim treatment of cultural soils and resources prior to final on-site internment, including appropriate on-site storage and security for such resources. Final internment of Native American cultural soils and materials.
- k. Confidentiality of cultural information including location and data.
- l. Negotiation of disagreements should they arise during the implementation of the Agreement and Preservation Plan.
- m. Regulations that apply to cultural resources that have been identified or may be identified during project construction.

M-CR-10 Preservation and Maintenance Plan (Impact CR-1 through CR-9). Prior to the issuance of grading permits, the Project Applicant and the San Luis Rey and Pechanga Tribes shall prepare a Preservation and Maintenance Plan for the long-term care and maintenance of CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822, and their associated cultural resources and features. The Plan shall indicate, at a minimum, the specific areas to be included in and excluded from long-term maintenance; prohibited activities; methods of preservation to be employed (fencing, vegetative deterrence, etc.); the entity or entities responsible for the long-term maintenance; maintenance scheduling and notification; appropriate avoidance protocols; monitoring by the Tribes and compensation for services; and necessary emergency protocols. The Project Applicant shall submit a fully

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executed copy of the Preservation and Maintenance Plan to the County to ensure compliance with this mitigation measure.

M-CR-11 Fair Share Contribution Towards Regional Ethno-historic Study (Impact CR-2 through CR-4, CR-7 through 9). In order to mitigate for impacts to Traditional Cultural Properties, the applicant shall make a fair share contribution towards a regional ethno-historic study, which study shall be prepared in consultation with the San Luis Rey and Pechanga Tribes. The applicant shall make a fair share contribution in the amount of \$50,000 to an account held in trust by a third party manager. The fund shall include the following:

- a. An agreement for the preparation of a regional study for the Deer Springs area when funding is 100% available. The agreement must identify the entity responsible for the management of the fund, rate of return, and annual management fees. The agreement must be reviewed and approved by the County of San Diego prior to implementation.
- b. Annual reporting to the County of San Diego on the status of the fund is required. The annual report shall include the balance of the fund and an accounting of projects that have contributed to the fund. Project information shall include the project name, project number, condition number and when fair share contributions were made.
- c. The County shall retain under contract a qualified ethnographer or anthropologist to complete a Luiseño ethnographic study of the Project area and the associated vicinity as it relates to Luiseño knowledge, history, and culture. The selection of the consultant retained to conduct the ethnography shall consider qualifications, ability to work collaboratively with the Pechanga and San Luis Rey Tribes, cost, and shall be by mutual agreement of the Tribes and the County. Consultant selection shall be approved by the County and Tribes; however, approval of the consultant by Tribes shall not be unreasonably withheld.
- d. The study shall be completed within 1 year of the execution of the consultant's contract. The Tribes agree to work in good faith with the ethnographer to meet this deadline and the goals of this study.

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Summary

The 1901 historic structure was not re-located, and no evidence of the structure or related features was identified. Additional research is needed to determine if any subsurface features relating to the 1901 historic structure are present, since impacts to any such features would be considered significant (**Impact CR-1**). Implementation of a subsurface exploratory program (M-CR-1) to search for historic features associated with the 1901 historic structure would mitigate these impacts to less than significant.

For those portions of sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822 that would be preserved in place by being located within a park or open space, no direct significant impacts would occur. (See M-CR-2 and M-CR-2a.)~~For those portions of sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822 that would be preserved in place by being located within open space, no direct significant impacts would occur.~~ For the portion of sites CA-SDI-4558, CA-SDI-5951, and CA-SDI-9822 that could be affected by Deer Springs Road improvements, impacts would be potentially significant (**Impact CR-2, CR-3 and Impact CR-4**). Such impacts cannot be feasibly avoided or mitigated through preservation-in-place techniques. These impacts would be mitigated to less than significant through implementation of a data recovery plan (M-CR-3) and a plan for removal, as well as monitoring during construction (M-CR-4) and treatment of human remains according to California Health and Safety Code Section 7050.5 and PRC Section 5097.98 (M-CR-8).

In addition, grading operations associated with the widening of Deer Springs Road may cause dust impacts on the pictograph at site CA-SDI-9822, resulting in a significant impact (**Impact CR-5**). Implementation of a dust control plan (M-CR-5) to protect the pictograph would reduce the impact to less than significant.

Archaeological materials were collected during the Palomar College excavations in the 1980s from the area of site CA-SDI-9822 that would be largely avoided for the project through the use of a retaining wall. These archaeological materials have not been properly cataloged or analyzed, causing a significant impact to the scientific value of this site (**Impact CR-6**). Prior to the final disposition of these artifacts, the collection would be fully analyzed according to morphological and functional classifications for each artifact class (M-CR-6) to salvage important scientific information.

It is possible that project-related grading may uncover previously unknown cultural resources. If such resources are encountered but cannot be feasibly avoided (**Impact CR-7**), significance evaluation of newly discovered archaeological resources and data recovery (M-CR-3), proper treatment of human remains (M-CR-8), and archaeological monitoring (M-CR-4) would reduce this potentially significant impact to less than significant.

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During excavation, there is potential to discover additional human remains (**Impact CR-8**). Compliance with PRC Section 5097.98 and CEQA Section 15064.5 (M-CR-8) would reduce potential impacts to less than significant.

The project would increase public access to the sites CA-SDI-4558, CA-SDI-5951 and CA-SDI-9822, and potentially increase the risk of vandalism or unauthorized pot-hunting/looting, thereby resulting in a potentially significant impact (**Impact CR-9**). Implementation of avoidance measures at these three sites (MM-CR-2), construction of temporary fencing (MM-CR-3) and permanent fencing (MM-CR-4), planning for long-term care of the resources (MM-CR-10), along with contribution to a regional ethnohistoric study (MM-CR-11) would reduce these potentially significant impacts to less than significant.

The County recognizes the cultural significance of the *Pavxin* TCP, the area associated with sites CA-SDI-9822, CA-SDI-4558, and CA-SDI-5951. The mitigation measures recommended in this section are intended, in part, to preserve and protect the integrity of *Pavxin* and to do so using culturally sensitive techniques that respect the heritage and cultural values of the site.

In summary, all potentially significant impacts on cultural resources can be mitigated to less than significant. Refer to Table 6-1 for a summary of resources sites and impact significance.

**Table 6-1
Site Status and Significance**

Site Number	Site Description	Site Significance/ Eligibility Status	Significant Impact Before Mitigation?	Recommended Mitigation	Significance After Mitigation
1901 Map for Historic Structure Location	Historic	County: Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Pre-grade subsurface exploration program (M-CR-1).	Less Than Significant
CA-SDI-4370	One bedrock milling feature	Destroyed. County: Not Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Monitoring (M-CR-7).	Not Significant
CA-SDI-4371	One bedrock milling feature	Not re-located; likely destroyed or located outside of project Site. County: Not Important;	Not Significant	Monitoring (M-CR-7).	Not Significant

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**Table 6-1
Site Status and Significance**

Site Number	Site Description	Site Significance/ Eligibility Status	Significant Impact Before Mitigation?	Recommended Mitigation	Significance After Mitigation
		CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant			
CA-SDI-4558	Ceremonial site	County: Important; CEQA: Significant; CRHR: Eligible; RPO: Significant	Significant	<p>The site shall be preserved in place via incorporation into a natural park, in which no trails or ground disturbance will be permitted to traverse or encroach upon those portions of site 4558 located within the park (M-CR-2a). (See CEQA Guidelines, § 15126.4(b)(3)(B), option 2.) All forms of preservation in place are feasible for the significant portion of site. The County of San Diego is recommending that the significant portions of the site be avoided, potentially significant deposits that may be identified during construction be subject to data recovery (MM-CR-5), and monitoring (M-CR-7). The significant portions of the site will be subject to temporary fencing (MM-CR-3) and permanent fencing (MM-CR-4).</p> <p>Potentially significant impacts to the TCP through roadbed removal will be mitigated through repatriation of roadbed sediments (MM-CR-8), development of a Treatment Agreement (MM-CR-9) and Long Term Management Plan (MM-CR-10), as well as contribution to a regional Ethno-historic study (MM-CR-11) will reduce impacts to the TCP to less than significant.</p>	Less Than Significant
CA-SDI-5639	Two bedrock milling features	Destroyed. County: Not Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not	Not Significant	Monitoring (M-CR-7).	Not Significant

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**Table 6-1
Site Status and Significance**

Site Number	Site Description	Site Significance/ Eligibility Status	Significant Impact Before Mitigation?	Recommended Mitigation	Significance After Mitigation
		Significant			
CA-SDI-5640	One bedrock milling feature	Destroyed. County: Not Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Monitoring (M-CR-7).	Not Significant
CA-SDI-5951	Ceremonial site	County: Important; CEQA: Significant; CRHR: Eligible; RPO: Significant	Significant	<p>All forms of preservation in place are feasible for the northern portion of the site excluded from the off-site roadway circulation component of the project; this area would be avoided through incorporation into open space (M-CR-2).</p> <p>All forms of preservation in place are not feasible for significant deposits of the site located within a roadway circulation component of the project due to engineering design constraints.</p> <p>Mitigation of impacts through temporary fencing, (MM-CR-3), permanent fencing (MM-CR-4), data recovery (MM CR-5), proper treatment of human remains (M-CR-9), and monitoring (MM CR-7) will reduce impacts to less than significant.</p> <p>Potentially significant impacts to the TCP through roadbed removal will be mitigated through repatriation of roadbed sediments (MM-CR-8), development of a Treatment Agreement (MM-CR-9) and Long Term Management Plan (MM-CR-10), as well as contribution to a regional Ethno-historic study (MM-CR-11) will</p>	Less Than Significant

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**Table 6-1
Site Status and Significance**

Site Number	Site Description	Site Significance/ Eligibility Status	Significant Impact Before Mitigation?	Recommended Mitigation	Significance After Mitigation
				reduce impacts to the TCP to less than significant.	
CA-SDI-9822	Ceremonial site	County: Important; CEQA: Significant; CRHR: Eligible; RPO: Significant	Significant	<p>All forms of preservation in place are feasible for the northern portion of the site excluded from the off-site roadway circulation component of the project, including the area containing the pictograph. This area would be avoided through incorporation into open space (M-CR-2). Dust control measures are required to protect the pictograph during construction (M-CR-6).</p> <p>All forms of preservation in place are not feasible for significant deposits of the site located within a roadway circulation component of the project due to engineering design constraints. Avoided portions of the site will be protected through temporary fencing (MM-CR-3) and permanent fencing (MM-CR-4).</p> <p>Mitigation of impacts through data recovery (M-CR-5), proper treatment of human remains and monitoring (M-CR-7), and laboratory analysis of the Palomar College excavation collection (M-CR-6) will reduce these impacts to less than significant.</p> <p>Potentially significant impacts to the TCP through roadbed removal will be mitigated through repatriation of roadbed sediments (MM-CR-8), development of a Treatment Agreement (MM-CR-9) and Long Term Management Plan (MM-CR-10), as well as</p>	Less Than Significant

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**Table 6-1
Site Status and Significance**

Site Number	Site Description	Site Significance/ Eligibility Status	Significant Impact Before Mitigation?	Recommended Mitigation	Significance After Mitigation
				contribution to a regional Ethno-historic study (MM-CR-11) will reduce impacts to the TCP to less than significant.	
CA-SDI-9253	Temporary camp	County: Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Open space easement and temporary fencing (M-CR-2, MM-CR-3), monitoring (M-CR-7).	Not Significant
CA-SDI-10747H	Remains of a house, a collapsed wood structure, and a rock and mortar hearth/chimney structure	County: Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Open space easement and temporary fencing (M-CR-2, MM-CR-3), monitoring (M-CR-7).	Not Significant
CA-SDI-17264	Single bifacial handstone and debitage	County: Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Monitoring (MM CR-7).	Not Significant
CA-SDI-17265	Single bedrock milling feature	County: Important; CEQA: Not Significant; CRHR: Not Eligible; RPO: Not Significant	Not Significant	Open space easement and temporary fencing (M-CR-2, MM-CR-3), monitoring (M-CR-7).	Not Significant

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7 REFERENCES

- 36 CFR 60. National Register of Historic Places.
- 36 CFR 63. Procedures for Requesting Determinations of Eligibility.
- 36 CFR 800.1–800.16 and Appendix A. Protection of Historic Properties.
- 48 FR 44716-44740.
- 48 FR 44720–44726. “The Secretary of the Interior’s Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act.” April 24, 1998.
- Aasved et al. 1978a. Site Record Form for CA-SDI-5950. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Aasved et al. 1978b. Site Record Form for CA-SDI-5951. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Adams, Jenny L. 2002. “Ground Stone Analysis: A Technological Approach”. University of Utah Press: Salt Lake City, Utah.
- Advanced Planning & Research Associates (APRA) 1978. Metzner Lot Split TPM 12592, Log #77-8-228 and Vuksic Lot Split TPM 13618, Log # 77-8-232. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Advanced Science Inc. (ASI) 1991. Title unknown. Ms. Reported missing at the South Coastal Information Center, San Diego State University, San Diego, California.
- Aguilar, J. 2006a. Site Form for CA-SDI-17787. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Aguilar, J. 2006b. Site Form for CA-SDI-17788. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Alexander Plat Map 1913. On file, San Diego Historical Society Archives.
- Archaeological Associates (AA) 1988. Archaeological Survey Report: The Twin Oaks Valley Ranch Project, City of San Marcos, CA. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- Archaeological Systems Management (ASM) 1978. An Archaeological Reconnaissance of a Proposed Water Treatment Plant Site in San Diego County, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Archaeological Systems Management (ASM) 1984. Cultural Resources Assessment of the 94-Acre Bureau of Land Management Parcel in the Merriam Mountains, Near San Marcos, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Baksh, M. 1975a. Site form for CA-SDI-4374. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Baksh, M. 1975b. Site form for CA-SDI-4375. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Banks, Thomas J. 1980. An Archaeological Survey of the Escajeda Property Near Moosa Canyon, San Diego County HDTPM 1428E, TPM 16713 Log # 80-8-109. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Basgall and Hall 1990. "Adaptive Variation in the North-Central Mojave Desert." Paper presented at the 55th Annual Meeting of the Society for American Archaeology, Las Vegas, Nevada.
- Basgall and Hall 1993. "Archaeology of the Awl Site, CA-SBR-4562, Fort Irwin, San Bernardino County, California." Prepared for the U.S. Army Corps of Engineers, Los Angeles District, Davis, California.
- Basgall et al. 2002. "An Evaluation of Four Archaeological Sites in the Lead Mountain Training Area, Marine Corps Air Ground Combat Center, Twentynine Palms, California." Submitted to U.S. Army Corps of Engineers, Fort Worth, Texas..
- Bass, S.T. and S.B. Andrews 1977. Using a New Classification System on Kern County Indian Beads. Kern County Archaeological Society Journal, Number 1:9-24.
- Bean, L. J., and F. C. Shipek 1978. "Luiseño". In Handbook of North American Indians, Volume 8: California, edited by R. F. Heizer, pp. 550-563. Smithsonian Institution, Washington, D.C.
- Bean, L. J., and F. C. Shipek 1978. "Luiseño". In Handbook of North American Indians, Volume 8: California, edited by R. F. Heizer, pp. 550-563. Smithsonian Institution, Washington, D.C.

Cultural Resources Report for the Newland Sierra Project

- Beddow, Donna 2007. Negative Cultural Resources Survey Report for Steinbeck – TPM 20753 / Log No. 00-08-052; APN 186-300-23, -56, 186-650-01. Prepared by County of San Diego Department of Planning and Land Use. Report on file at South Coastal Information Center, San Diego State University.
- Bennyhoff, James A. 1986. "The Emeryville Site, Viewed 93 Years Later". In Symposium: A New Look at Some Old Sites, pp. 65-81. Papers from the Symposium Organized by Francis A. Riddell Presented at the Annual Meeting of the Society for California Archaeology, March 23-26, 1983, San Diego, California. Coyote Press Archives of California Prehistory 6.
- Bennyhoff, James A. and David A. Fredrickson 1967. "A Typology of Shell and Stone Beads from Central California". Unpublished Manuscript on File, California Department of Parks and Recreation, Cultural Resources Division, Sacramento.
- Bennyhoff, James A. and Richard E. Hughes 1987. "Shell Bead and Ornament Exchange Networks Between California and the Western Great Basin". Anthropological Papers of the American Museum of Natural History 64:82-175.
- Bennyhoff, James A. and Robert F. Heizer 1958. "Cross-dating Great Basin Sites by Californian Shell Beads". In University of California Archaeological Survey Reports 42:60-92.
- Berryman, Stanley 1977. Archaeological Investigation on Rezone r77-28. Prepared by Toups Corporation. Report on file at South Coastal Information Center, San Diego State University.
- Berryman, S. n.d. Site Record Form for CA-SDI-5187. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Bibb, L.E. 1991. "Pablo Apis and Temecula." Journal of San Diego History 37(4):256–271.
- Binford, Lewis R. 1980. "Willow Smoke and Dog's Tails: Hunter-Gatherer Settlement Systems and Archaeological Site Formation". In: American Antiquity 45(1):4–20.
- Bollinger, Sharon Loughlin. 1976. Cave Johnson Courts, Jr., Last of the Dons. M.A. Thesis: University of San Diego, San Diego, California.
- Bonner, W. and S. Williams 2009. Cultural Resource Records Search Results and Site Visit for Cricket Communications Candidate SAN-215A (Hidden Meadows), 25005 North Centre City Parkway, Escondido, San Diego, County, California. Prepared by Michael Brandman Associates. Report on file at South Coastal Information Center, San Diego State University.

Cultural Resources Report for the Newland Sierra Project

- Bonner, Wayne 2011. Cultural Resource Records Search and Site Visit Results for T-Mobile USA Candidate SD06110-A (Jesmond Dene), 35880 Jesmond Dene Road, Escondido, San Diego County, California. Prepared by Michael Brandman Associates. Report on file at South Coastal Information Center, San Diego State University.
- Boscana 1846. "Chinigchinich; A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of St. Juan Capistrano, Alta California." In *Life in California*, by Alfred Robinson, 227–341. New York, New York: Wiley & Putnam.
- Bowden-Renna, Cheryl 2012. Letter Report: ETS 23959-Cultural Resources Survey for Poles P116061 and P116062, San Marcos, San Diego County, California-IO 7011102. Prepared by AECOM. Report on file at South Coastal Information Center, San Diego State University.
- Brackett, R.W. 1960. "Los Vallecitos de San Marcos Rancho," in *The History of San Diego County Ranchos*. Union Title Insurance Co., San Diego, California.
- Brock, T. et al. 1975a. Site form for CA-SDI-4372. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Brock, T. et al. 1975b. Site form for CA-SDI-4373. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Brown, Joan C. 2001. Cultural Resources Literature Review and Reconnaissance for the San Marcos Highlands. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Browne and Vogt 1985. Draft Environmental Impact Report: Jaqudi-Lundberg General Plan Amendment North County Metropolitan Planning Area. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Byrd, B. F., and S. N. Reddy 2002. "Late Holocene Adaptations along the Northern San Diego Coast: New Perspectives on Old Paradigms". In *Catalysts to Complexity: Late Holocene Societies of the California*, edited by J. M. Erlandson and T. L. Jones, pp. 41-62. Perspectives in California Archaeology, Volume 6. Cotsen Institute of Archaeology, University of California, Los Angeles.
- Cardenas, D.S. 1980. Site Record Form for CA-SDI-8327. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- Cardenas, D.S. 1986a. Site Update for CA-SDI-9253. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Cardenas, D.S. 1986b. Site Record Form for CA-SDI-10747H. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carrico, R. 1975. Site Record Form for CA-SDI-4573. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carrico, R. 1977. *Archaeological Survey of the San Marcos General College Community Plan Area, San Marcos, California*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carrico, R. 1978. *Archaeological Survey of Indian Hill Lot Split W-459*. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carrico, R. 1982. *Archaeological Survey of Indian Hill Lot Split W-459*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carrico, R. 2008. *Strangers in a Stolen Land: Indians of San Diego County from Prehistory to the New Deal*. Sunbelt Publications, San Diego.
- Carrico, R. and K.D. Rhodes 1979. *Archaeological Survey of the Welk Park North Property San Diego County, California*. Prepared by WESTEC. Report on file at South Coastal Information Center, San Diego State University.
- Carrico, R. n.d. *Archaeological Survey of the Teleklew Productions Property (Southern Section)*. Report on file at South Coastal Information Center, San Diego State University.
- Carrico, R. 1976. *Archaeological Survey of the Daley Ranch North of Escondido, San Diego County*. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carrico, Richard, Andrew Pigniolo, Brian Glenn, and Kathleen Crawford 1995. *Historic Property Survey Report for the State Route 78 Corridor Enhancement Project II-SD-78, P.M.5.3-9.8, 965100, City of Vista, California*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Carroll, William 1975. "San Marcos: A Brief History". Coda Publications, San Marcos, California.

Cultural Resources Report for the Newland Sierra Project

- Cheever, Dayle 1988. *Archaeological Resources Survey of the Santalina Hills Property*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- City of Escondido 1980, Draft Environmental Impact Report for Expansion of Wasterwater Treatment Facility. On File, South Coastal Informaion Center, San Diego State University, San Diego, California.
- Clevenger, Joyce, Delman James, and Kathleen Crawford 1992. *Revised Archaeological Survey, Testing, and Evaluation Program for the North County Square II Project, City of Vista, San Diego County, California*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Clifford, James and Brian F. Smith 2004. *A Cultural Resources Survey for the Buena Creek Nextel Cell Site Project, 1200 Loma Vista Way, Vista, California*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Cook, John R. 1988. *Circle R Resort Archaeological Preservation Plan*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Cook, Roger A. 1977. Site Update for CA-SDI-4558. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Cook, Roger A. 1978. *Final Report Archaeological Test Excavations in Moosa Canyon, San Diego County, California (11-SD-15 P.M. R40.4/R42.9)*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Cook, Roger A., Pat Welch, Roy Pettus, Jim McManus, Lesley McCoy, Tim Vasquez, and Fred Warn 1977. *Preliminary Report. Archaeological Test Excavation at 4-SDI-4558, 4562, and 4562A (11-SD-15 Post Mile 36.0/37.6)*. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Cooley, T.G. and S.C. Jordan 2003. *Cultural Resources Inventory and Survey Report for a Proposed Water Treatment Plant Facility Site Located in Twin Oaks Valley, San Diego County, California*. Prepared by Mooney & Associates. Report on file at South Coastal Information Center, San Diego State University.
- County of San Diego 1979. Inter-Departmental Correspondence Regarding Environmental Impact Report for Welk Park North. Report on file at South Coastal Information Center, San Diego State University.

Cultural Resources Report for the Newland Sierra Project

County of San Diego 1991. The Resource Protection Ordinance.

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.

Crawford, Kathleen 2011. *Historical Resources Technical Report of the Property at 1310 K Street, San Diego, California 92101*. Report on file at South Coastal Information Center, San Diego State University.

Crull, Scott 1989. *An Analysis of Five Eastern Excavated Units at Deer Springs: 1989*. Ms. on file, Palomar College, San Marcos, California.

Crull, Scott 1990a. The Cultural Resource Study of Ghost Rider II: A Section of Twin Oaks Valley, San Marcos, San Diego County, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Crull, Scott 1990b. Site Update for CA-SDI-9822. On file, South Coastal Information Center, San Diego State University, San Diego, California.

CSP (California State Parks). 2009. "Preservation Matters." *The Newsletter of the California Office of Historic Preservation* 2(3):3–21. Cupples, Sue Ann 1976. Archaeological Survey Report for a Proposed Improvement of 11-SD-76 p.m.12.3/12.5. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cupples, Sue Ann 1977. An Archaeological Survey Report for Proposed Construction of Interstate 15 (11-SD-15 p.m. R36.01 37.6) 11203-095041 and 11-SD-15 p.m. R37.6/40.4 11203-095051. On file, South Coastal Information Center, San Diego State University, San Diego, California.

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

Davison, K. and M. Robbins-Wade 2013. *Lake Morena's Oak Shores Mutual Water Company System Improvements Project Phase 2-Archaeological Monitoring*. Prepared by Affinis. Report on file at South Coastal Information Center, San Diego State University.

De Barros, Philip 1999a. Site Record Form for CA-SDI-15671. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- De Barros, Philip 1999b. Cultural Resource Survey and Assessment of a 386-Acre Parcel in the San Marcos Mountains, Near Vista, San Diego County, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- De Barros, Philip 2000. *Cultural Resource Survey and Assessment of a Cellular Phone Tower Emplacement Near Deer Springs Road in the City of Escondido, San Diego County, California*. Prepared by Professional Archaeological Services. Report on file at South Coastal Information Center, San Diego State University.
- De Barros, Philip 2005. Cultural Resources Survey and Assessment of a 25.2-Acre Parcel on the East Side of Tarek Terrace Road, South of Gopher Canyon Road Near Bonsall, San Diego County, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Diehl and Brown 1986. Site form update for CA-SDI-9822. Never submitted to the South Coastal Information Center, San Diego State University, San Diego, California.
- Dietz, S.A. and T.L. Jackson. 1981. Report of Archaeological Excavations at Nineteen Archaeological Sites for the Stage 1 Pacific Grove-Monterey Consolidation Project Regional Sewerage System. Four volumes. Submitted to State Water Resources Control Board, Sacramento.
- DuBois, Constance Goddard 1908. The Religion of the Luiseño and Diegueño Indians of Southern California. *University of California Publications in American Archaeology and Ethnology* 8(3):69-186.
- Duke, Curt 2001a. *Cultural Resource Assessment for Pacific Bell Wireless Facility SD 096-03, San Diego County, CA*. Prepared by LSA. Report on file at South Coastal Information Center, San Diego State University.
- Duke, Curt 2001b. *Cultural Resource Assessment for Pacific Bell Wireless Facility SD 109-01, San Diego County, California*. Prepared by LSA. Report on file at South Coastal Information Center, San Diego State University.
- Eargle, D.H. 2000. The Indians of San Diego County. In *Native California Guide. Weaving Past & Present*. Tree Company Press, San Francisco.
- Eckhardt, W.T. 1978. *Archaeological and Historical Survey of the Vista Valley Country Club San Diego County, California*. Prepared by WESTEC. Report on file at South Coastal Information Center, San Diego State University.

Cultural Resources Report for the Newland Sierra Project

- Einer, Emma (Nack) 1976. Interview. On file, San Marcos Historical Society, San Marcos, California.
- Enges-Maas, Mary n.d. "Remembering the Valley the Way It Was," in Major Merriam Biography File. On file, San Marcos Historical Society, San Marcos, California.
- Engineering-Science 1981. Draft Environmental Impact Report Oceanside Reservoir. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- ERC Environmental & Energy Services Co. 1990. Draft Environmental Impact Report San Marcos Highlands Specific Plan. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Escondido Times-Advocate 1888. "Mrs. G. F. Merriam – Obituary," January 19, p.3.
- Escondido Times-Advocate 1908 "San Pasqual in Romance," March 6, p.3.
- Escondido Times-Advocate 1914. "Major Merriam Badly Hurt When Hit by Car," January 26, p.1.
- Escondido Times-Advocate 1918 October 25, p.1.
- Fages 1937. *A Historical, Political, and Natural Description of California* (1775). Translated by Herbert Ingram Priestly. Berkeley, California: University of California Press.
- Fenenga, Garret 1988. Analyses of South-Central Californian Shell Artifacts: Studies from Santa Cruz, Monterey, San Luis Obispo, and Santa Barbara Counties. In Coyote Press Archives of California Prehistory 23:87-105.
- Flenniken, J. Jeffrey 1981. *Replicative Systems Analysis: A Model Applied to the Vein Quartz Artifacts from the Hoko River Site*. Laboratory of Anthropology Reports of Investigations, No. 59. Washington State University, Pullman.
- Flenniken, J. Jeffrey 1985. Stone Tool Reduction Techniques as Cultural Markers. In *Stone Tool Analysis: Essays in Honor of Don E. Crabtree*, edited by M. G. Plew, J. C. Woods, and M. G. Pavesic, pp. 265-276. University of New Mexico Press, Albuquerque.
- Flenniken, Jeff J., and Tracy Stropes 2002. Monitoring Results for CA-SDI-7215 Locus A and Locus B, Lithic Analysis, Sections 3 and 4. In: Cultural Resource Monitoring and Data Recovery Program for CA-SDI-7215 Otay Mesa Generating Project, San Diego County, California, Gallegos et al. On file, South Coastal Information Center, San Diego State University, San Diego California.

Cultural Resources Report for the Newland Sierra Project

- Flower, Douglas M., Darcy Ike, Linda Roth, and Susan Sapone 1979. Phase II Archaeological-Historical Investigation of Vista Valley Country Club, Vista, California: SDi-5423, SDi-5424, SDi-5425, Tourmaline Mine. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Freeman, Trevor 1988. Archaeological Survey Report: Twin Oaks Valley Ranch Project, City of San Marcos, CA. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Fulton, P. 2013 *Cultural Resource Assessment Class III Inventory Verizon Wireless Services North Oaks Facility, City of San Marcos, San Diego County, California*. Prepared by LSA Associates Inc. Report on file at South Coastal Information Center, San Diego State University.
- Gallegos, Dennis R 1987. A Review and Synthesis of Environmental and Cultural Material for the Batiquitos Lagoon Region. In: *San Dieguito-La Jolla: Chronology and Controversy*, San Diego Archaeological Society, San Diego, California.
- Gallegos, Dennis R. 1983. Archaeological Report for Business/Industrial, Richmar, Lake San Marcos, and Barham/Discovery Community Plan, San Marcos, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Gallegos, Dennis R. and Carolyn E. Kyle 1989. Cultural Resource Survey of the San Marcos Highlands Project. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Gallegos, Dennis R. and Dayle Cheever 1986. Archaeological Testing at SDi-8327 Gopher Canyon Reservoir Project, Oceanside, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Gallegos, Dennis R. and Ivan Strudwick 1992. Historical/Archaeological Survey Report for San Marcos Mountain North Reservoirs. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Gallegos, Dennis R. and Richard Carrico 1985. Archaeological Testing for Site Significance for Site SDI-4806, All Seasons Campground, Escondido, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- Gallegos, Dennis R., Monica Guerrero, and Tracy Stropes 2007 *Cultural Resources Report for the Merriam Mountains Project, County of San Diego, California*. Prepared by Gallegos and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Gardner, Jill 2009. *Archaeological Monitoring for the SDG&E Pole Replacement Project in Escondido, San Diego County, California (ETS 7851)*. Prepared by ASM Affiliates Inc. Report on file at South Coastal Information Center, San Diego State University.
- Garrahy, S.T. and D.J Weber 1971. Francisco de Ulloa, Joseph James Markey, and the Discovery of Upper California, In *California Historical Society Quarterly* 50 (March 1971); 73-78.
- Gayton, A. H. 1929. Yokuts and Western Mono Pottery-Making. In *American Archaeology and Ethnology* 24(3):239-255. University of California, Berkeley.
- Geiger, M., and C. W. Meighan. 1976. As the Padres Saw Them: California Indian Life and Customs as Reported by the Franciscan Missionaries, 1813-1815. Santa Barbara, California: Santa Barbara Mission Archive Library.
- Gibson, Robert O. 1973. On the Nature of Beads. Paper presented at the Annual Meetings of the Society for California Archaeology, Riverside. On file at Gallegos & Associates.
- Gifford, Edward W 1947. Californian Shell Artifacts. In *University of California Anthropological Records* 9(1):1-114.
- Glenn, Brian K. 1993a. A Cultural Resource Survey and Historic Structures Evaluation Report for the Proposed Sycamore Avenue Widening Project, City of Vista, San Diego County, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Glenn, Brian K 1993b. A Positive Archaeological Survey Report for the Sycamore Avenue Interchange Project 11-SD-78 PM 8.7/9.8 11221-184970, Vista, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Golla, V. 2007. "Linguistic Prehistory." In *California Prehistory: Colonization, Culture, and Complexity*, edited by T.L. Jones and K.A. Klar, 71–82. New York, New York: Altamira Press.
- Gouveia, F., and R. 1977b. Site form for CA-SDI-5640. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Gouveia, F., and R. Ricard 1977a. Site form for CA-SDI-5639. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- Graham, William R., Christopher W. White and Scott G. Fulmer 1981. Final Report, Cultural Resource Survey of the Laguna Mountain Recreation Area, San Diego County, California. Archaeological Systems Management Inc., San Diego. Submitted to USDA Forest Services, Cleveland National Forest, San Diego.
- Griset 1996. "Southern California Brown Ware." Unpublished PhD dissertation; University of California, Riverside.
- Gross, Timothy and Lorin Jacobsen 1990. Cultural Resource Inventory: Mountain Meadow Road Realignment, Valley Center, San Diego County. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Gross et al. 1990. Site form for P-37-014965. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2004a. Site Form for CA-SDI-17264. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2004b. Site Form for CA-SDI-17265. On file, South Coastal Information Center, San Diego State University, San Diego, California
- Guerrero, Monica 2004c. Site Form for P-37-025968. On file, South Coastal Information Center, San Diego State University, San Diego, California
- Guerrero, Monica 2005. Site Form for CA-SDI-9253. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2007a. Site Form for CA-SDI-4370 On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2007b. Site Form for CA-SDI-4558. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2007c. Site Form for CA-SDI-5639. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2007d. Site Form for CA-SDI-5640. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Guerrero, Monica 2007e. Site Form for CA-SDI-9822. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

Guerrero, Monica 2007f. Site Form for CA-SDI-10747H. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Guerrero, Monica and Dennis Gallegos 2005. Cultural Resource Survey Report for the Pizzuto Subdivision Property San Diego County, California. Prepared by Gallegos and Associates. Report on file at South Coastal Information Center, San Diego State University.

Guerrero, Monica, Dennis R. Gallegos, Tracy Stropes, Steve Bouscaren, Susan Bugbee, and Richard Cerreto 2001. Cultural Resource Test Report for Oceanside-Escondido Rail Project, Oceanside, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Gunderman, Shelby and Ni Ghabhlain, Sinead 2010. *Cultural and Historical Resources Survey and Evaluation Report for the City of San Marcos Public Works Channel Maintenance Permit Project, San Diego County, California*. Prepared by ASM Affiliates Inc. Report on file at South Coastal Information Center, San Diego State University.

Hale 2001. "Technological Organization of the Millingstone Pattern in Southern California." Master's thesis; California State University, Sacramento.

Hale 2009. "San Diego and Santa Barbara: Socioeconomic Divergence in Southern California." PhD dissertation; University of California, Davis.

Harrington, J.P. 1934. "A New Original Version of Boscana's Historical Account of the San Juan Capistrano Indians of Southern California." *Smithsonian Miscellaneous Collections* 92(4).

Hastings, Edgar F. 1960. Interview of Richmond Nolly Goodwin. On file, San Diego Historical Society, San Diego, California.

Hatley, M. Jay 1979. Cultural Resources Impact Mitigation Report for Circle R Ranch. On file, South Coastal Information Center, San Diego State University, San Diego, California.

HCH & Associates 1978. *Vista Valley Country Club Draft Environmental Impact Report for the Department of Land Use and Environmental Regulation County of San Diego*. Report on file at South Coastal Information Center, San Diego State University.

HCH & Associates 1984. *Vista Valley Country Club Draft Supplemental Environmental Impact Report*. Report on file at South Coastal Information Center, San Diego State University.

Cultural Resources Report for the Newland Sierra Project

- Hector 1984. "Late Prehistoric Hunter-Gatherer Activities in Southern San Diego County." PhD dissertation; University of California, Los Angeles.
- Hector, S.M. 2006. Cultural Resources Sensitivity Analysis for the Carryover Storage and San Vicente Dam Raise Project (CSP) Alternatives Analysis. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Hector, S.M. 2007. Archaeological Investigations at University House Meeting Center and Chancellor Residence, CA-SDI-4669 (SDM-W-12), University of California at San Diego, La Jolla, California. ASM Affiliates.
- Hedges, Kenneth E. and C. Beresford 1977. Site Update for CA-SDI-9822/W-223-A. On file, Museum of Man, San Diego, California.
- Heizer, R. 1978. "Introduction." In *California*, edited by R.F. Heizer, 1–6. *Handbook of North American Indians*, Vol. 8, edited by W.C. Sturtevant. Washington, D.C.: Smithsonian Institution.
- Heizer, R. and K.M. Nissen. 1973. *The Human Sources of California Ethnography*. Berkeley, California: University of California Archaeological Research Facility, Berkeley.
- Heuett, M. L. 1982a. Site Form for CA-SDI-9252. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Heuett, M. L. 1982b. Site Form for CA-SDI-9253. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Hilton, S. 2000. Site form for P-37-019199. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Howard, Donald M. 1974. MNT-350, The Cal-Am Filter Plant Site. In *Archaeology in Paradise*, pp. 39-41. Antiquities Research Publications, Carmel.
- James and Briggs 2000. Site Record Form for CA-SDI-15689. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Johnson, J.R., and J.G. Lorenz. 2006. "Genetics, Linguistics, and Prehistoric Migrations: An Analysis of California Indian Mitochondrial DNA Lineages." *Journal of California and Great Basin Anthropology* 26:33–64.

Cultural Resources Report for the Newland Sierra Project

- Jones & Stokes 2000. Final Cultural Resources Inventory Report for the Williams Communications Inc. Fiber Optic Cable System Installation Project, Riverside to San Diego, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Jones, Barry 1989. Focused Assessment of Status of the California Black-Tailed Gnatcatcher for the Circle R Resort Special Assessment. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Jones, Timothy 2013. *A Cultural Resources Study for the SDCWA Microwave Communications Project, San Diego County, California*. Prepared by LSA Associates Inc. Report on file at South Coastal Information Center, San Diego State University.
- Kearns, Tim 1971a. Site Record Form for CA-SDI-4558. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kearns, Tim 1971b. Site Record Form for CA-SDI-4559. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kearns, Tim 1971c. Site Record Form for CA-SDI-4559. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kearns, Tim 1971d. Site Record Form for CA-SDI-4559. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kimbrow, Harriet, ed. n.d. "A Genuine Western Man Never Drinks Tea: Gustavus French Merriam's Letters from Kansas in 1860," *Kansas History*. On file, Escondido Public Library, Escondido, California.
- King, Chester D. 1982. The Evolution of Chumash Society: A Comparative Study of Artifacts Used in System Maintenance in the Santa Barbara Channel Region Before AD 1804. Ph. D. Dissertation, Department of Anthropology, University of California, Davis.
- Kirkish, Alex N. 1996. Results of an Archaeological Survey of the Proposed Twin Oaks Reservoir for the Vallecitos Water District, San Marcos, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kowta, M. 1969. The Sayles Complex: A Late Milling Stone Assemblage from Cajon Pass and the Ecological Implications of its Scraper Planes. In: *University of California Publications in Anthropology*, No. 6.

Cultural Resources Report for the Newland Sierra Project

- Kroeber, Alfred L. 1925. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C.
- Kwiatkowski, Heather 2008. *Cultural Resources Survey Report for TM 5335: Washington Meadows Tentative Map APN 186-290-32*. Prepared by the Department of Planning and Land Use. Report on file at South Coastal Information Center, San Diego State University.
- Kyle, Carolyn 2007. *Cultural Resource Survey and Significance Test of Site CA-SDI-15689 for the Mountain Gate Project County of San Diego, California*. Prepared by Kyle Consulting. Report on file at South Coastal Information Center, San Diego State University.
- Kyle, Carolyn and Dennis Gallegos 1987a. Cultural Resource Survey of Moosa Canyon Recreation Park, San Diego County, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kyle, Carolyn and Dennis Gallegos 1987b. Cultural Resource Survey of Potential Quarry Localities, Gopher Canyon, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kyle, Carolyn E., Adella B. Schroth, and Dennis R. Gallegos 1998. Remington Hills Archaeological Data Recovery Program for Prehistoric Site CA-SDI-11079, Otay Mesa, San Diego, California. Ms on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Kyle, Carolyn, Patricia Mitchell, and Dennis Gallegos 1998. *Historical/Archaeological Supplemental Survey for the Jesmond Dene Property and Significance Test of Prehistoric Sites CA-SDI-11898, Loci A and B, and CA-SDI-11899, County of San Diego, California*. Prepared by Gallegos and Associates. Report on file at South Coastal Information Center,
- Laylander, D. 1985. "Some Linguistic Approaches to Southern California's Prehistory." *San Diego State University Cultural Resource Management Center Casual Papers* 2(1):14-58.
- Laylander, D. 2000. *Early Ethnography of the Californias, 1533-1825*. Salinas, California: Coyote Press Archives of California Prehistory.
- Laylander, D. 2010. "Linguistic Prehistory." Research Issues In San Diego Prehistory. Accessed August 31, 2012. <http://www.sandiegoarchaeology.org/Laylander/Issues/index.htm>
- Lindenmeyer, Ruth 1978a. "German Families Settled the Valley of San Marcos," *The Courier*, October 19. In "Twin Oaks" Vertical File. On file, San Marcos Historical Society, San Marcos, California.

Cultural Resources Report for the Newland Sierra Project

- Lindenmeyer, Ruth 1978b .“Harrison Family Homesteaded in This Valley Nearly a Century Ago,” *The Courier*, July 20. In “Twin Oaks” Vertical File. On file, San Marcos Historical Society, San Marcos, California.
- Loftus, Shannon 2013a. *Cultural Resource Records Search and Site Survey AT&T Site NS0322 Royal Road 632 Ora Avo Drive, Vista, San Diego County, California 92084*. Prepared by ACE Environmental LLC. Report on file at South Coastal Information Center, San Diego State University.
- Loftus, Shannon 2013b. *Cultural Resource Records Search and Site Survey AT&T Site SD0633 Deer Springs 684 Deer Springs Road, San Marcos, San Diego County, California 92069*. Prepared by ACE Environmental LLC. Report on file at South Coastal Information Center, San Diego State University.
- Loftus, Shannon n.d. *Cultural Resource Records Search and Site Survey AT&T Site SD0640 Stickley Ranch 27311 Mountain Meadow Road Escondido, San Diego County, California 92026*. Prepared by ACE Environmental LLC. Report on file at South Coastal Information Center, San Diego State University.
- Marben-Laird Associates 1987. *Historical Resource Survey, A Project of the City of Vista, California*. Report on file at South Coastal Information Center, San Diego State University.
- May, Ron, Jay Hatley, and R. H. Norwood 1975a. Site form for CA-SDI-4367. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- May, Ron, Jay Hatley, and R. H. Norwood 1975b. Site form for CA-SDI-4368. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- May, Ron, Jay Hatley, and R. H. Norwood 1975c. Site form for CA-SDI-4369. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- May, Ron, Jay Hatley, and R. H. Norwood 1975d. Site form for CA-SDI-4370. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- May, Ron, Jay Hatley, and R. H. Norwood 1975e. Site form for CA-SDI-4371. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- McCoy, Lesley C. 1979. Archaeological Survey of the Barron Ranch. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- McHenry, Anita. 1997. The History of Valley Center, California: The Homestead Years, 1860-1900. Unpublished Master's Thesis in History. Submitted to University of San Diego, San Diego, California
- McHenry, Petei 1989. An Analysis of Five Western Excavated Units: 1989. Ms. on file, Palomar College, San Marcos, California.
- Meighan 1959. "California Cultures and the Concept of an Archaic Stage." *American Antiquity* 24:289-305.
- Mooney, B.F. 1992. *Draft Supplemental Environmental Impact Report for Hidden Meadows Tentative Map (TM4739RPL, P88-027, Log # 88-8-26) (Steinbeck Subdivision) SCH # 900105916*. Prepared by Brian F. Mooney and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Moratto, Michael J. and Roger Kelly 1976. Optimizing Strategies for Evaluating Archaeological Significance. In: *Advances in Archaeological Method and Theory*, edited by Michael B. Schiffer, Vol. 1, pp. 1-30. Academic Press.
- New Horizons Planning Consultants Inc. (NHPC) 1982. South Coast Asphalt Products Company Inc. Twin Oaks Quarry Major Use Permit and Reclamation Plan Draft Environmental Impact Report. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- New Horizons Planning Consultants Inc. (NHPC) 1984. Draft Environmental Impact Report Sullins Technology Park. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Norwood, R.H. 1977. Site Record Form for CA-SDI-5357. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Olsen, Richard et al. 1991. *Archaeological Investigation of Deer Springs Estates Twin Oaks Valley, San Diego County, California Survey Report*. Prepared by Advanced Sciences Inc. Report on file at South Coastal Information Center, San Diego State University.
- Parker, Patricia L. and Thomas J. King. 1998. *Guidelines for Evaluating and Documenting Traditional Cultural Properties*. National Park Service, Washington, D.C.
- Perkins, Eloise. 1966. "The Merriams of Twin Oaks," *Escondido Times-Advocate*, June 29. 1976 "19th Century School Built by Merriam," *Escondido Times-Advocate*, November 21.

Cultural Resources Report for the Newland Sierra Project

- Pierson, Lawrence J. 2001. *An Archaeological Report for the Mitigation, Monitoring, and Reporting Program at the South Round Truck Route, City of San Diego*. Prepared by Brian F. Smith and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Pignuolo, A.R. 2004. "Points, Patterns, and People: Distribution of the Desert Side-Notched Point in San Diego." *Proceedings of the Society for California Archaeology* 14:27–39.
- Pignuolo, Andrew 2006. *Negative Cultural Resources Survey Report Letter, Eslamian Parcels, City of San Diego, California*. Prepared by Laguna Mountain Environmental Inc. Report on file at South Coastal Information Center, San Diego State University.
- Polan, Keith H. 1978. An Archaeological Field Report on Buena Creek Ranch. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Polan, Keith H. and Stanley Berryman 1977. *Archaeological Investigation of Hidden Meadows*. Prepared by Toups Corporation. Report on file at South Coastal Information Center, San Diego State University.
- Pourade, R.F. 1960–1967. *The History of San Diego*. 6 vols. San Diego, California: Union-Tribune Publishing Company.
- PRC Toups Corporation 1981. *Draft Environmental Impact Report, Hidden Meadows, San Diego, CA*. Report on file at South Coastal Information Center, San Diego State University.
- Preston, W.L. 2002. "Portents of Plague from California's Protohistoric Period." *Ethnohistory* 49:69–121
- Quinn, J.M. 1907. *History of California, Volume I: Southern Coast Counties*. Historic Record Company, Los Angeles, California. On file, San Marcos Historical Society, San Marcos, California.
- Quintero, Leslie 1987. Room and Board at Deer Springs: Faunal Analysis as an Aid to Settlement Studies. M.A. Thesis: San Diego State University, San Diego, California.
- Rhodes, K. 1978. Site Record Form for CA-SDI-8095. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Ricard, R. 1977a. Site Record Form for CA-SDI-5638. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Ricard, R. 1977b. Site Record Form for CA-SDI-5640. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- Ricard, R. 1977b. Site Record Form for CA-SDI-56. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Robbins-Wade, Mary 1999. Archaeological Resource Survey of Welk/Garden Villas, Escondido, San Diego County, California. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Robbins-Wade, Mary 2001. Cultural Resources Inventory for the Taylor Street Extension and Escondido Avenue Extension, Vista, San Diego County, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Robbins-Wade, Mary 2003. *Archaeological Records Search and Literature Review, Vallecitos Water District Master Plan Update, San Diego County, California*. Prepared by Affinis. Report on file at South Coastal Information Center, San Diego State University.
- Rogers 1929. "The Stone Art of the San Dieguito Plateau." *American Anthropologist* 31:454–467.
- Rogers 1945. "An Outline of Yuman Prehistory." *Southwestern Journal of Anthropology* 1:167–198.
- Rogers, Malcolm n.d. Site Record Form for CA-SDI-9822/W-223-A. On file, Museum of Man, San Diego, California.
- Roop, William and Katherine Flynn 1978. Heritage on the Half-Shell: Excavation at MNT-298. Ms. on file, City of Monterey, Urban Renewal Agency.
- Rosen, Martin 2011. *Historic Property Survey Report for County Department of Public Works Bridge Preventative Maintenance Project #1*. Prepared by ICF International. Report on file at South Coastal Information Center, San Diego State University.
- Rosenberg, Seth 2009. *ETS 8147; Cultural Resources Survey for the Replacement of Four Wood Poles (P116494, P112248, P13581, and P135582) in Valley Center, San Diego County*. Prepared by E2M. Report on file at South Coastal Information Center, San Diego State University.
- Rosenberg, Seth, Adriane Dorrlor, and Brian F. Smith 2007. *A Cultural Resources Evaluation for the Vista and Buena Sanitation District 2007 Sewer Master Plan Update*. Prepared by Brian F. Smith and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Roy, Julie 2013. *Letter Report: ETS 26411- Cultural Resources Survey for Pole P251273S, Community of Bonsall, Northern San Diego County, California-IO 7011102*. Prepared by AECOM. Report on file at South Coastal Information Center, San Diego State University.

Cultural Resources Report for the Newland Sierra Project

- San Diego Historical Society n.d. "Twin Oaks," Vertical File #635. On file, San Diego Archaeological Society, San Diego, California.
- San Diego Sun, The 1926. "Early Perils and Romance of San Diego County Bared," August 7. In "Twin Oaks" Vertical File. On file, San Marcos Historical Society, San Marcos, California.
- San Diego Union, The 1908. "Civil War Hero Knew Dewey Well," September 27, p.20.
- San Marcos Historical Society n.d. "Cochems Family History," in Cochems Biography File. On file, San Marcos Historical Society, San Marcos, California.
- Schlesinger, Nancy 1982. "Family Restores Aged House," *Escondido Times-Advocate*, September 5. In "Twin Oaks" Vertical File. On file, San Marcos Historical Society, San Marcos, California.
- Schroth, Adella 1991. Archaeological Investigations at a Five Hundred Year Old Settlement, Twin Oaks Valley Ranch, San Marcos, California. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Scientific Resource Surveys Inc. (SRS) 1982. Archaeological Report on SDI-8250. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Scientific Resources Surveys Inc. (SRS) 1990. *Archaeological Resource Assessment for the Jesmond Dene Development Project T.M. 4902, San Diego County, California*. Report on file at South Coastal Information Center, San Diego State University.
- Shipek, Florence 1977. *A Strategy for Change: The Luiseño of Southern California*. Unpublished Ph.D. dissertation, Department of Anthropology, University of Hawaii, Honolulu.
- Shipek, Florence 1993. Kumeyaay Plant Husbandry: Fire, Water and Erosion Control Techniques. In: *Before the Wilderness: Environmental Management by Native Californians*. Ballena Press, Menlo Park, California.
- Smith, Brian F 1982. Site Update for CA-SDI-5369. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Smith, Brian F. 1987 *An Evaluation of Cultural Resources at the Hidden Meadows Specific Amendment Project*. Prepared by Brian F. Smith and Associates. Report on file at South Coastal Information Center, San Diego State University.

Cultural Resources Report for the Newland Sierra Project

- Smith, Brian F. 1991. An Archaeological Survey of the Israni Subdivision Project, Escondido County, San Diego TM4967, EAD Log#90-8-101. Ms. on file, South Coastal Information Center, San Diego State University, San Diego, California.
- Smith, Brian F. and Karl J. Lorenzen 2006. *A Phase I Archaeological Assessment of the National Quarries Project*. Prepared by Brian F. Smith and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Smith, Brian F. and Sara Clowery-Moreno 2008. *Negative Cultural Resources Survey Report – The Majestic Farms Project, San Diego County, California, APNS 178-180-48, 182-180-32, and 182-180-35*. Prepared by Brian F. Smith and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Smith, Brian F. and Shannon Gilbert 2003. *An Archaeological Survey for the Canyon Villas at the Welk Resort Project, San Diego County, California*. Prepared by Brian F. Smith and Associates. Report on file at South Coastal Information Center, San Diego State University.
- Sparkman, Philip S. 1908. The Culture of the Luiseño Indians. *University of California Publications in Archaeology and Ethnology* 8(4):187-234.
- Spelts, Brian 2013. *Letter Report: ETS 26585-Cultural Resources Survey for Pole P108200 and Proposed Pole P167397S, City of Escondido, San Diego County, California- IO 7011102*. Prepared by AECOM. Report on file at South Coastal Information Center, San Diego State University.
- Spier, Leslie 1923. Southern Diegueño Customs. *University of California Publications in American Archaeology and Ethnology* 20(16):297–358.
- Spier, Robert F. G. 1978. Foothill Yokuts. In *Handbook of the North American Indians, Volume 8, California*, edited by Robert F. Heizer, pp. 471-484. Smithsonian Institution, Washington, D.C.
- Strudwick, Ivan and Dennis R. Gallegos 1994. *Historical/Archaeological Survey and Test Report for the Rancho Penasquitos Pipeline (P5EII) San Diego County Municipal Water Authority, San Diego, California*. Prepared by P & D Technologies. Report on file at South Coastal Information Center, San Diego State University.
- TMI Environmental Services 1989a. Cultural Resources Assessment for 29.1 Acres in San Marcos, CA. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- TMI Environmental Services 1989b. Cultural Resource Assessment for 80+ Acres in San Marcos, CA. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- True, Delbert L. 1958. An Early Complex in San Diego County, California. *American Antiquity*, 23(3):255-264.
- True, Delbert L. 1966. Archaeological Differentiations of Shoshonean and Yuman Speaking Groups in Southern California. Ph.D. Dissertation, Department of Anthropology, University of California at Los Angeles.
- True, Delbert L. 1980. The Pauma Complex in Northern San Diego County:1978. *The Journal of New World Archaeology* 3:1-39.
- True, Delbert L. n.d. Site form for CA-SDI-561. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- True, Delbert L. and Georgia Waugh 1982. Proposed Settlement Shifts during San Luis Rey Times: Northern San Diego County, California. In: *Journal of California and Great Basin Anthropology* 4(1):34-54.
- U.S. Army Corps of Engineers 1990. Archaeological Sites Protection and Preservation Notebook. US Army Engineer Waterways Experiment Station, Environmental Laboratory, PO Box 631, Vicksburg, Mississippi.
- Ubelaker, Douglas H. 1978. *Human Skeletal Remains*. Aldine, Chicago.
- Van Horn, D. 2003. Site form for P-37-025780. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Van Horn, K. 1974. "Tempting Temecula: The Making and Unmaking of a Southern California Community." *Journal of San Diego History* 20:26-38.
- Wade, Sue 2001. Diocese of San Diego, Deer Springs Road Property, Cultural Resource Survey. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Wallace, W.J 1955. "A Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology* 11:214-230.
- Warren Claude N. 1964. "Cultural Change and Continuity on the San Diego Coast." Unpublished PhD dissertation; University of California, Los Angeles.

Cultural Resources Report for the Newland Sierra Project

- Warren, Claude N. 1968. Cultural Tradition and Ecological Adaptation on the Southern Coast, In: Archaic Prehistory in the Western United States, C. I. Williams ed. *Eastern New Mexico University Contributions in Anthropology* 1(3):1-14.
- Warren et al. 2004. "Paleoindian and Early Archaic Periods." In *Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study*. Prepared for the Metropolitan Wastewater Department, City of San Diego. Encinitas, California: ASM Affiliates.
- Weiss, Jamie L. 1978. "Merriam Dedicated to Land," *Escondido Times-Advocate*, April 13.
- Westec 1983a. Monte Cerno Draft Environmental Impact Report. Report on file at South Coastal Information Center, San Diego State University.
- Westec 1983b. Appendices Monte Cerno Draft Environmental Impact Report. Report on file at South Coastal Information Center, San Diego State University.
- White, Christopher 2005. Personal communication. California Department of Transportation.
- White, Christopher and Joyce Corum 1980. Addendum Phase 1 Archaeological Survey Report for a Proposed Left-Turn Pocket on Existing Route 15 at Gopher Canyon Road (11-SD-15 P.M. R40.4/R42.9) 11502-095063. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- White, Laurie and Robert S. White n.d. A Cultural Resources Overview of the 2000±Acre Merriam Mountains Project, Northwest of Escondido, San Diego County. On file, Archaeological Associates, Sun City, California.
- White, Laurie, David Van Horn, and Robert White 2008. *A Cultural Resources Assessment of the 19.98 Acre T.E.R.I. Project Site Located in Twin Oaks Valley, Near San Marcos, San Diego County*. Prepared by Archaeological Associates. Westec 1983. Appendices Monte Cerno Draft Environmental Impact Report. Report on file at South Coastal Information Center, San Diego State University.
- White, Raymond C. 1963. Luiseño Social Organizations. *University of California Publications in American Archaeology and Ethnology* 48(2):1-194.
- White, Robert S. 1990. An Archaeological Assessment of a 16 +/- Acre Parcel in the 700 Block of Plumosa Avenue, Vista, San Diego County. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

- Wilson, Stacie 2013. *Letter Report: ETS 25074- Cultural Resources Survey for the Replacement of Pole P115805, Community of Escondido, San Diego County, California- IO 7011102*. Prepared by AECOM. Report on file at South Coastal Information Center, San Diego State University.
- Wing, Elizabeth S. and Antoinette B. Brown 1979. *Paleo-Nutrition: Method and Theory in Prehistoric Foodways*. Studies in Archaeology, Academic Press, Orlando, Florida.
- Winterrowd, C. L. 1986. Site form for SDM-W-3880C. On file, Museum of Man, San Diego, California.
- Winterrowd, C. L. and D. S. Cardenas 1987. Cultural Resource Survey and Assessment of the Sycamore Ridge Project Area. Ms. Reported missing at the South Coastal Information Center, San Diego State University, San Diego, California.
- Wise, M. et al. 2006. Site Form for CA-SDI-17910. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Wright, Gail 2003. *Negative Cultural Resources Survey Report for Waldman Subdivision – TM 5320; Log No. 3-08-033; APN 179-120-59*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Wright, Gail 2004a. *Cultural Resources Survey Report for TM 5337; Log No. 3-08-054; Rogers Estate; APN 182-310-44; Negative Findings*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Wright, Gail 2004b. *Cultural Resources Survey Report for TPM 20814; Log No. 04-08-012; West Minor Subdivision; APN 181-012-22, 25; Negative Findings*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Wright, Gail 2004c *Cultural Resources Survey Report for MUP 04-042, Log No. 04-08-035; 76 Station and Convenience Store Project: APN 186-093-27, 30, 34 and 36*. On file, South Coastal Information Center, San Diego State University, San Diego, California.
- Wright, Gail 2004d. *Cultural Resources Survey Report for TPM 20860; Log No. 04-08-033; Northcutt Minor Subdivision West Minor Subdivision; Negative Findings, APN 172-061-52*. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

Wright, Gail 2006. *Cultural Resources Survey Report for TPM 20954; Log No. 05-08-024; Twin Oaks 4 Minor Subdivision APN 172-061-33-00*. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Wright, Gail 2007. *Cultural Resources Survey Report for TPM 5523; Log No. 08-08-043; Rimmelspach Subdivision; APN 186-101-40-00*. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Xinos Enterprises Inc. 1984. Draft Supplement Environmental Impact Report: High Meadow Ranch, EAD Log #77-14-371. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Zepeda-Herman, Carmen 2012. *Archaeological Survey Report for the Proposed Mesa Grande Road Bridge Preventative Maintenance Project 3, San Diego County, California*. Prepared by RECON. On file, South Coastal Information Center, San Diego State University, San Diego, California.

Cultural Resources Report for the Newland Sierra Project

8 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

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

Brad Comeau (Dudek): Acted as Principal Investigator and authored the technical report.

Adriane Dorrler (Dudek): Acted as co-author of the technical report and preformed the records search.

Adam Giacinto (Dudek): Acted as co-author of the technical report.

Monica Guerrero (Gallegos and Associates): Conducted fieldwork and co-authored the technical report.

Tracy Stropes (Gallegos and Associates): Acted as Lithic Analyst and co-author of the technical report.

Dennis R. Gallegos (Gallegos and Associates): Acted as co-author of the technical report.

Susan Bugbee (Gallegos and Associates): Acted as co-author of the technical report.

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9 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Impacted Archaeological Sites	
<i>Site Numbers</i>	<i>Mitigation Measures</i>
CA-SDI-4558	All forms of preservation in place are feasible for the significant portion of site. The County of San Diego is recommending that the site be avoided through incorporation into a greenspace park (M-CR-2) and through monitoring (M-CR-4).
CA-SDI-5951	<p>All forms of preservation in place are feasible for the northern portion of the site excluded from the off-site roadway circulation component of the project; this area would be avoided through incorporation into open space (M-CR-2).</p> <p>All forms of preservation in place are not feasible for significant deposits of the site located within a roadway circulation component of the project due to engineering design constraints.</p> <p>Mitigation of impacts through data recovery (MM CR-3), proper treatment of human remains (M-CR-8), and monitoring (MM CR-4).</p>
CA-SDI-9822	<p>All forms of preservation in place are feasible for the northern portion of the site excluded from the off-site roadway circulation component of the project, including the area containing the pictograph. This area would be avoided through incorporation into open space (M-CR-2). Dust control measures are required to protect the pictograph during construction (M-CR-5).</p> <p>All forms of preservation in place are not feasible for significant deposits of the site located within a roadway circulation component of the project due to engineering design constraints.</p> <p>Mitigation of impacts through data recovery (M-CR-3), proper treatment of human remains (M-CR-8), monitoring (M-CR-4), and laboratory analysis of the Palomar College excavation collection (M-CR-6).</p>
CA-SDI-4370; CA-SDI-4371; CA-SDI-5369; CA-SDI-5640; CA-SDI-17264	Monitoring (MM CR-4)
1901 Historic Structure	Pre-grade Subsurface Exploration Program (MM-CR-1)
CA-SDI-9253; CA-SDI-10747H; CA-SDI-17265	Open space easement and temporary fencing (M-CR-2), monitoring (M-CR-4).

Cultural Resources Report for the Newland Sierra Project

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APPENDIX A (CONFIDENTIAL)

SCIC Records Search Results

APPENDIX B (CONFIDENTIAL)

Archaeological Location and Impact Maps

APPENDIX C (CONFIDENTIAL)

*Phase II Evaluation Artifact
Catalogs and Analysis Tables*

APPENDIX D (CONFIDENTIAL)

Management Recommendations and Data Recovery Work Plan

APPENDIX E (CONFIDENTIAL)

Tribal Consultation Documentation

APPENDIX F (CONFIDENTIAL)

Human Remains Documentation (Restricted)

APPENDIX G (CONFIDENTIAL)

Pechanga Ethnography

APPENDIX H (CONFIDENTIAL)
Section 106 Findings Memo

APPENDIX I

Resumes of Key Personnel

Micah Hale, PhD, RPA

Senior Archaeologist

Micah Hale is Dudek's cultural resources practice manager and lead principal investigator, with technical expertise as a lithic and groundstone analyst, invertebrate analyst, and in ground penetrating radar. Over the course of his 19-year career, Dr. Hale has served as a principal investigator in the public and private sector for all levels of archaeological investigation, as a public outreach coordinator and as an assistant professor at the University of California, Davis (U.C. Davis). As Dudek's cultural resources practice manager, he currently functions as a principal investigator in project oversight including proposals, research designs, fieldwork, artifact analysis, and report authorship.

Dr. Hale's experience is both academic and professional spanning California, Arizona, Nevada, and Oregon, including work for Naval Facilities Engineering Command (NAVFAC) Southwest, California Department of Transportation (Caltrans), Western Area Power Administration, Bureau of Land Management (BLM), U.S. Army Corps of Engineers (ACOE), U.S. Fish and Wildlife Service (USFWS), California State Parks, various city and county agencies, and directly for Native American groups. Dr. Hale has supervised numerous large-scale surveys, test excavations, data recovery programs, and geoarchaeological investigations, served as a third party review consultant, and an expert witness in legal proceedings. He has authored research designs, management and treatment plans, proposals, preliminary and final reports, and technical analyses. Dr. Hale has integrated his personal research interests into projects and participated in professional symposia at local and national venues, including the Society for American Archaeology and the Society for California Archaeology. Additionally, he has conducted academic research in the Polar Arctic, Greenland. Dr. Hale's current focus is on hunter-gatherer archaeology of California and the Great Basin, applying theoretical premises of cultural evolution and human behavioral ecology.

EDUCATION

University of California, Davis
PhD, Anthropology, 2009
California State University, Sacramento
MA, Anthropology, 2001
University of California, Davis
BS, Anthropology, 1996

CERTIFICATIONS

Register of Professional Archaeologists
(RPA), 2001

PROFESSIONAL AFFILIATIONS

Society for American Archaeology
Society for California Archaeology
Antelope Valley Archaeological Society
San Diego Archaeological Society

Project Experience

Development

Phase II Archaeological Data Recovery for the Newland Homes Sierra Project, San Diego County, California, 2013-present. As project manager and principal investigator, supervising data recovery investigations at two significant prehistoric archaeological sites and historic archival research of a homestead in support of the Newland Sierra Environmental Impact Report (EIR).

Phase I Archaeological Inventory and Phase II Archaeological Evaluation for the Yokohl Ranch Project, Tulare County, California, 2012-2013. As project manager and principal investigator, supervised completion of 12,000 acre survey and archaeological evaluation of 85 prehistoric and historical archaeological sites in support of the Yokohl Ranch EIR.

Phase I Inventory and Phase II Cultural Resources Evaluation for the Star Ranch Project, RBF Consulting, San Diego County, California, 2011. As project manager and principal investigator, supervised CEQA inventory and evaluation for private development.

Phase II Archaeological Evaluation of Two Prehistoric Sites, Torrey Pines Glider Port, San Diego County, California, 2012. As project manager and principal investigator, supervised CEQA evaluation of two prehistoric archaeological sites for the Torrey Pines City Park General Development Plan.

Data Recovery of One Prehistoric Site for the Rhodes Property, Sea Breeze Properties, San Diego County, California. As project manager and principal investigator, supervised CEQA compliant data recovery of a large prehistoric site for a residential development.

Archaeological Survey of the Paramount Mine Exploratory Drilling Project, Essex Environmental, Mono County, Nevada, 2006. As principal investigator and field director, conducted archaeological survey for mining exploration and prepared the technical report.

Phase I Inventory of 1,544 Acres and Phase II Evaluation of Archaeological Sites along the Western and Northwestern Boundaries, Edwards Air Force Base, Kern County, California, 2005. As field director, supervised a Phase I inventory of 1,544 acres. Recorded 30 new archaeological sites, more than a dozen "sub-modern" refuse dumps, and a variety of isolate finds. Notable sites include several early Holocene lithic scatters (Lake Mojave-, Silver Lake-, and Pinto-age deposits), a rhyolite lithic quarry, and a complex of historic dumps associated with homesteading activities around Lone Butte.

Pankey Ranch Testing, Pardee Homes, Northern San Diego County, California, 2004. As field director, supervised excavation of shovel test pits to delineate the boundaries of site CA-SDI-682, the prehistoric village of Tom-Kav. Managed field personnel, conducted excavation, and wrote portions of technical report.

Oceanside Hilton EIR, Dudek Associates, Oceanside, San Diego County, California, 2004. As principal investigator and field director, conducted a survey of the proposed Hilton Hotel at the eastern end of Buena Vista Lagoon in Carlsbad and prepared portions of technical report for an EIR.

Archaeological Survey of the La Mesa Meadows Residential Development Project, Helix Environmental, San Diego County, California, 2005. As principal investigator, conducted a survey of a proposed residential development in San Diego County.

Data Recovery of Locus O, Star Canyon Development, Agua Caliente Band of Cahuilla Indians, Palm Springs, Riverside County, California, 2004. As field director, supervised field crews for data recovery mitigation of an archaeological deposit and human remains near Tahquitz Canyon. Coordinated with Native American representatives and prepared portions of the technical report.

Linda Vista Survey, City of San Marcos Planning Department, San Diego County, California, 2003. As field director, conducted a Phase I cultural resource inventory of the proposed road realignment in San Marcos. Prepared technical reports and made recommendations for additional work to be done within the project area.

Archaeological Monitoring for Williams Communications Fiber-Optic Line, Jones and Stokes Associates, San Luis Obispo and Bakersfield, Kern and San Luis Obispo Counties, California, 2001. As resource monitor/Native American coordinator, conducted archaeological monitoring for a fiber-optic cable installation project that spanned 180 miles from San Luis Obispo to Bakersfield. Identified and

protected archaeological resources in the project area in compliance with state and federal regulations. Managed Native American monitors and coordinated daily work with construction and environmental staff to facilitate project completion.

AT&T Cable Removal Project, Jones and Stokes Associates, Taft to Los Angeles, Kern and Los Angeles Counties, California, 1998. As field archaeologist, conducted a survey to determine archaeological impact by the removal of a lead-lined subsurface cable.

Subsurface Survey of a Proposed Bicycle Path Along the Columbia River Slough in Northwest Portland, City of Portland, Multnomah County, Oregon, 2000. As field archaeologist, conducted auger testing in a variable north-to-south transect at 30-meter intervals, and unit mapping.

Phase II Test Excavations, AT&T, Portland, Multnomah County, Oregon, and Vancouver, Clark County, Washington, 1999. This project determined the presence and condition of any cultural resources in the project areas that were situated on the northern and southern sides of the Columbia River in Washington and Oregon.

Education

Data Recovery for the Palomar North and Meadowood Projects, Palomar College, San Diego County, California, 2012. As principal investigator, supervised Section 106 and CEQA-compliant data recovery of the ethnohistoric village of Tom-Kav. Expert witness for litigation of archaeological work for the client.

Data Recovery Excavations in Advance of Geotechnical Coring at W-12, University of California San Diego (UCSD), San Diego County, California, 2009. As project manager and principal investigator, supervised data recovery excavations in a midden dated as early as 9,600 years before present.

Archaeological Test Excavations at Selected Sites on Vandenberg Air Force Base, University of California, Davis, Lompoc, Santa Barbara County, California, 2008. As principal investigator and field director, supervised and instructed 21 students for the 2008 U.C. Davis Field School.

Archaeological Survey and Excavations in the Polar Arctic, University of California Davis, Northwest Greenland, 2006. As researcher, conducted a project for the National Science Foundation, National Geographic, and the Inglefieldland Polar Archaeology Expedition; U.C. Davis.

Energy

Phase II Evaluation of 19 Archaeological Sites for Soitec's Tierra Del Sol Solar Project, San Diego County, California, 2012-2013. As principal investigator, oversaw and implemented significance evaluations, including fieldwork and documentation, under CEQA and San Diego County guidelines within the development footprint.

Phase II Evaluation of 42 Archaeological Sites for Soitec's Rugged Solar Project, San Diego County, California, 2012-2013. As principal investigator, oversaw and implemented significance evaluations, including fieldwork and documentation, under CEQA and San Diego County guidelines within the development footprint.

Class III Cultural Resources Inventory for the Level 3 Fiber Optic Installation Project, Fort Irwin Army Reserve and BLM, San Bernardino County, California, 2012-2013. As Project manager and co-

principal investigator, oversaw and implemented cultural resource inventory of fiber optic corridor and recordation and evaluation of contributing elements to the NRHP-eligible LADWP transmission line corridor.

Class III Cultural Resources Inventory for Soitec’s Fort Irwin Solar Project, San Bernardino County, California, 2013. As project manager and co-principal investigator, oversaw and implemented cultural resources inventory.

Third Party Compliance Monitoring for the Ocotillo Wind Energy Farm, Ocotillo, Imperial County, California, 2012-2013. As principal investigator, oversaw and implemented compliance assistance to the BLM to ensure adherence to mitigation measures and proper treatment of cultural resources.

Third Party Compliance Monitoring for the Tule Wind Project, San Diego County, California, 2012-2013. As principal investigator, oversaw and implemented compliance assistance to the Bureau of Land Management to ensure adherence to mitigation measures and proper treatment of cultural resources.

Third Party Compliance Monitoring for the East County Substation Project, San Diego County, California, 2012-2013. As principal investigator, oversaw and implemented compliance assistance to the BLM and California Public Utilities Commission (CPUC) to ensure adherence to mitigation measures and proper treatment of cultural resources.

Third Party Compliance Monitoring for the Rio Mesa Solar Project, Riverside County, California, 2012-2013. As principal investigator, oversaw and implemented compliance assistance to the BLM to ensure adherence to mitigation measures and proper treatment of cultural resources.

Phase II Archaeological Testing of One Historic Site for the Cool Valley Solar Project, RBF Consulting, San Diego County, California. As project manager, supervised implementation of archaeological testing of a historic airfield near Campo.

Phase II Archaeological Testing of Four Prehistoric Sites for the Gildred Solar Project, RBF Consulting, San Diego County, California. As project manager, supervised implementation of archaeological testing of four small prehistoric sites along the ancient Lake Cahuilla shoreline.

Phase II Archaeological Testing of One Prehistoric Site for the Borrego A and B Solar Projects, RBF Consulting, San Diego County, California. As project manager, supervised implementation of archaeological testing of a large prehistoric habitation site in the Imperial Valley.

Phase I Cultural Resources Inventories for the Sol Orchard and Sol Focus Solar Projects, RBF Consulting, San Diego County, California. As project manager, supervised implementation of Phase I CEQA inventories for more than 22 solar projects.

Class II Survey of 4,700 Acres for the Silurian Wind Project, Iberdrola Renewables, San Bernardino County, California, 2011. As project manager and principal investigator, supervised Section 106 inventory of proposed renewable energy project.

Class III and Class II Cultural Resources Inventory for the Tule Wind Alternative Energy Project, HDR Engineering for Iberdrola Renewables, San Diego County, California, 2010. As project manager and principal investigator, supervised inventory of 6,000 acres and recordation of nearly 200 archaeological sites, and assisted the BLM in preparation of a programmatic agreement between Iberdrola and the California State Historic Preservation Office (SHPO).

Monitoring of the Installation of Meteorological (MET) Towers for the Tule Wind Project, HDR Engineering, San Diego County, California, 2010. As project manager and principal investigator, supervised archaeological and Native American monitors during MET tower installation in the Tule Wind project area.

Jamul Substation 6, San Diego Gas & Electric Company (SDG&E), Jamul, San Diego County, California, 2004. As field director, conducted an intensive pedestrian survey of 18 acres in Jamul for a proposed substation construction project. Identified and recorded two archaeological sites within the project area. Prepared the technical report. Coordinated with paleontology subcontractor and incorporated paleontology report into ASM's archaeology technical report.

Path 15 Transmission Line Corridor, Steigers Corporation, San Joaquin Valley, Fresno and Merced Counties, California, 2004. As field director, supervised survey of over 87 miles of 400-foot transmission line corridor and over 46 miles of access roads in Merced and Fresno Counties. Supervised field crew, documented sites, coordinated with Native American representatives, coordinated access to survey areas, and prepared portions of technical report.

Carmel Valley Substation Survey, SDG&E, Carmel Valley, San Diego County, California, 2003. As field director, conducted a Phase I cultural resource inventory of a proposed power substation.

Federal

Ground-Penetrating Radar Survey and Class III Inventory for the Friendship Circle Project, Department of Homeland Security, Gulf South Research Corporation, San Diego County, California. As project manager and principal investigator, supervised and implemented a ground-penetrating radar survey and surface survey for the Friendship Circle project at Border Fields State Park, San Diego.

Healthcare

Kaiser Permanente Murrieta Valley Medical Center PEIR, City of Murrieta, California. Dr. Hale acted as Principal Investigator on the Kaiser Murrieta project, overseeing a Phase I cultural resources inventory and Phase II archaeological significance evaluation of one prehistoric resource. Dr. Hale assisted the City with Tribal communication and analysis of potential impacts to a viewshed considered sensitive by local Native Americans. All studies were completed to comply with CEQA guidelines in support of an EIR.

Military

Phase II Evaluation of 31 High Complexity Sites on Edwards Air Force Base, CH2MHill/JT3, Kern and Los Angeles Counties, California, 2010. As project manager, oversaw Section 106 test excavations at 31 prehistoric archaeological sites.

Phase II Evaluation of 85 Archaeological Sites on Edwards Air Force Base, CH2MHill/JT3, Kern and Los Angeles Counties, California, 2010. As project manager and principal investigator, supervised Section 106 test excavations at 42 prehistoric and 43 historic archaeological sites.

Western Acquisition Survey, Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms, San Bernardino County, California, 2010. As principal investigator, managed the survey of 10,000 acres on land administered by the BLM in Johnson Valley, west of the base. Duties included

project management, coordination with BLM Barstow field office and MCAGCC 29 Palms personnel, coordinating and supervising field crews, as well as document preparation.

Management Plan for the Coso Rock Art National Historic Landmark (NHL), Naval Air Weapons Station (NAWS) China Lake, Inyo County, California, 2010. As project manager, supervised and co-authored a management plan for the Coso Rock Art NHL, including arranging and implementing stakeholder meetings and field testing the implementation plan.

Section 110 Intensive Archaeological Survey of the Cole Flat Training Area, NAWS China Lake, Inyo County, California, 2009. As project manager and principal investigator, supervised the survey of 5,400 acres near the Coso Rock Art NHL.

Phase I Survey of Selected Parcels in Five Training Areas, MCAGCC Twentynine Palms, San Bernardino County, California, 2009. As project manager and principal investigator, supervised survey of 4,500 acres in the Blacktop, Lava, Lavic Lake, Sunshine Peak, and Quackenbush training areas.

Phase I Survey of Aerial Maneuver Zones for the 53 AMZ Project, MCAGCC Twentynine Palms, California, 2009. As project manager and principal investigator, supervised survey of 72 Aerial Maneuver Zones. Client Reference: Leslie Glover, MCAGCC 29 Palms, 760.830.5369.

Cultural Resources Inventory and Evaluation for the Skaggs Island BRAC Disposal Archaeological Survey, Naval Communications Station, Sonoma County, California, 2011-2012. As principal investigator, supervised survey of installation and recordation and evaluation of historic civilian and military resources.

Phase I Survey of 8,100 Acres on Edwards Air Force Base, ACOE, Kern County, California, 2008–2009. As principal investigator, supervised survey of 8,100 acres on Edward Air Force Base.

Phase I and II Survey of 2,500 Acres and Evaluation of 50 Sites on Edwards Air Force Base, ACOE, Kern County, California, 2008. As principal investigator, supervised survey of 2,500 acres and evaluation of 50 sites on Edward Air Force Base.

Cultural Resources Inventory and Evaluation for the Concord Inland BRAC Disposal Archaeological Survey, Naval Weapons Station, Seal Beach, Detachment Concord, Contra Costa County, California. As principal investigator, supervised survey of 5,200 acres and recordation and evaluation of historic civilian and military resources, and prehistoric archaeological sites.

Archaeological Evaluation of Eight Prehistoric Sites in the Emerson and Quackenbush Training Areas, ACOE, MCAGCC Twentynine Palms, San Bernardino County, California, 2005. As field director, supervised excavation of eight prehistoric sites on the Marine Corps base in Twentynine Palms, California.

Archaeological Evaluation of 22 Sites on Edwards Air Force Base, ACOE, San Bernardino County, California, 2005. As field director, supervised the National Register evaluation of 22 sites at Edwards Air Force Base.

Naval Base Point Loma Site Recordation, NAVFAC Southwest (SW), Point Loma, San Diego County, California, 2004. As principal investigator and field director, supervised relocation of 33 sites

located on Naval Base Point Loma. Reviewed site documentation and re-recorded sites that were improperly documented by past surveys.

Archaeological Testing of 23 Sites in the Las Pulgas Corridor, MCB Camp Pendleton Environmental Security, MCB Camp Pendleton, San Diego County, California, 2004. As field director, supervised field crews for Phase II testing and mechanical coring of 23 sites on Camp Pendleton. Coordinated with coring contractor and base personnel. Documented sites in the field. Supervised field crews and prepared portions of technical report.

Rose-Arizona, Clay, and Photo Drainage, and Road Improvement Surveys, NAVFAC SW, NALF San Clemente Island, Los Angeles County, California, 2004. As field director, supervised archaeological surveys and the placement of protective signing on 750 sites. Coordinated access to the island and supervised one crew member.

Remote Sensing, NAVFAC SW, NALF San Clemente Island, Los Angeles County, California, 2004. As Global Positioning System (GPS) specialist, conducted data collection and image rectification for a remote sensing project in the detection of archaeological sites on the base. Supervised one crew member.

MCB Camp Pendleton Burn Survey, MCB Camp Pendleton Environmental Security, MCB Camp Pendleton, San Diego County, California, 2002. As field director, supervised an archaeological survey of 1,500 acres in the De Luz and Case Springs areas of Camp Pendleton. Managed field crews, documented archaeological sites, prepared site forms and portions of technical report.

Survey of Yuma Stormwater Basin, NAVFAC SW, MCAS Yuma, Yuma County, Arizona, 2002. As field director, supervised survey of stormwater basin along the Marine Corps airfield at MCAS Yuma. Managed field crew and prepared technical report. Client

Archaeological Coring of SDI-811, MCB Camp Pendleton Environmental Security, MCB Camp Pendleton, San Diego County, California, 2002. As field director, supervised first phase of a geologic coring project for a shell midden site along the coast of MCB Camp Pendleton, San Diego County. Coordinated with coring contractor and base personnel. Managed field monitors and field crew.

Archaeological Testing and Survey of the Lemon Tank Area, NAVFAC SW, NALF San Clemente Island, Los Angeles County, California, 2002. Conducted excavations, survey, and site recording.

Evaluation of Four Prehistoric Sites, Jones and Stokes Associates, Camp Roberts National Guard, San Luis Obispo County, California, 1998. As field technician, conducted excavation in order to determine the boundaries of the site for further mitigation.

Evaluation of Nine Prehistoric Sites, Edwards Air Force Base, San Bernardino County, California, 1999. As field archaeologist, evaluated nine sites through excavation to determine overall sensitivity and value of the archaeological remains that characterize the region.

Archaeological Survey and Excavation, ACOE, MCAGCC Twentynine Palms, San Bernardino County, California, 1998. As field archaeologist, participated in nine field rotations averaging 10 days each. Conducted survey of portions of the Marine Corps base to determine the distribution of cultural materials, and subsequently excavate sites based on priority. This area is characterized as high desert with the typically associated flora and fauna and archaeological sites that range in age from Early to Late Holocene.

Resource Management

South Sacramento Habitat Conservation Plan (HCP) EIR, County of Sacramento, California. Dr. Hale led the cultural resources effort on the South Sacramento HCP Project, including development of a long-term plan for analyzing cultural resources constraints and assisting multiple agencies in their tribal outreach obligations.

Archaeological Data Recovery Excavations at Border Fields State Park, California State Parks, Imperial Beach, San Diego County, California, 2005. As field director, supervised excavation of prehistoric sites located within the APE of a fence along the U.S.–Mexico Border in San Diego County. Prepared technical report.

Archaeological Salvage Excavations of Two Ollas in Hellhole Canyon, BLM, San Diego County, California, 2005. As principal investigator, relocated a cache of prehistoric ceramic artifacts uncovered during wildfires in San Diego County. Documented cache and collected artifacts for subsequent reconstruction in the ASM laboratory. Prepared technical report detailing project.

Archaeological Data Recovery Excavations at CA-SDI-16691, Jackson Pendo Development Company, Escondido, San Diego County, California, 2005. As principal investigator, supervised data recovery excavation at a Late Prehistoric site in Escondido, California.

El Cuervo Wetlands Mitigation, City of San Diego Land Development Review Department and Mitigation Monitoring Coordination, Carmel Valley, San Diego County, California, 2004. As co-principal investigator, supervised an archaeological monitoring project in central San Diego County, conducted test excavation of one site identified during monitoring. The site was evaluated as not significant. Prepared portions of technical report and supervised on-site monitor.

Milk Vetch Emergency, Imperial Irrigation District, Imperial County, California, 2002. As archaeological monitor, conducted emergency monitoring along transmission line corridor in Imperial County. Coordinated with IID and construction personnel. Prepared technical report.

Burial Salvage Excavations at the Carp Site, CA-MER-295, California Department of Parks and Recreation, Los Banos, Merced County, California, 1999. As field supervisor, directed excavations at CA-MER-295 in the central San Joaquin Valley in order to salvage cultural remains (including burials) from further destruction by the San Joaquin River.

Archaeological Survey of the Silver Lake Recreation Area, El Dorado Irrigation District, El Dorado County, California, 2006. As principal investigator and field director, supervised an archaeological survey of the Silver Lake Recreation area.

Transportation

Ortega Highway Monitoring, City of San Juan Capistrano, Orange County, California, 2013. As project manager, supervised Dudek's principal investigator to coordinate archaeological, tribal, and paleontological mitigation monitoring associated with the construction of water conveyance facilities and road repairs.

Archaeological Testing and Ground Penetrating Radar Study of the Forester Creek Biological Mitigation Area, Caltrans District 11, Santee, San Diego County, California, 2005. As principal investigator and field director, supervised archaeological testing of a private parcel.

Bridge 230.6 Replacement, North County Transit District, Agua Hedionda, Carlsbad, San Diego County, California, 2004. As principal investigator and field director, managed an archaeological survey of an APE associated with the replacement of and historic railroad bridge. Recorded archaeological sites within APE and prepared portions of technical report.

Little Lake Phase II Testing, Caltrans District 5, Little Lake, Inyo County, California, 2004. As field director, supervised Phase II testing of four sites including the ethnohistoric village of *Pagunda* near the town of Little Lake. Supervised field crews, coordinated fieldwork with Caltrans and subcontractors, and prepared portions of technical report.

Extended Phase I Testing, Caltrans District 05, Little Lake, Inyo County, California, 2003. As field director, supervised fieldwork for extended Phase I testing of one prehistoric site along U.S. Highway 395 in Inyo County. Prepared portions of technical report.

Cartago and Olancho Four-Lane Project Test Excavations, Caltrans District 05, Inyo County, California, 2002. As field director, supervised test excavations of 15 sites for the proposed widening of U.S. Highway 395 near Cartago and Olancho. Supervised all fieldwork and managed a team of 12 field archaeologists. Coordinated selected specialized studies, conducted ground stone analysis, and prepared large portions of the resulting 800+-page report.

Survey of Amtrak Second Mainline Right-of-Way, North County Transit District, Oceanside, San Diego County, California, 2002. As co-field director, managed an archaeological survey of 6.2 miles of North County Transportation District railroad right-of-way near San Onofre, California.

State Route 905 Survey, Caltrans District 11, San Diego County, California, 2002. As co-field director, conducted survey and recording of sites along the State Route 905 right-of-way in southern San Diego County. Documented three prehistoric sites within the proposed right-of-way. Created site maps and prepared site forms.

Evaluation of 11 Sites along U.S. 395, Caltrans District 05, Blackrock, Inyo County, California, 2000. As crew chief, managed 6-18 personnel, prepared paperwork and report. Made decisions surrounding site excavations in Owens Valley. Project included Phase II test excavation of numerous sites ranging in age from early to late Holocene.

Phase I Survey, Caltrans District 10, Stockton, San Joaquin County, California, 1997. As field archaeologist, conducted various survey and excavation projects for Caltrans throughout central California. Conducted survey and excavation, operated as a graduate student assistant to the District 10 archaeologist dealing with compliance issues, prepared site mapping and technical reports including Archaeological Survey Reports (ASR), Historic Properties Survey Reports (HPSR), and Negative Declarations.

Phase I Survey/TEA, Caltrans, Inyo and Mono Counties, California, 1996–1997. As field archaeologist, conducted survey of most major highways in Mono and Inyo Counties, California. Documented the distribution of all cultural material within the Caltrans right-of-way in order to determine impacts by road widening.

Tribal

Section 106 Mitigation Development and Tribal Consultation Assistance, BLM, San Diego County, California, 2011–2012. As project manager, assisted the BLM in development of Historic Properties Treatment Plan, Tribal Participation Plan, and other mitigation measures for the Tule Wind project, McCain Valley California.

Mitigative Screening, Agua Caliente Band of Cahuilla Indians, Palm Springs, Riverside County, California, 2003. As field director, supervised archaeological mitigation of an impacted burial site on the Agua Caliente Reservation. Prepared mapping of the project, coordinated field efforts with Tribal representatives, oversaw monitoring of the project, and prepared portions of the technical report.

Water/Wastewater

San Clemente Water Recycling Monitoring, City of San Clemente, Orange County, California, 2013. As project manager, supervised Dudek's principal investigator to coordinate archaeological, tribal, and paleontological mitigation monitoring associated with the construction of a new water conveyance pipeline. Duties include preparation of a discovery and treatment plan.

Poseidon Resources Desalination Plant and Pipeline Monitoring, City of Carlsbad, San Diego County, California, 2013. As project manager, supervised Dudek's principal investigator to coordinate archaeological, tribal, and paleontological mitigation monitoring associated with the construction of the desalination plant and a new water conveyance pipeline. Duties include preparation of a discovery and treatment plan and evaluation of archaeological discoveries.

Poseidon Resources Desalination Plant and Pipeline Wetland Mitigation Archaeological Evaluation, City of San Diego, San Diego County, California, 2013. As project manager and principal investigator, developed methods and strategies to evaluate archaeological deposits most likely related to the 1782 ethnohistoric Kumeyaay village of La Punta located within the wetland mitigation area. Project included geotechnical coring and backhoe exploration to locate and evaluate buried archaeological deposits. Duties included assistance provided to the USFWS for NAGPRA consultation and implementation.

Lee Lake Cultural Resources Inventory, Lee Lake Water District, Riverside County, California, 2013. As project manager, supervised Dudek's principal investigator to coordinate and implement cultural resources inventory for the construction of a new pipeline and water storage facility.

Cultural Resources Monitoring for the City of Napa Levee Improvement Project, ACOE, Sacramento District, Sacramento, California, 2010–2011. As principal investigator, supervised archaeological monitoring requiring HAZWOPER certified archaeologists to treat historical archaeological discoveries for a levee and stormwater improvement project.

Data Recovery Excavations at the Ridge Hill Facilities Site (SDI-18472), Padre Dam Municipal Water District (PDMWD), San Diego County, California, 2009. As principal investigator, supervised data recovery of a complex late prehistoric habitation site.

San Clemente Canyon Survey, City of San Diego Metropolitan Wastewater Department, City of San Diego, San Diego County, California, 2004. As principal investigator and field director, supervised and conducted an intensive pedestrian survey of proposed access road maintenance for the San

Clemente Canyon sewer line. Two cultural resources were identified. Conducted site documentation, prepared sites forms and technical report. Managed survey crew member.

Lake Murray Survey, City of San Diego Metropolitan Wastewater Department, La Mesa, San Diego County, California, 2003. As field director, conducted survey of proposed trunk sewer replacement in La Mesa. Prepared portions of the technical report.

Imperial Irrigation District's Phase II Testing, Imperial Irrigation District, Imperial County, California, 2003. As field director, supervised Phase II testing of eight sites in the Colorado Desert. Managed field crews, conducted test excavations, and prepared site documentation and portions of the technical report.

Carmel Valley Archaeological Monitoring, City of San Diego Metropolitan Wastewater Department, Carmel Valley, San Diego County, California, 2002. As field monitor for pre-trenching for placement of sewer line, conducted monitoring and wrote portions of technical report.

EIR/EIS Preparation

Dr. Hale currently assists in the preparation of technical descriptions and analyses for environmental impact statements and reports at the state and federal levels for Dudek projects. Examples of completed environmental sections include those prepared for the Yokohl Ranch, Rio Mesa Solar, Soitec Rugged and Tierra Del Sol Solar, SDG&E's Wood to Steel project, and various others. More details are available upon request.

Other Relevant Experience

Training

- ≠ 2012 - Accounting and Finance for Non-Financial Managers, UCSD Rady School of Business Management
- ≠ 2010 - ESOP Planning and Management, UCSD Rady School of Business Management
- ≠ 2004 - Ground Penetrating Radar Field Methods and Interpretation Certificate
- ≠ 2002, 2010 - GPS Field Methods Training, ASC Scientific

Teaching

- ≠ 2008 - Assistant Professor, Archaeology, U.C. Davis
- ≠ 2008 - Instructor/ Principal Investigator, 2008 UC Davis Archaeology Field School, Vandenberg Air Force Base, California.
- ≠ 2005–2008 – Level III Teaching Assistant, U.C. Davis; taught discussion sections/ lectures for Human Evolution, Archaeology, and Human Ecology
- ≠ 1998–1999 – Acted as Public Education Coordinator for the Museum of Anthropology at UC Davis; included instructing a course teaching archaeology students how to inform the public about the value of anthropology through in-class presentations, exhibits, and the building of 'teaching trunks' for people in grades 1–12 of primary and secondary education
- ≠ 1997–1998 - Substitute teacher with an Emergency Credential in the Woodland and Davis Joint Unified School Districts for grades K–12, all subjects excluding foreign languages
- ≠ 1997–present – Regularly perform presentations about the value of archaeology in classrooms at the level of the grades 1–12

- ≠ 1996 – Teaching assistant at the U.C. Davis archaeological field school; job duties included student management and instruction in the methods of excavation and survey.

Publications

Selected Technical Reports

- Hale, Micah J. 2010. "Limited Archaeological Excavations at SDI-4669 (SDM-W-12A)." In Advance of Geotechnical Coring, University House Rehabilitation Project, University of California at San Diego, La Jolla, California. Submitted to Ione Stiegler Architecture, La Jolla, California. Report on file at South Coastal Information Center, SDSU.
- Hale, Micah J. 2010. Results of Archaeological Monitoring for Meteorological Masts in McCain Valley, San Diego County, California. Prepared for HDR Engineering Inc.
- Hale, Micah J. 2007. Archaeological Survey of the Silver Lake Recreation Area, El Dorado Irrigation District, El Dorado County, California. Prepared for Trish Fernandez, El Dorado Irrigation District, El Dorado County, California.
- Hale, Micah J. 2005. "Ground Stone Analysis." In From the Coast to the Inland: Prehistoric Settlement Systems Along the Las Pulgas Corridor, Camp Pendleton, California, by Micah J. Hale and Mark S. Becker. Report submitted to Southwest Division of Naval Facilities.
- Hale, Micah J. 2005. Cultural Resources Inventory for the Proposed San Diego Model Schools Development Project. ASM Affiliates Inc., Carlsbad, California. Prepared for the City of San Diego, California.
- Hale, Micah J. 2004. Cultural Resources Inventory for the Replacement of Bridge 230.6 over Agua Hedionda Lagoon, San Diego County, California. Submitted to North County Transit District, San Diego County, California.
- Hale, Micah J. 2004. Cultural Resources Inventory for the Gawle Property, San Diego County, California. Submitted to Helix Environmental for the City of San Diego.
- Hale, Micah J. 2004. Cultural Resources Inventory for the Hines Nursery, San Diego County, California. Submitted to Hines Nurseries, Rainbow Valley, California.
- Hale, Micah J. 2004. Cultural Resources Inventory for the San Clemente Canyon Trunk Sewer Maintenance and Access Routes, San Diego County, California. Submitted to Metropolitan Wastewater Department, City of San Diego, California.
- Hale, Micah J. 2004. Cultural Resources Inventory for the Montezuma Trunk Sewer Replacement, San Diego County, California. Submitted to Metropolitan Wastewater Department, City of San Diego, California.
- Hale, Micah J. 2004. Cultural Resources Inventory for the Oceanside Hotel EIR, San Diego County, California. Submitted to Dudek for the City of Oceanside, California.
- Hale, Micah J. 2004. Historic Resources Mitigation Monitoring of the El Cuervo Norte Project, San Diego County, California. Submitted to the City of San Diego.

- Hale, Micah J. 2004. Emergency Test Excavations of an Exposed Olla, Riverside County, California. Submitted to BLM, Riverside County, California.
- Hale, Micah J. 2004. Cultural Resources Monitoring for Geotechnical Coring Related to the All-American Canal Lining Project, Imperial County, California. Submitted to Imperial Irrigation District, Imperial County, California.
- Hale, Micah J. 2004. Cultural Resources Monitoring of Geotechnical Coring Related to the Coachella Canal Lining Project, Riverside County, California. Submitted to Imperial Irrigation District, Riverside County, California.
- Hale, Micah J. 2004. "Ground and Battered Stone Analysis." In Data Recovery Investigations at the Eucalyptus Site, CA-SDI-6954, San Diego County, California. Prepared by Don Laylander, ASM Affiliates Inc., Carlsbad, California. Submitted to EDAW, Inc.
- Hale, Micah J. 2003. Cultural Resources Inventory for the Linda Vista Drive Re-Alignment Alternatives, City of San Marcos, California. Submitted to Nolte for the City of San Marcos.
- Hale, Micah J. 2003. Cultural Resources Inventory for the Lake Murray Trunk Sewer Replacement, San Diego County, California. Submitted to the Metropolitan Wastewater Department, City of San Diego, California.
- Hale, Micah J. 2000. Cultural Resource Monitoring Report. Jones and Stokes Associates Inc. Prepared for AT&T Corp., Atlanta, Georgia, for the AT&T cable removal project from Lucin, Utah, to Red Bluff, California.
- Hale, Micah J. 2000. "Ground and Battered Stone Analysis." In Report on Excavations at Four Locations in the Lead Mountain Vicinity of the 29-Palms Marine Base, edited by Mark Basgall. Sacramento Archaeological Research Center.
- Hale, Micah J. 2000. "Ground and Battered Stone Analysis." In Report on Excavations at CA-MER-295, edited by Mark Basgall and R. Bethard. Sacramento Archaeological Research Center.
- Hale, Micah J. 2000. "Invertebrate Analysis." In Report on Excavations at CA-MER-295, edited by Mark Basgall and Mark Giambastiani. Sacramento Archaeological Research Center.
- Hale, Micah J. 2000. "Site Reports for Sites SBR-9415 and SBR-9420." In Report on Excavations at Lead Mountain in Twentynine Palms Marine Corps Air Ground Combat Training Center, edited by Mark Basgall. Sacramento Archaeological Research Center.
- Hale, Micah J. 1999. "Ground and Battered Stone Analysis." In Muddle in the Middle: Phase II Excavations of Five Sites in Kern County, California, edited by Mark Basgall. Prepared for V. Levulett, Environmental Management, Caltrans District 5, San Luis Obispo. Sacramento Archaeological Research Center.
- Hale, Micah J., and Brad Comeau. 2009. Data Recovery Excavations at CA-SDI-18472 for the Proposed Padre Dam Municipal Water District Secondary Connection Project (Ridge Hill Facilities) Johnstown, San Diego County, California. Prepared for Mr. Albert Lau, Engineering Manager, Padre Dam Municipal Water District.

- Hale, Micah, Brad Comeau, and Chad Willis. 2010. Class II and Class III Cultural Resources Inventory Report for the Tule Wind Project, McCain Valley, San Diego County, California. Prepared for HDR Engineering Inc. Report on file at the South Coastal Information Center, SDSU.
- Hale, Micah J., and John R. Cook. 2005. Results of Ground Penetrating Radar Investigations at CA-SDI-10148 in the Forester Creek Biological Mitigation Site, San Diego County, California. With contributions by Jeffrey S. Patterson. Prepared for Chris White, Caltrans District 11.
- Hale, Micah J., and Mark S. Becker. 2006. From the Coast to the Inland: Prehistoric Settlement Systems Along the Las Pulgas Corridor, Camp Pendleton, California. ASM Affiliates, Carlsbad, California. Submitted to Southwest Division of Naval Facilities.
- Hale, Micah J., and Mark A. Giambastiani. 2010. A Cultural Resources Inventory for Sample Surveys in Selected Training Areas, Marine Corps Air Ground Combat Center (MCAGCC), Twentynine Palms, San Bernardino County, California. Prepared for Marine Air Ground Task Force Training Command, Natural Resources and Environmental Affairs, Twentynine Palms, California.
- Hale, Micah, and Mark Giambastiani. 2010. Archaeological Resources Survey Report Aerial Maneuver Zone (AMZ) Project at the Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center, Twentynine Palms, California, San Bernardino County, California. Prepared for Marine Air Ground Task Force Training Command, Natural Resources and Environmental Affairs, Twentynine Palms, California.
- Hale, Micah, and Mark Giambastiani. 2010. An Archaeological Survey of 3,650 Acres at Cole Flat, Naval Air Weapons Station (NAWS), China Lake, California. Prepared for Mike Baskerville, Base Archaeologist, NAWS China Lake, California.
- Hale, Micah J., Mark Giambastiani, Michael Richards, and David Iversen. 2009. Phase II Cultural Resource Evaluations at 51 Archaeological Sites in Management Regions 1A, 1B, 2B, 2C, and 3E, Bissell Hills and Paiute Ponds, Edwards Air Force Base, Kern and Los Angeles Counties, California. Prepared for U.S. Army Corps of Engineers under contract numbers W91238-07-F-0051 and W91238-07-F-0052.
- Basgall, Mark, Lynn Johnson, and Micah Hale. 2002. An Evaluation of Four Archaeological Sites in the Lead Mountain Training Area, Marine Air Ground Task Force Training Command, Marine Corps Air Ground Combat Center, Twentynine Palms, California. Prepared for United States Marine Corps Air Ground Combat Center, Twentynine Palms, California. Prepared by Archaeological Research Center, Institute of Archaeology and Cultural Studies, Department of Anthropology, California State University, Sacramento.
- Becker, Mark S., and Micah J. Hale. 2004. "Flaked Stone and Ground Stone Artifact Analysis." In Phase II Archaeological Testing and Evaluation of CA-INY-3647, CA-INY-3650/H, CA-INY-3826, and P-14-7356, Little Lake Rehabilitation, U.S. 395, Inyo County, California, edited by Brian Byrd and Seetha Reddy, ASM Affiliates. Prepared for Caltrans District 6, Fresno.
- Byrd, Brian F., and Micah J. Hale. 2005. Testing and Evaluation of CA-SDI-13,930 on Camp Pendleton Marine Corps Base, San Diego County, California: A Paleoenvironmental Approach. ASM Affiliates, Carlsbad, California. Prepared for Southwest Division Naval Facilities Engineering Command.

- Byrd, Brian F., and Micah J. Hale. 2004. Final Report on the Rose-Arizona Site Survey and Documentation, San Clemente Island. Prepared for Dr. Andrew Yatsko, NAVFAC SW, South Bay Area Focus Team.
- Byrd, Brian F., and Micah J. Hale. 2004. Final Report on the San Clemente Island Protective Signing and Maintenance Project. Prepared for Dr. Andrew Yatsko, NAVFAC SW, South Bay Area Focus Team.
- Byrd, Brian F., and Micah J. Hale. 2004. Final Report on the San Clemente Island Road Improvement Survey. Prepared for Dr. Andrew Yatsko, NAVFAC SW, South Bay Area Focus Team.
- Byrd, Brian F., Micah J. Hale, and Sinéad Ní Ghabhláin. 2004. "Archaeological Testing at INY-3647." In Phase II Archaeological Testing and Evaluation of CA-INY-3647, CA-INY-3650/H, CA-INY-3826, and P-14-7356, Little Lake Rehabilitation, U.S. 395, Inyo County, California, edited by Brian Byrd and Seetha Reddy, ASM Affiliates. Prepared for Caltrans District 6, Fresno.
- Byrd, Brian F., Micah J. Hale, and Sinéad Ní Ghabhláin. 2004. "Archaeological Testing at INY-3650/H." In Phase II Archaeological Testing and Evaluation of CA-INY-3647, CA-INY-3650/H, CA-INY-3826, and P-14-7356, Little Lake Rehabilitation, U.S. 395, Inyo County, California, edited by Brian Byrd and Seetha Reddy, ASM Affiliates. Prepared for Caltrans District 6, Fresno.
- Byrd, Brian F., Micah J. Hale, and Sinéad Ní Ghabhláin. 2004. Archaeological Testing at INY-3826. In Phase II Archaeological Testing and Evaluation of CA-INY-3647, CA-INY-3650/H, CA-INY-3826, and P-14-7356, Little Lake Rehabilitation, U.S. 395, Inyo County, California, edited by Brian Byrd and Seetha Reddy, ASM Affiliates. Prepared for Caltrans District 6, Fresno.
- Byrd, Brian F., and Micah J. Hale. 2003. Final Report on Extended Phase I Excavation at CA-INY-2207/2758, Little Lake Rehab Project, Inyo County, California. ASM Affiliates, Encinitas. Prepared for Lynn Faraone, Chief, Central California Cultural Resource Branch, California Department of Transportation.
- Byrd, Brian F., and Micah J. Hale. 2002. Phase II Investigations of 15 Prehistoric Sites for the Cartago-Olancho Four-Lane Project, U.S. 395, Owens Valley, California. ASM Affiliates Inc. Prepared for Caltrans District 6, Fresno.
- Byrd, Brian F., and Micah J. Hale. 2001. Research Design for Phase II Investigations of 14 Prehistoric Sites for the Cartago-Olancho Four-Lane Project, U.S. 395, Owens Valley, California. ASM Affiliates Inc. Prepared for Caltrans District 6, Fresno.
- Cook, John R., Collin O'Neill, and Micah J. Hale. 2001. Archaeological Survey for the Amtrak Second Main Line, San Onofre Segment, MP 210.1 to 214.7, San Diego County. ASM Affiliates Inc. Draft report prepared for North County Transit District.
- Giambastiani, M., M. Hale, M. Richards, and S. Shelley. 2008. Draft Report Phase II Cultural Resource Evaluations at 47 Archaeological Sites on the East and Northeast Shores of Rogers Lake, Management Region 3, Edwards Air Force Base, Kern and Los Angeles Counties, California. Report submitted to Edwards Air Force Base, Base Historic Preservation Officer.
- Giambastiani, G., M. Hale, S. Ni Ghabhláin, and D. Iversen. 2006. Phase II Cultural Resource Evaluation of 21 Archaeological Sites along the Western and Northwestern Boundary Fence, Edwards AFB, Kern and Los Angeles Counties, California. Submitted to Earth Tech Inc., Colton, California.

Hector, Susan, Micah J. Hale, and Catherine Wright. 2003. Cultural Resource Inventory of the Path 15 Los Banos-Gates Transmission Line Construction Project, Merced and Fresno Counties, California. Contract No. 03-186-01-01-ASM. Prepared for Steigers Corporation, Littleton, Colorado.

Laylander, Don, and Micah J. Hale. 2004. Data Recovery Excavations at Locus O, CA-RIV-45. ASM Affiliates Inc., Carlsbad, California. Submitted to Agua Caliente Band of Cahuilla Indians.

Reddy, Seetha N., and Micah J. Hale. 2003. Archaeological Survey of Portions of the De Luz Housing Area, O'Neill Lake, and the Case Spring Highlands, Marine Corps Base Camp Pendleton, California. ASM Affiliates, Encinitas, California. Prepared for NAVFAC SW, San Diego, California.

Whitley, David, and Micah Hale. 2010. Management Plan for the Coso Rock Art District National Historic Landmark. Prepared for NAVFAC SW, San Diego County, California.

Other Publications

Hale, Micah J. 2012. "Malcolm Rogers' Archaeology in Coastal San Diego." Book chapter in preparation; edited by Don Laylander.

Hale, Micah J. 2011. "Modeling Socioeconomic Discontinuity in Southern Alta California." In, *California Archaeology* 2:2: December 2010, pp. 203-250.

Hale, Micah J. 2010. "A Comment on Hildebrandt et al. (2009) Shellfish Transport, Caloric Return Rates, and Prehistoric Feasting." In *California Archaeology* 3:111-113.

Hale, Micah J. 2009. Santa Barbara and San Diego: Contrasting Adaptive Strategies in Southern California. PhD dissertation; University of California, Davis.

Hale, Micah J. n.d. Preserving Cultural Heritage Through Public Outreach: A Curriculum for Jr. High and High School.

Hale, Micah J. 2005. Processing Economies, Coastal Settlement, and Intensification in Northern San Diego County. In *Proceedings of the Society for California Archaeology*, Volume 18.

Hale, Micah J. 2001. Technological and Social Organization of the Millingstone Horizon in Southern California. Master's thesis; California State University, Sacramento.

Hale, Micah J. 2000. Consumer Anthropology: Theory and Method of Recognizing and Interpreting Consumption Patterns for Product Development and Marketing Strategies. Developed for Richard Knight, Director of Intelligent Products, Addidas, USA.

Hale, Micah J., Richard McElreath, and Robert Bettinger. 2012. (in prep.) Modeling Time Minimizing and Energy Maximizing Adaptive Strategies.

Hale, Micah J., and Peter Richerson. 2012. (in prep.) Investigating the Rate-Limiting Factors of Cultural Evolution: Archaeological Evidence from Southern California.

Hale, Micah J., and Bruce Winterhalder. 2012. (in prep.) Discontinuous Sociocultural Evolution

Editorial Reviewer

Hale, Micah J. 2011. Editorial Reviewer, *Journal of California Archaeology*, Left Coast Press, California.

Hale, Micah J. 2011. Editorial reviewer, *Journal of California and Great Basin Anthropology*, Malki Museum Press, California.

Hale, Micah J. 2010. Editorial reviewer, *Pacific Coast Archaeology Society*, California.

Presentations

Hale, Micah J. 2012. *The Data Matter: Contributions of the Sacramento State Archaeological Research Center*. Presented at the 2012 Society for California Archaeology Meetings, San Diego, California.

Hale, Micah J. 2012. *Andy Yatsko, the Human Transit: Celebrating His Lifetime Contributions*. Presented at the 2012 Society for California Archaeology Meetings, San Diego, California.

Hale, Micah J. 2012. *Malcolm Rogers' Work Along the San Diego Coast*. Presented at the 2012 Society for California Archaeology Meetings, San Diego, California.

Hale, Micah J. 2011. *Tracing the Origins of Processing Economies in the Far West: A View from Coastal Southern California*. Presented at the Yucca Valley Archaeopalooza Conference, 29 Palms, California.

Hale, Micah J. 2011. *Adaptive Divergence Among Southern California Hunter Gatherers*. Presented at the 2011 Society for California Archaeology Meetings, Rohnert Park, California.

Hale, Micah J. 2011. *A 10,000 Year Old Habitation at the University House, La Jolla: Implications for Trans-Holocene Socioeconomic Stability in San Diego*. Presented at the 2011 Society for American Archaeology Meetings, Sacramento, California.

Hale, Micah J. 2010. *Using the Ideal Free Distribution to Model Socioeconomic Discontinuity Among Hunter-Gatherers*. Paper presented at the 2009 Society for American Archaeology Meetings, St. Louis, Missouri. Micah Hale, Symposium Chair.

Hale, Micah J. 2005. *Investigating the Role of Acorns in Southern California Hunter-Gatherer Economies*. Guest Speaker at the Antelope Valley Archaeological Society Meeting.

Hale, Micah J. 2005. *Processing Economies, Coastal Settlement, and Intensification in Northern San Diego County*. Presented at the Society for California Archaeology, Sacramento.

Hale, Micah J. 2004. *Cultural Resource Management in Practice: An Overview of Methodological Approaches*. Presented at the Imperial Valley Desert Museum Annual Meetings.

Hale, Micah J. 2003. *The Adaptive Significance of Technological Organization during the Holocene in Southern California*. Discussant in a symposium entitled, *Change and Cultural Adaptations Along the California Coast*. Organized by Seetha Reddy for the 68th Annual Meetings of the Society for American Archaeology, Milwaukee, Wisconsin. David Yesner and Roger Colten, Chairs.

Hale, Micah J. 2003. *The Organization of Subsistence Technology in Southern California During the Holocene*. Guest Speaker for the San Diego County Archaeological Society, January 28, 2003, San Diego.

Hale, Micah J. 2002. *Prehistory Along the Southwestern Shore of Owens Lake: Preliminary Results from the Cartago-Olancho Project*. Presented at the 2002 Northern California Data Sharing Meetings, Society for California Archaeology, Santa Cruz, California.

Hale, Micah J. 2002. *Ground and Battered Stone Along the Western Shores of Owens Lake*. Presented at the 2002 Northern California Data Sharing Meetings, Society for California Archaeology, Santa Cruz, California.

Hale, Micah J. 2001. *Technological and Social Organization during the Millingstone Horizon of Southern California*. Presented at the Society for California Archaeology Annual Meeting, Modesto.

Hale, Micah J. 1999. *The Analysis Method of Formatting Presentations and Lesson Plans in Archaeology*. Presented at the Society for American Archaeology 64th Annual Meeting, Chicago, Illinois.

Hale, Micah J. 1998. *A Practical and Effective Method for Teaching Archaeology to the Public*. Presented at the Society for California Archaeology Annual Meeting, San Diego, California.

Awards/Commendations

- ≠ 2010 – NAVFAC SW, Camp Pendleton, Research Grant, \$59,000
- ≠ 2008 – U.S. Air Force, Vandenberg AFB, Radiocarbon Grant, \$25,000
- ≠ 2008 – Fieldwork Fellowship, Graduate Studies, UC Davis, \$2,010
- ≠ 2007 – Fieldwork Fellowship, Graduate Studies, UC Davis, \$1,800
- ≠ 2006 – Fieldwork Fellowship, Graduate Studies, UC Davis, \$5,650
- ≠ 2005–2009 – Graduate Fee Fellowship/Stipend, UC Davis, \$74,500

Clearances

- ≠ Department of Defense (DoD) High-Security Clearance for SPAWAR, Naval Base Point Loma, NALF San Clemente Island, Vandenberg Air Force Base, MCAGCC 29 Palms, Edwards Air Force Base, NAWS China Lake, Yuma Proving Grounds, and MCB Camp Pendleton

Brad Comeau

Archaeologist

Brad Comeau is an archaeologist with over 11 years' experience as a principal investigator, field director, archaeological monitor, and laboratory technician. He has conducted numerous surveys, evaluation excavations, and data recoveries, primarily in Southern California. He has extensive experience in San Diego County, with additional experience in Riverside County, the Mojave Desert, San Joaquin Valley, and Imperial County, as well as Massachusetts, Arizona, and England. His research interests include the role of experimentation in archaeology, copper production techniques, and lithic production.

Project Experience

Energy

Archaeological Services for the McCoy Solar Energy Project, Blythe, Riverside County, California, 2014-Present.

As Principal Investigator, oversaw and implemented compliance monitoring for construction of the solar field, including archaeological significance evaluations and mitigation, tribal coordination, and documentation, under CEQA, Riverside County guidelines, and Section 106 guidelines.

Imperial Solar Energy Center West, Tenaska Solar Ventures, Imperial County, California. As Principal Investigator, coordinated monitors and documented post-review discoveries of cultural resources during construction of a 150 MW solar generation facility (in progress).

Jacumba Solar Energy Project, NextEra, Jacumba, San Diego County, California. As principal investigator, directed Phase I, Extended Phase I, and Phase II studies of 304 acre project area; directed a crew of 2-4; coordinated with Tribal monitors; documented, treated, and repatriated human remains in accordance with State law; prepared letter report of Extended Phase I study; lead author of County format CEQA report; lead author of Section 106 ARMR-format report; performed lithic, ceramic, and faunal analysis.

Block 4N (North Encanto) Underground Utility District, City of San Diego Public Works Department, San Diego, California. As principal investigator, directed archaeological monitoring for the installation of underground utility lines; scheduled archaeological and Native American monitors; prepared monthly summaries; (in progress).

Desert Green Solar Project, Invenergy LLC, Borrego Springs, San Diego County, California. As principal Investigator, directed archaeological monitoring for a 50 acre, 5MW solar energy generation facility; scheduled archaeological and Native American monitors; directed excavation of newly discovery resources, including human remains; lead author of technical report.

EDUCATION

University of Sheffield

MS, Experimental Archaeology, 2012

University of Massachusetts, Amherst
BA, Anthropology, 2004

BA, Italian Studies, 2004

CERTIFICATIONS

Principal Investigator, Archaeology, State of Nevada

Occupational Health and Safety
Administration Hazardous Waste
Operations and Emergency Response
40-hour Course, 2011

City of San Diego, Certified Archaeological
Monitor, 2009

PROFESSIONAL AFFILIATIONS

Society for American Archaeology, 2012

Bath and Camerton Archaeological
Society, 2012

Society for California Archaeology, 2008

Block 8B Sherman Heights Underground Utility District Archaeological Monitoring, City of San Diego Public Works Department, San Diego, California. As principal investigator, provided internal review of the construction monitoring report prepared by the archaeological subcontractor.

Kent South Solar Substation, Dashiell Corporation, County of Kings, California. As primary author, prepared archaeological and paleontological construction monitoring and inadvertent discovery work plan for construction of the substation.

Tierra del Sol LLC Project, Soitec, LLC, Tierra del Sol, San Diego County, California. As field director, conducted pedestrian survey and evaluation of the 337-acre Gen-Tie portion of the solar project; directed crew between 2 and 4 people; prepared the Gen-Tie portion of the technical report; provided internal review and editing on entire report based on agency comments; prepared cost and scoping proposal for evaluation phase.

Rugged Solar Project, Soitec, LLC, Boulevard, San Diego County, California. Provided internal review and editing of the evaluation report based on agency comments for the evaluation of 39 archaeological sites.

LanWest Solar Farm Project, Soitec, LLC, Boulevard, San Diego County, California. Provided internal review and editing based on agency comments of a 231-acre survey report.

LanEast Solar Farm Project, Soitec, LLC, Boulevard, San Diego County, California. Provided internal review and editing based on agency comments of a 35-acre survey report.

Rio Mesa Solar Project, Bureau of Land Management, Riverside County, California. Contributed to 3rd party review for the Bureau of Land Management of the Phase I pedestrian survey report.

San Jacinto Solar Project, NextEra, Riverside County, California. As principal investigator, performed site visit and record search review of project area; prepared constraints analysis assessing the potential for sensitive cultural materials; directed Phase I pedestrian survey of 142 acre project area; prepared negative letter report of findings.

Tule Wind Cultural Resources Testing, HDR Inc., McCain Valley, San Diego County, California. As field director, conducted eligibility testing for one prehistoric site, led a crew of four people, and assisted in producing an ARMR report of findings.

Occidental of Elk Hills Block Survey II, Occidental Petroleum, Taft, Kern County, California. As field director, conducted pedestrian survey of 2,560 acres in the Elk Hills Oil Field; led a crew of six people; prepared site forms and site descriptions for technical report.

Class III Cultural Resources Inventory, Occidental Petroleum, Taft, Kern County, California. As field director, conducted pedestrian survey of 2,560 acres in the Elk Hills Oil Field; led a crew of six people; performed records search at the Southern San Joaquin Valley Information Center and Bureau of Land Management (BLM) Bakersfield office; prepared site forms and site descriptions for technical report.

Five Well Pads Cultural Resources Survey, Occidental Petroleum, Kern County, California. As field director, led a crew of two people for a Class III pedestrian survey of 60 acres near McKittrick, California; performed the record searches at the Southern San Joaquin Valley Information Center and BLM Bakersfield office.

Vintage Kern Front Inventory, Vintage Production California LLC, Oildale, Kern County, California. As field director, led a crew of five people for a Class III pedestrian survey of 184 acres in the Kern Front Oil Field; prepared primary record.

Coso Geothermal Plant Road Survey, BLM, Inyo County, California. As field director, led a crew of 2 for a Class III pedestrian survey of proposed roads associated with a geothermal plant in southern Inyo County.

Gildred Solar Cultural Resources Survey, Gildred Building Company, Ocotillo Wells, San Diego County, California. As field director, led a crew of four for a Class III pedestrian survey of 440 acres; coordinated Native American monitor participation; assisted with preparation of ARMR technical report.

Silurian Valley West Cultural Resources Study, Iberdrola Renewables, Baker, San Bernardino County, California. As crew chief, led a crew of four people for a Class II pedestrian survey of 4,500 acres within the project right-of-way; assisted the field director in organizing and scheduling two field crews; trained crew members in operation of Bluetooth-enabled laser range finder.

TL 637 Survey Santa Ysabel to Creelman, San Diego Gas & Electric, San Diego County, California. As archaeological monitor, performed pre-construction fielding study with engineers, biologists, and construction managers for an electrical transmission line pole replacement; located previously recorded sites; helped direct new pole locations to avoid site impacts.

East County Substation Survey, Insignia Environmental, Jacumba, San Diego County, California. As crew chief, conducted survey of linear electric transmission line; directed a crew of three people; recorded multiple prehistoric and multicomponent sites; prepared site forms and site descriptions for technical report of findings.

Sunrise Powerlink Evaluations, San Diego Gas & Electric, San Diego and Imperial Counties, California. As field director, conducted subsurface testing of 17 sites; directed a crew ranging from three to six people; helped organize laboratory artifact processing.

Devers–Palo Verde 2 Survey, Southern California Edison, Riverside County, California. As field director, conducted Class III intensive survey of selected portions of a transmission line area of potential effect (APE); relocated and updated previously recorded sites; identified and recorded new sites.

Colorado River Staging Yard Survey, Southern California Edison, Riverside County, California. As crew chief, conducted Class III pedestrian survey of the Colorado River Staging Yard for the Devers–Palo Verde 2 electric transmission line near Blythe; identified and recorded numerous World War II–era sites relating to the Desert Training Center; led a crew of two people.

Tule Wind Project Surveys, HDR Inc., McCain Valley, San Diego County, California. As field director, conducted Class II and Class III intensive pedestrian surveys over 4,900 acres; coordinated multiple survey crews; scheduled and coordinated with Native American monitors; prepared site forms; co-author of ARMR-format report of findings.

Sunrise Powerlink Survey and Monitoring, San Diego Gas & Electric, San Diego and Imperial Counties, California. As crew chief, led survey crew of four people and two Native American monitors for Class III survey of project APE; coordinated with Native American monitors; created survey schedules in conjunction with the field director and right-of-way agents.

Development

Truckee High School Track and Field Improvements Project, Tahoe-Truckee Unified School district, Truckee, California. As Principal Investigator, directed Phase I inventory of QQ acre improvements to the high school track and field facilities and associated

Proctor Valley Village 14 and Preserve Project, Jackson Pendo Development Company, San Diego County, California. As Principal Investigator, directed Phase II evaluation of over 30 sites within the 640 acre project ADI; initiated archival research on historic-period sites; performed lithic, ceramic, and groundstone analysis; lead-author of combined Phase I and II County-formatted technical report.

Palm Avenue Distribution Project, IDS Real Estate Group, City of San Bernardino, California. As Principal Investigator, directed archaeological/paleontological monitoring for the construction of a warehouse facility on a 37 acre parcel; directed evaluation excavation of newly discovered prehistoric site; lead author of monitoring report.

North Eastern Sphere Annexation Area, Sargent Town Planning, Inc., Rancho Cucamonga, California. As Principal Investigator, directed Phase I inventory of 1500 acre parcel; co-author of technical report; performed field director duties for a portion of the survey.

Five Lagunas Project, Merlone Geier Management, LLC, City of Laguna Hills, California. As Principal Investigator, directed Phase I inventory of a 68 acre redevelopment project; prepared Phase I negative letter report documenting findings.

Yorba Avenue Industrial Project, Pacific Industrial, Inc., City of Chino, California. As co-Principal Investigator, managed cultural resource inventory for an 11 acre warehouse development project.

888 N. Sepulveda Blvd. Specific Plan Project, El Segundo, California. As Principal Investigator, coordinated Native American monitors during ground disturbing activities for the construction of a 5-story hotel; prepared a monitoring report in compliance with CEQA and the mitigation measures adopted for the project.

Mira Loma Commerce Center, Western Realco, Jarupa Valley, Riverside County, California. As Principal Investigator, directing cultural and paleontological monitoring for the construction of two commercial buildings on 31 acres; coordinated with Tribal monitors; lead author of technical report.

SCE Bishop Service Center, Elements Architecture, City of Bishop, Inyo County, California. As principal investigator, conducted a Phase I pedestrian survey of a 20 acre parcel; performed records search; prepared site forms and ARMR-format technical report in accordance with CEQA; directed archaeological and Native American monitoring of construction grading; directed additional survey for off-site improvements; prepared revised ARMR-format technical report for Caltrans.

Winchester 1800 Project, Van Daele Development Corporation, French Valley, Riverside County, California. As principal investigator, directed a Phase I pedestrian survey for a 40 acre residential subdivision; primary author of ARMR-format technical report in accordance with County guidelines.

Lone Oak Road Project, Hunsaker & Associates, San Diego, Inc., San Diego County, California. As Principal Investigator, directed a Phase I cultural resource inventory for a 14 acre residential subdivision development; coordinated with Native American subcontractor; prepared negative letter report.

Newland Sierra Project, Newland Sierra, LLC, San Diego County, California. As principal investigator, directing Phase III data recovery of three archaeological sites, including re-analysis of existing collections (in progress).

Alessandro Business Park Project, Western Realco, City of Riverside, Riverside County, California. As primary author, prepared archaeological monitoring report, including discovery evaluation results for seven new archaeological sites. Prepared DPR forms.

The Vineyard, Van Daele Development Corporation, Temecula, Riverside County, California. As principal investigator, directed archaeological monitoring for construction of a 25 acre residential development; prepared a monitoring and unanticipated discoveries work plan; prepared negative monitoring letter report.

Shearwater Creek Project, City of Temecula, Temecula, Riverside County, California. As principal investigator, performed all aspects of a Phase 1 cultural resource study for a 7 acre residential development project; performed pedestrian survey; coordinated with Native American monitors and Tribal representative in regards to a sacred resource in the project area; primary author of the ARMR-format technical report.

Arbor Vista Cluster Residential Project, City of Temecula, Temecula, Riverside County, California. As principal investigator, conducted all aspects of a Phase I pedestrian survey for archaeological and paleontological resources for a 72-acre parcel; directed a crew of two people; primary author ARMR-format technical report of findings, including summation of paleontological resources.

Navy Federal Credit Union Project, City of Temecula, Temecula, Riverside County, California. As principal investigator, conducted Phase I pedestrian survey for archaeological and paleontological resources; lead author of ARMR-format report; prepared all archaeological portions of technical report and contributed to the paleontological portions; performed background research into historic context of the project area, incorporating results into the report.

Artesian Road Project, The Harwood Group, Rancho Santa Fe, San Diego County, California. As principal investigator, directed a Phase I cultural resource study for a 25 acre residential project; coordinated field crew schedule and tribal monitor; primary author of ARMR-format report according to County guidelines; performed background research into historic context of the project area, incorporating results into the report.

Martin Residence Project, HAA Architects, Carlsbad, San Diego County, California. As principal investigator, performed all aspects of a Phase 1 cultural resource study for a 1 acre residential development project within a known archaeological site; instructed staff and provided quality control oversight in the preparation of the ARMR-format technical report.

St. John Garabed Church Project, San Diego County, California. As field director, conducted site examinations and limited shovel test pit excavation for an Extended Phase 1 survey; directed a crew of two people; prepared a letter report of findings.

Rhodes Crossing Update, Rhodes Properties, San Diego, California. As field director, led a crew of two people for a Class III pedestrian survey of 88 acres; coordinated Native American monitor participation; assisted with preparation of Archaeological Resource Management Report (ARMR).

Palomar Station Project Survey, Integral Communities Inc., San Marcos, San Diego County, California. As field director, conducted Class III pedestrian survey of 14.5-acre parcel and prepared ARMR technical report of findings.

Gregory Canyon Landfill Environmental Impact Statement PHI Assessments, PCR Services Corporation, Pala, San Diego, California. As field director, conducted pedestrian survey of proposed landfill; relocated and verified previously recorded sites; led a crew of four people; coordinated with Native American monitors; prepared site forms and site descriptions for ARMR report.

Robertson Ranch East Excavation, The Corky McMillin Companies, Carlsbad, San Diego County, California. As field director, conducted controlled grading of two prehistoric sites that required directing excavation activities of multiple types of heavy machinery; led excavation of numerous roasting pit features by a crew of up to 20 people; instructed crew in carbon-14, thermoluminescence, and soil floatation sampling techniques.

Sky Ranch Monitoring, Lennar, Santee, San Diego County, California. As archaeological monitor, monitored mass grading activities for construction of a subdivision.

Sky Ranch Data Recovery, Lennar, Santee, San Diego County, California. As crew chief, conducted data recovery excavation of two prehistoric sites; led a crew of up to eight staff; drew site maps and unit profiles; collected carbon-14 and soil floatation samples.

4S Ranch Data Recovery, 4S Ranch Company, Rancho Bernardo, San Diego County, California. As field technician and crew chief, conducted Phase III data recovery of a large Late Prehistoric site; excavated numerous hearth features; drew site maps and unit profiles; created a site grid for unit placement; collected carbon-14 and soil floatation samples.

Atlas Monitoring and Excavation, D. R. Horton, San Diego County, California. As archaeological monitor, monitored building/subterranean parking structure excavation; excavated historic deposits.

The Rock Academy Monitoring, The Rock Church, San Diego, California. As archaeological monitor, monitored building foundation excavation, trenching, and building demolition.

Otay Business Park Project, Paragon Management Company, LLC, San Diego County, California. As field technician, excavated 10 prehistoric and multi-component sites as part of a Phase II evaluation project.

Vantage Point, Point of View Monitoring LLC, San Diego County, California. As archaeological and paleontological monitor, monitored excavation, drilling, and other construction activities during the excavation of a subterranean parking garage and building footings. Recorded and collected artifacts and marine fossils.

Audie Murphy Ranch Monitoring, Woodside Homes, Sun City, Riverside County, California. As archaeological monitor, monitored controlled grading of five sites in collaboration with Native American monitors; excavated hearth features; monitored construction grading.

Roberston Ranch Data Recovery, The Corky McMillin Companies, Carlsbad, San Diego County, California. As field technician, excavated four prehistoric sites as part of a data recovery program, including test unit excavation, wet screening, drawing and photographing profiles, excavating hearth and pit features, and artifact sorting.

LaPozz No. 5 Lode Evaluation, Enviroscientists, Indian Wells Valley, Kern County, California. As field director, led a crew of four people for an evaluation testing program of three prehistoric sites; prepared site form updates and site testing results for the ARMR technical report.

Faraday Data Recovery, Carlsbad, San Diego County, California. As field technician, excavated five prehistoric sites as part of a data-recovery program, including test unit excavation, drawing profiles, wet screening, and sorting artifacts.

Education

Academy of Our Lady of Peace Parking Garage Project, T.B. Penick & Sons, Inc., San Diego, San Diego County, California. As principal investigator, directed archaeological and Native American monitoring for construction of a new parking garage; conducted evaluation excavation of a newly discovered historic deposit; directed laboratory analysis; lead author of technical report; coordinated paleontological monitoring subcontractor.

San Elijo Hills K-9th Grade Campus Project, San Marcos Unified School District, San Marcos, San Diego County, California. As principal investigator, conducted all aspects of a Phase I pedestrian survey for a 36-acre school; prepared letter report summarizing findings.

Palomar College 7 Building Historic Evaluation, Palomar Community College District, San Marcos, San Diego County, California. As Global Positioning System (GPS) technician and photographer, assisted architectural historians in recording potentially historic buildings; photographed and recorded buildings with Ricoh digital camera, range finder, and Trimble GeoXH GPS.

University House Excavation, University of California, San Diego, San Diego County, California. As crew chief, conducted Phase II test excavation using wet screening; led a crew of five people.

San Marcos Unified School District Monitoring, San Marcos Unified School District, San Diego County, California. As archaeological monitor, monitored transplanting of endangered species by biologists prior to construction grading of site.

Desert Sands Unified School District (DSUSD) High School Monitoring, DSUSD, Indio, Riverside County, California. As archaeological monitor, monitored grading for construction of a new high school and related facilities.

Maranatha Excavation, Maranatha Christian School, Rancho Bernardo, San Diego County, California. As field technician, excavated test units for a Phase III data recovery of an archaic period site; drew unit profiles; sorted artifacts.

Federal

Bunker Hill Survey, GSR Corporation, Imperial Beach, San Diego County, California. As field director, conducted Class III pedestrian survey of a road improvement and fence construction covering 7.6 acres for the border fence; directed a crew of two people; recorded a previously identified site for a future nomination to the National Register of Historic Places; prepared site form update; prepared ARMR technical report of findings.

Imperial County Drill Sites Survey, United States Geological Survey, Imperial County, California. As field director, conducted survey of two water well drilling sites; coordinated U.S. Border Patrol escort; prepared ARMR technical report of findings.

BLM Western Expansion Survey, TEC Environmental, Johnson Valley, San Bernardino County, California. As crew chief, surveyed various locations throughout the BLM Johnson Valley off-highway vehicle area; identified and recorded new sites; coordinated survey schedule with the field director.

Border Fence Project Survey and Monitoring, U.S. Army Corps of Engineers, San Diego County, California, and Pima, Santa Cruz and Cochise Counties, Arizona. As archaeological monitor, monitored construction of the U.S./Mexico border fence; surveyed locations of proposed construction activity; mapped new archaeological sites; directed construction activities away from archaeological resources.

Military

Fort Irwin Solar Project, Soitec LLC, Fort Irwin, San Bernardino County, California. As principal investigator, directed pedestrian survey of 12 acres for a proposed solar generation facility; also prepared the technical report.

Level 3 Powerline Road Fiber-Optic Project, HP Communications Inc., Fort Irwin, San Bernardino County, California. As principal investigator, conducted intensive pedestrian survey of approximately 10 acres; also prepared the ARMR technical report of findings.

Naval Air Weapons Station (NAWS) Road Survey, Naval Facilities Engineering Command (NAVFAC) Southwest, Ridgecrest, Inyo, San Bernardino, and Kern Counties, California. As field director, conducted Class III pedestrian survey of approximately 129 miles of existing roads; led a crew of four people; scheduled and coordinated with Explosive Ordnance Disposal escorts; prepared ARMR technical report of findings.

NAWS Fiber-Optic Survey, Epsilon Systems Solutions, Ridgecrest, San Bernardino County California. As crew chief, conducted Class III pedestrian survey for a proposed fiber-optic line; led a crew of two people; assisted the field director with scheduling.

Delivery Order (DO) 30 Survey, NAVFAC Southwest, Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms, San Bernardino County, California. As crew chief, surveyed numerous proposed landing zones throughout MCAGCC; coordinated scheduling/training area access with the field director; prepared site forms and site descriptions for ARMR report.

53 Aerial Maneuver Zone (AMZ) Survey, NAVFAC Southwest, MCAGCC Twentynine Palms, San Bernardino County, California. As crew chief, surveyed numerous proposed landing zones throughout MCAGCC Twentynine Palms; coordinated scheduling/training area access with the field director; prepared site forms and site descriptions for ARMR report.

Southwest Division (SWDIV)-04/DO 27 Survey, NAWS China Lake, NAVFAC Southwest, Ridgecrest, Inyo County, California. As field technician, participated in a Class III intensive survey under Section 106 of National Historic Preservation Act; operated a Trimble GeoXH for navigation and site recording.

Resource Management

Dry Canyon Munition Response and Remediation. As Principal Investigator, directed archaeological monitoring for unexploded ordnance (UXO) sampling and remediation; prepared site forms for updated and newly discovered sites and isolates; prepared ARMR-formatted technical report for the USACE.

Ground Penetrating Radar Study at the Vista Canyon Project, Santa Clarita, California. Conducting a GRP survey of the Mitchell Family Cemetery (in progress).

St Algar's Farm Geochemical Testing, English Heritage, Frome, Somerset, United Kingdom. As student volunteer, helped perform a pXRF field survey of a Roman-era glass and metalworking site; excavated a 5-by-5-meter trench.

Transportation

San Onofre to Pulgas Double Track Project, PGH Wong Engineering, Inc., San Diego County, California.

As principal investigator, directing cultural, paleontological, and Native American monitoring of installation of second railroad track through Camp Pendleton; prepared monitoring and inadvertent discovery work plan; attended weekly construction meetings; preparing weekly monitoring schedules for all monitors, including multiple Native American Tribes; conducted evaluation excavations for two new discoveries identified during monitoring; prepared letter report summarizing discovery evaluations (in progress).

Ortega Interchange Project, RBF Consulting, San Juan Capistrano, Orange County, California. As principal investigator, directed archaeological and Native American monitoring for construction of a freeway interchange; prepared letter report of findings (in prep).

Palomar Station Project Survey, Integral Communities Inc., San Marcos, San Diego County, California. As field director, conducted Class III pedestrian survey of 14.5-acre parcel and prepared ARMR technical report of findings.

Water/Wastewater

Cultural Resource Inventory for the Barrett Reservoir, City of San Diego Public Utilities Department, San Diego County, California. As principal investigator, directed a Phase I archaeological survey of lands recently exposed within the high-water line of the lake due to water level draw down; documented over 30 new archaeological sites; lead author of ARMR-format survey report, including recommendations to treat and prevent on-going impacts to the sites, including looting; collected selected surface artifacts potentially at risk of looting; coordinated Native American monitor.

Little Lake MDP Line B, Stage 1 Project, Riverside County Flood Control and Water Conservation District, Riverside County, California. As principal investigator, directing archaeological and Native American monitoring for a new underground pipeline (in progress).

Tijuana River Valley Channel Maintenance, City of San Diego, San Diego County, California. Assumed responsibility of principal investigator during project implementation from another contractor; coordinated archaeological and Native American monitoring; prepared negative monitoring report; prepared budget for services.

Cultural Resource Inventory for the Morena Reservoir, City of San Diego Public Utilities Department, San Diego County, California. As principal investigator, directed a Phase I archaeological survey of lands recently exposed within the high-water line of the lake due to water level draw down; documented 27 new archaeological sites; lead author of ARMR-format survey report, including recommendations to treat and prevent on-going impacts to the sites, including looting; collected selected surface artifacts potentially at risk of looting; coordinated archaeological subcontractor and Native American monitor; presented findings to City and County Parks representatives to institute actions to prevent looting.

Bear River Restoration at Rollins Reservoir Project, Nevada Irrigation District, Nevada and Placer Counties, California. As contributing author, prepared ARMR-format report for 75 acre Phase I pedestrian survey for compliance with CEQA and Section 106 of the NHPA.

Huntington Beach Beach Blvd. Sewer Improvements Project, Civil Source, Huntington Beach, Orange County, California. As principal investigator, directed archeological and Native American monitoring for the installation of a 1 mile sewer line; prepared letter report of findings.

Plano Force Main Project, Santa Margarita Wastewater District, City of Rancho Santa Margarita, Orange County, California. As principal investigator, prepared a constraints analysis for the relocation of an existing force main; reviewed records search results and contacted Native American tribes to assess the potential for cultural resources in the project area; prepared a letter report of findings and recommendations.

Clay Canyon Sewer Pipeline Project, Lee Lake Water District, Riverside County, California. As principal investigator, directed a Phase I pedestrian survey for a 200 ft. pipeline installation; prepared letter report of findings.

Recycled Water MNDs, El Toro Water District, Orange County, California. As principal investigator, directed cultural and paleontological monitoring of a water pipeline installation project; coordinated field monitor; prepared technical report.

Water Recycling Monitoring, San Clemente Water District, San Clemente, Orange County, California. As principal investigator, directed cultural and paleontological monitoring of a water pipeline installation project; coordinated field monitor; prepared technical report.

Carlsbad Desal Plant Project, Poseidon Resources, Carlsbad, California. As principal investigator, directed cultural and paleontological monitoring for the water pipeline portion of the project; coordinated and scheduled archaeological and Native American monitors; providing oversight and coordination for paleontological monitoring subcontractor; prepared letter report for Plant portion of the project; performed Phase I inventory for the Intake/Discharge modification, including preparation of negative letter report.

Newhall County Water District Sewer Relocation Project, Alliance Engineering, Santa Clarita, Los Angeles County, California. As principal investigator, directed a Phase I pedestrian survey of 13.4 acre sewer line project; prepared ARMR-format report in compliance with CEQA and Section 106 of the NHPA; prepared DPR site record updates.

30" ETM Replacement at San Juan Creek, Moulton Niguel Water District, San Juan Capistrano, Orange County, California. As principal investigator, prepared a constraints analysis for water main installation project; prepared a records search review and tribal outreach to assess the potential for cultural resources; prepared a letter report of findings.

Poseidon Wetland Mitigation Project, Poseidon Resources, Inc., Imperial Beach, San Diego County, California. As principal investigator, conducted all aspects of a Phase II evaluation of three prehistoric archaeological sites; performed ceramic analysis for report; prepared technical report of findings as lead author.

Buena Vista Creek Enhancement Project, City of Vista, Vista, San Diego County, California. As principal investigator, conducted all aspects of a Phase I pedestrian survey for archaeological resources; prepared technical report of findings.

Construction Monitoring for the Pipeline 3 Desalination Relining and Pipeline 4 Vent Modifications Project, San Diego County Water Authority, San Diego County, California. As principal investigator, conducted all aspects of a Phase I pedestrian survey for archaeological resources; prepared letter reports summarizing findings of each project component.

MWD Upper Newport Backbay EIR, Metropolitan Water District, Newport Beach, Orange County, California. Requested and reviewed records search for the project area for inclusion in the project EIR.

Wastewater Pipeline Improvement Project, City of South Pasadena, Los Angeles County, California. As principal investigator, conducted all aspects of a constraints analysis for a City-wide pipeline rehabilitation and replacement project; performed a limited pedestrian reconnaissance of selected pipeline segments; prepared letter report of findings.

Temescal Canyon and Dawson Canyon Pipelines and Non-Potable Water Tank Project, Lee Lake Water District, Riverside County, California. As principal investigator, performed Phase I intensive pedestrian survey of the project APE; also prepared letter report of findings.

Padre Dam Data Recovery, Padre Dam Municipal Water District, Lakeside, San Diego County, California. As field director, conducted a data recovery project of a late prehistoric site using wet screening; led a crew of six; coordinated with Native American monitors; performed shell and ceramic lab analysis studies.

Training/Continuing Education

Desert Geomorphology for Archaeologists. National Center for Preservation Technology and Training , Friends of the NCPTT, and the Desert Research Institute. Las Vegas, NV. May 2015. Five day instructional course on the principals and practices of geomorphology, including field visits.

Ground Penetrating Radar: Principals, Procedures, and Application. A 3 Day GPR Short Course. Sensors & Software, Inc., Toronto, Canada. May 2015. Instructed in operation and survey design of multiple GPR devices; participated in in-field training with equipment; instructed in data processing and interpretation.

Publications

Professional Presentations

Dry Run on a Dry Well: An Experimental Investigation of Sintashta Metallurgy. Paper presented at the 78th Annual Meeting of the Society of American Archaeology. 2013. Lead author.

Time, Space and Place: The Potential of Time/Geography, Geophysical, and Geochemical Approaches for Capturing Experimental Engagement. Paper presented at the 78th Annual Meeting of the Society of American Archaeology. 2013. Co-author.

Finding the Smith in Hammerscale Palais: Investigations at an Experimental Iron Production Site. Poster presented at the 39th International Symposium on Archaeometry 2012. Co-author.

Archaeological Investigations at Site CA-SDI-10,611: A Functional and Temporal Analysis of Subterranean Pit Features In Northern San Diego County. Presented at Society for California Archaeology Annual Meeting 2008. Co-author.

The Burghardts of Great Barrington: The View from the W.E.B. Du Bois Boyhood Homesite. Presented at the Society for Historical Archaeology Conference 2005. Co-author.

Technical Reports

2014 (Draft) *Negative Cultural Resource Survey Report for the Lone Oak Road Project, Hunsaker & Associates, San Diego County, California.* Brad Comeau, MSc, RPA. Submitted to Dan Rehm, Hunsaker & Associates.

2014 *Cultural Resources Monitoring Report for the Alessandro Business Park Project, City of Riverside, California.* Brad Comeau, MSc, RPA, Nicholas Hanten, Joshua D. Dunn, MA, RPA, and Micah J. Hale, PhD, RPA.

2014 *Archaeological Monitoring and Unanticipated Discovery Treatment Plan for The Vineyard Project, City of Temecula, Riverside County, California.* Brad Comeau, MSc, RPA, and Micah J. Hale, PhD, RPA. Submitted to Matt Peters, City of Temecula (in progress).

2014 *Cultural and Paleontological Resources Survey Report for the Shearwater Creek Project, City of Temecula, Riverside County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD RPA. Submitted to Matt Peters, City of Temecula

2014 (Draft) *Cultural Resource Monitoring and Discovery Plan for the Kent South Solar Substation, Kings County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA. Submitted to Dashiell Corporation.

2014 *Cultural and Paleontological Resources Survey Report for the Martin Residence, City of Carlsbad, San Diego County, California.* Joshua D. Dunn, MA, RPA, Brad Comeau, MSc, RPA, and Micah J. Hale, PhD, RPA. Prepared for Jaime Bernal, HAA Architects.

2014 *Cultural Resources Report for the Artesian Road Project, San Diego County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA. Submitted to Doug Harwood, The Harwood Group.

2013 (Draft) *Cultural Resources Evaluation for the U.S. Fish and Wildlife Service Otay River Estuary Restoration Project, Otay Mesa, San Diego County, California.* Brad Comeau, MSc, RPA, Nicholas Hanten, Micah J. Hale, PhD, RPA, Matt Maxfeldt, and Adam Giacinto, MA, RPA. Submitted to Nick Valentine, U.S. Fish and Wildlife Service.

2013 *Cultural Resources Survey Report for the Newhall County Water District Sewer Relocation Project, Santa Clarita, Los Angeles County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA. Submitted to Craig Whitteker, Alliance Engineering.

2013 *Archaeological and Paleontological Monitoring and Unanticipated Discovery Treatment Plan for the San Onofre-Las Pulgas Double Track Project, Camp Pendleton, San Diego County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA. Prepared for PGH Simon Wong Engineering, Inc.

2013 *Cultural Resources Survey Letter Report for the Construction Monitoring for the Pipeline 3 Desalination Relining and Pipeline 4 Vent Modifications Project.* Brad Comeau, MSc, RPA, and Micah J. Hale, PhD, RPA.

- 2013 *Archaeological Survey and Evaluation for the Tierra del Sol LLC Project, San Diego County, California.* James T. Daniels, MA, RPA, Micah J. Hale, PhD, RPA, Brad E. Comeau, MSc, and Adam Giacinto, MA, RPA.
- 2013 *Negative Cultural Resources Letter Report for the Buena Vista Creek Enhancement Project.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA. Submitted to Tim Shell, City of Vista.
- 2013 *Cultural and Paleontological Resources Survey Report for the Arbor Vista Cluster Residential Project, City of Temecula, Riverside County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA. Submitted to Matt Peters, City of Temecula.
- 2013 *Cultural and Paleontological Survey Report for the Navy Federal Credit Union Project, City of Temecula, Riverside County, California.* Brad Comeau, MSc, Micah J. Hale, PhD, RPA, Dylan Duvergé, MS, and David Stone, MA, RPA. Submitted to Kenneth Taylor, City of Temecula.
- 2013 *St Algar's Farm, Selwood, Somerset Geochemical Survey Technology Report.* English Heritage Research Report Series 28-2013. David Dungworth, Brad Comeau and Andrew Lowerre.
- 2013 *Negative Cultural Resources Letter Report for the San Elijo Hills K-8th Grade Campus Project, San Marcos, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA.
- 2013 *Archaeological Survey Report for the Level 3 Powerline Road Fiber Optic Project, San Bernardino County, California.* Brad Comeau, MSc, RPA and Micah J. Hale, PhD, RPA
- 2013 *Archaeological Survey Report for the Construction and Operation of a Concentrated Photovoltaic Facility, Fort Irwin, San Bernardino County, California.* Brad Comeau, MSc, and Micah J. Hale, PhD, RPA. Submitted to Brantley Jackson, Fort Irwin.
- 2013 *Draft Archaeological Survey Report for the Fort Irwin Solar Project, Fort Irwin, San Bernardino County, California.* Brad Comeau, MSc, and Micah Hale, PhD, RPA.
- 2012 *Results of Extended Phase 1 Shovel Probing at Potentially Sensitive Archaeological Sites for the Jacumba Solar Project, San Diego County, California.* Brad Comeau, MSc, and Micah Hale, PhD, RPA.
- 2012 *Cultural Resources Report for the Extended Phase I Survey for the St. John Garabed Church Project, San Diego County, California.* Brad Comeau, MSc, and Micah Hale, PhD, RPA.
- 2012 *Cultural Resources Survey Report for the Lee Lake Water District Dawson Canyon Non-potable Water Storage Tank and Pipeline Design Project, Riverside County, California.* Brad Comeau, BA, and Micah Hale, PhD, RPA.
- 2011 *Class III Archaeological Inventory of 2,560 Acres Comprised of the Entire Sections of 10Z, 14D, 20B, 28B, 32G, Elk Hills, Kern County, California.* David Whitley, PhD, RPA; and Brad Comeau, BA; and Michelle Dalope, BA.
- 2011 *An Archaeological Evaluation of KER-7290, KER-7293 and KER-7294 for the LaPozz No. 5 Lode Claim (CAMC286149), Indian Wells Valley, Kern County, California.* Mark S. Becker, PhD, RPA; Brad Comeau, BA; and Tony Quach, BA.

- 2011 *Cultural Resources Inventory for the Gildred Solar Project, San Diego County, California*. Chad Willis, MA, RPA; Micah Hale, PhD, RPA; and Brad Comeau, BA.
- 2011 *Cultural Resources Inventory Report for the Rhodes Crossing Project, San Diego County, California*. Chad Willis, MA, RPA; Micah Hale, PhD, RPA; and Brad Comeau, BA.
- 2011 *Class II Cultural Resources Inventory for the Silurian Wind Project, Silurian Valley, San Bernardino County, California*. Diane Winslow, MA, RPA; Micah Hale, PhD, RPA; Sherri Andrews, MA, RPA; and Brad Comeau, BA.
- 2011 *An Archaeological Inventory of Historic and Contemporary Roads at Naval Air Weapons Station China Lake, Inyo, Kern, and San Bernardino Counties, California*. Brad Comeau, BA; Mark A. Giambastiani, PhD, RPA; and Oliver Patsch, BA.
- 2011 *Cultural Resources Survey Report for the Palomar Station Project, San Marcos, San Diego County, California*. Brad Comeau, BA, and Micah Hale, PhD, RPA.
- 2011 *An Archaeological Survey of Bunker Hill in Border Field State Park, San Diego County, California*. Brad Comeau, BA, Scott Wolf, BA, and Micah Hale, PhD, RPA.
- 2010 *Archaeological Survey Report for the Imperial County Drill Sites Project, Imperial County, California*. Brad Comeau, BA, and Jerry Schafer, PhD, RPA.
- 2010 *Class II and Class III Cultural Resources Inventory Report for the Tule Wind Project, McCain Valley, San Diego County, California*. Micah Hale, PhD, RPA; Brad Comeau, BA; and Chad Willis, MA.
- 2010 *Draft Study Plan for Cultural Resources: Gregory Canyon Landfill, San Diego County, California*. Don Laylander and Brad Comeau.
- 2009 *Data Recovery Excavations at CA-SDI-18472 for the Proposed Padre Dam Municipal Water District Secondary Connection Project (Ridge Hill Facilities), Johnstown, San Diego County, California*. Micah Hale, PhD, RPA, with contributions by Brad Comeau and Aaron Sasson.

Master's Dissertation

- 2012 *Investigating Metallurgical Practice: An Experimental Study of the Sintashta Well-Tunnel-Furnace (WTF) from the Middle Bronze Age, Siberia, Russia*. University of Sheffield.

Volunteer History

- 2012 Student Placement, English Heritage, Portsmouth, United Kingdom.

Awards/Commendations

- 1999–2003 Francis Ouimet Scholar

Relevant Previous Experience

- ≠ 2012–present Archaeologist, Dudek, Encinitas, California
- ≠ 2009–2011 Associate Archaeologist, ASM Affiliates Inc., Carlsbad, California
- ≠ 2008–2009 Archaeological Monitor, E²m, Denver, Colorado
- ≠ 2008 Archaeological Monitor/Field Technician, URS Corporation, San Diego, California

- ≠ 2005–2008 Field Supervisor, Brian F. Smith and Associates, Poway, California
- ≠ 2003–2004 Field/Lab Technician, University of Massachusetts Archaeological Services, Amherst, Massachusetts
- ≠ 2003 Field School in Archaeology, University of Massachusetts Amherst/Great Barrington, Massachusetts.

Adriane Dorrler

Archaeologist

Ms. Dorrler is a field archaeologist with over 14 years' experience in cultural resource management specializing in cultural resource studies with private, state, and federal regulatory agencies including National Historic Preservation Act (NHPA) Sections 106 and 110 and California Environmental Quality Act (CEQA) compliance extending primarily throughout Southern California. Ms. Dorrler has worked directly with Bureau of Land Management, the California Public Utilities Commission, California State Parks, and various military installations including the Marine Corps Air Ground Combat Center at Twentynine Palms, Marine Corps Base (MCB) Camp Pendleton, Naval Base Coronado, and Navy Installation San Clemente Island. She has experience in all aspects of project development from initial research, planning, and development to interpreting and synthesizing data in technical reports. Ms. Dorrler has acted as project manager and field director on complex data recovery programs, managed multiple archaeology laboratories, worked as liaison between Native American tribes and clients, and engaged in education and public outreach programs. In addition to Southern California, Ms. Dorrler has worked as a consulting archaeologist in the southwestern United States, the Mid-Atlantic region, and New England.

EDUCATION

BA, Anthropology,
Catholic University of America, 2001
BS, Nursing, University of Oklahoma, 2011

CERTIFICATIONS

City of San Diego Certified Archaeology and
Paleontology Monitor
City of San Diego Certified
Archaeology Crew Chief
Range Safety Training,
Camp Pendleton, California
Trimble GPS Mapping System
TerraSync Certification
Occupational Safety and Health Administration
(OSHA) 10-Hour Construction Safety Training
OSHA 40-Hour Hazardous Waste Operations
Worker (HAZWOPER) training
Railroad Safety and Security Training
Registered Nurse
Health and Safety Officer
American Heart Association (AHA) Pediatric and
Adult Cardiopulmonary resuscitation (CPR)
Wilderness First Responder

Project Experience

Development

Cannon Road, Caruso Affiliated, City of Carlsbad, San Diego County, California. Served as field director for a cultural resources constraints study of a 203-acre property for a proposed commercial retail center and open space easement in the City of Carlsbad. Conducted an intensive-level cultural resources survey.

Solana Highlands Revitalization, City of Solana Beach, San Diego County, California. Served as staff archaeologist during the preparation of an Environmental Impact Report (EIR) for a proposed 13.4-acre multifamily residential development with usable open space in Solana Beach. Authored Tribal Information Request letters in accordance with CEQA guidelines.

Murrieta 180, City of Murrieta, California. Served as field director for archaeological survey of a 10.9-acre property for a proposed multi-family residential development in Murrieta. Conducted a Phase I cultural resources inventory including a pedestrian survey and records search review of the California Historical Resources Information System.

Homestead South Cultural Resources, Newhall Land and Farming Company, Unincorporated Los Angeles County, California. Served as field director for archaeological survey of approximately 4,000-acre subdivision directly adjacent to the City of Santa Clarita. Conducted an intensive-level cultural resources survey.

Sand Canyon Plaza, JSB Development, City of Santa Clarita, California. Served as staff archaeologist during a Phase I cultural resources inventory for a proposed commercial and residential planning development in Santa Clarita. Performed a records search review of the California Historical Resources Information System.

Newland Sierra, Newland Land Co., San Diego, California. Served as staff archaeologist for the Phase I cultural resources inventory and Phase II significance evaluation of 1,983 acres of a proposed residential development within the North County Metro Subregion. Conducted a pedestrian survey, performed a records search review of the California Historical Resources Information System, and was a contributing author in the technical report.

As-Needed Environmental Planning Consultant Support Services, City of San Diego, California. Served as archaeological and paleontological monitor for underground conduit system installation in the neighborhood of Encanto. Tasks include environmental compliance monitoring.

Open Menu Indefinite Delivery/Indefinite Quantity (IDIQ) Contract for Cultural Resources Related Services, Naval Facilities Engineering Command Southwest (NAVFAC SW), various locations in California, Arizona, Colorado, Nevada, New Mexico, and Utah. Served as project manager, field director, health and safety officer, crew chief, and archaeological monitor and supported the undertakings of NAVFAC SW for new construction, ongoing maintenance, and repair projects by conducting cultural resources oversight for various projects throughout the Naval Southwest Division. Tasks included archaeological surveys, construction monitoring, National Register eligibility evaluations, mitigation programs, geographic information system (GIS) support, cultural resource/base support, and development of cultural/landscape contexts. (Approximate contract value: \$3,000,000). Examples of projects include:

- ≠ P-1040 – Wire Mountain Road/Vandegrift Boulevard Intersection Improvements, MCB Camp Pendleton, San Diego, California
- ≠ P-1014 – Northern Region Tertiary Treatment Plant, MCB Camp Pendleton, San Diego, California
- ≠ P-1048 – Upgrades to Electrical Systems and Associated Facilities, MCB Camp Pendleton, San Diego, California
- ≠ Wilcox Range – Archaeological Monitoring to Support the Wilcox Range Ditch Drainage Clearance, MCB Camp Pendleton, San Diego, California
- ≠ P-310 – Archaeological Monitoring to Support the Small Arms Magazine, Edson Range P-310 Construction, MCB Camp Pendleton, San Diego, California
- ≠ San Clemente Island – Site Recording Only of Archaeological Sites on Northern San Clemente Island, San Clemente, California
- ≠ Silver Strand Training Complex – National Register Eligibility Determinations for Three Prehistoric Sites, Silver Strand Training Complex South Naval Base, Coronado, California
- ≠ Cultural Resource Investigation at CA-SDI-14791, MCB Camp Pendleton, San Diego, California

Paleontological Monitoring for the Carmel Valley Skate Facility Project, San Diego County, California. Served as paleontological monitor for the 13,500-square-foot facility excavation.

Cultural Resources Evaluation for Rancho Jamul Estates, Rancho Jamul Estates, San Diego County, California. Served as archaeologist responsible for surveying and testing for 20 historic and prehistoric resources for an approximately 400-acre development project in Jamul, California. Recorded and tested prehistoric and historic resources for significance and eligibility to local and state registers. Assisted in preparation and data analysis of technical report.

Cultural Resource Mitigation for Robertson Ranch, San Diego County, California. Served as archaeologist responsible for data recovery, controlled grading, and mass grading phases for an approximately 400-acre development project in Carlsbad, California. Assisted in preparation and data analysis of technical report.

Centre City Development Corporation Downtown San Diego Mitigation and Monitoring Reporting Program, Centre City Development Corporation, San Diego, California. Served as field director/archaeology and paleontology monitor for numerous commercial projects in downtown San Diego subject to the Centre City Development Corporation mitigation measures and mitigation monitoring requirements. Examples of projects include:

- | | |
|---------------------------------------|--------------------------|
| ≠ The Q Project | ≠ Park Terrace Project |
| ≠ Lofts @ 707 10th Avenue Project | ≠ Pointe of View Project |
| ≠ South Block Lofts Project | ≠ Vantage Pointe Project |
| ≠ Vista Colina Project | ≠ West Park Project |
| ≠ 6th and Market Project | ≠ Q Street Lofts Project |
| ≠ Carnation Building/Icon LLC Project | ≠ The Mark |
| ≠ Electra Project | |

Paleontological Monitoring for the Glen Abbey Mortuary Project, San Diego County, California. Served as paleontological monitor for utility trenching and construction excavation in Chula Vista, California.

Cultural and Paleontological Resource Monitoring for the Towne Center Industrial Plaza Project, Imperial County, California. Served as archaeological and paleontological monitor for the mass grading and utility trenching of 125 acres of commercial/industrial land in Calexico, California.

Cultural Resource Survey for the Ketchum Ranch Project, San Diego County, California. Served as archaeologist responsible for field survey and eligibility review for prehistoric and historic sites for an approximately 208-acre development project in Jacumba, California.

Cultural Resource Survey for the Yuma Sector Project, BLM, Yuma County, Arizona. Served as archaeology crew chief responsible for in field survey and National Register eligibility review for ten prehistoric sites and three historic objects.

Cultural Resource Survey and Evaluation for the Otay Business Park Project, San Diego County, California. Served as archaeologist responsible for surveying and testing programs for an approximately 160-acre development project in Otay Mesa, California. Recorded and tested prehistoric and historic resources for significance and eligibility to local and State registers.

La Jolla Mitigation Monitoring Reporting Program, City of San Diego, California. Served as archaeological and paleontological monitor for numerous private residence additions within a culturally significant section of La Jolla, California. Examples of projects include:

- ≠ The Schroeder Residence Project
- ≠ The Nicolaou Residence Project
- ≠ The Underwood/Hall Residence Project

Paleontological Monitoring for the Gateway at Torrey Hills Project, San Diego County, California. Served as paleontological monitor during mass grading and excavation of a 200,000-square-foot building complex in Del Mar, California.

Paleontological Monitoring for the University City Village Project, San Diego County, California. Served as paleontological monitor during mass grading of a 55-acre residential development site in University City, California.

Cultural and Paleontological Resource Monitoring for the Siempre Viva Phase II Project, San Diego County, California. Served as archaeological and paleontological monitor for mass grading of a 60-acre business park site in Otay Mesa, California.

Cultural Resource Study and Paleontological Monitoring for the San Diego State University (SDSU) Campus Master Plan Project, San Diego County, California. Served as archaeological and paleontological monitor for the mitigation monitoring program of the 55-acre SDSU Campus Improvement project.

Paleontological Monitoring for the La Maestra Project, San Diego County, California. Served as paleontological monitor during utility trenching for improvements to a 36,440-square-foot medical clinic in City Heights.

Education

Academy of Our Lady of Peace Parking Garage Project, T.B. Penick & Sons, Inc., San Diego, California. As staff archaeologist, performed all laboratory duties for artifacts recovered from a historic refuse deposit discovered during construction; served as co-author of technical report.

Cultural Resources Monitoring, San Marcos Unified School District, San Diego County, California. Served as archaeology monitor responsible for available data review, construction activities monitoring, identified cultural resources recovery, strategy coordination with Native American groups, and cultural resource compliance establishment among contractors.

Cultural and Paleontological Resource Monitoring, San Marcos Unified School District, San Diego County, California. Served as archaeological and paleontological monitor for the mass grading of a 15-acre City of San Marcos school and park site.

Energy

Desert Green Solar Energy, Desert Green Solar Farm LLC, Borrego Springs, California. Served as co-author of technical report for a solar system project consisting of 45 acres of solar energy facility and offsite improvement corridors in Borrego Springs, San Diego County, California. Tasks include preparation and submittal of CEQA document.

McCoy Solar Energy, First Solar, Riverside County, California. Served as lead paleontological monitor during construction of the proposed 750-megawatt photovoltaic solar energy generating facility northwest of Blythe. Task included environmental compliance monitoring and project management support.

On-Call Cultural Resources, San Diego Gas & Electric (SDG&E), San Diego County, California. Served as field director and supported the undertakings of SDG&E for new construction, ongoing maintenance, and repair projects by conducting cultural resources inventories for various projects throughout the company service territory. Specific responsibilities included records search review, survey, field excavations, laboratory analysis, preparation of final report, and recommendations for resource significance and stewardship. Coordinated with other cultural resources staff, clients, and their subcontractors to implement, organize, conduct, and complete numerous small- to large-scale projects with overlapping schedules for SDG&E. Applied knowledge of local archaeological and Native American monitoring guidelines to assist SDG&E in completing projects within archaeologically sensitive areas. (Approximate contract value: \$1,250,000). Examples of projects include:

- ≠ Pole Replacement Monitoring/Survey
- ≠ Wood to Steel Pole Conversion TL 678
- ≠ Wood to Steel Pole Conversion TL 6910
- ≠ Wood to Steel Pole Conversion TL 6914
- ≠ Wood to Steel Pole Conversion TL 683
- ≠ Wood to Steel Pole Conversion TL 637
- ≠ Wood to Steel Pole Conversion TL 688
- ≠ Wood to Steel Pole Conversion TL 698
- ≠ Orange Grove Re-conductoring Project TL 698
- ≠ Wood to Steel Pole Conversion TL 685
- ≠ Wood to Steel Pole Conversion TL 6932

Cultural Resources for the Devers-Palo Verde 500-kilovolt (kV) Transmission Line, Southern California Edison (SCE), Riverside County, California. Served as archaeology monitor responsible for available data review, field survey, field monitoring, and cultural resource compliance maintenance among contractors.

Cultural Resource Survey for Sempra Generation Copper Mountain North Solar Facility, Sempra Energy, Clark County, Nevada. Served as archaeologist responsible for field survey, identified cultural resources recovery, GIS mapping and navigation, and site recordation.

Cultural Resource Survey for Kern Front Oil Field, Kern County, California. Served as archaeologist responsible for field surveying, recovering identified cultural resources, GIS mapping and navigating, and site recordation.

Cultural Resource Survey and Support for the SDG&E East County Substation, SDG&E, San Diego County, California. Served as field director responsible for records search review, field survey, GIS mapping and global positioning system (GPS) data analysis, preparation of final report, and recommendations for resource significance and stewardship.

Cultural Resource Monitoring for the San Juan Capistrano Gas Line Project, Southern California Gas Company, Orange County, California. Served as field director/archaeology monitor to provide immediate on-site response in the event that cultural material was discovered during excavation work. Responsible for review of available data, GIS mapping, site recordation, data analysis, coordination of strategies with Native American groups, and cultural resource compliance establishment among contractors.

Cultural Resource Survey for Silurian Valley Wind Application BLM, San Bernardino County, California. Served as archaeologist responsible for review of available data, field survey, GIS mapping and navigation, and site recordation.

Healthcare

Paleontological Monitoring for the Cardinal Court/Cabrillo Medical Center Project, San Diego County, California. Served as paleontological monitor during demolition of existing structure and mass grading for a 3-story Class A building.

Military

Cultural Resources Inventory of Proposed Utility Corridors Associated with the Edwards Air force Base (AFB) Area Development Plan, 412th Civil Engineer Directorate, Kern and Los Angeles Counties, California. Served as staff archaeologist for the cultural resources inventory for approximately 4,339-acres of utility corridor within Edwards AFB. Assisted in report preparation and submittal of NEPA and NHPA Section 106 deliverable.

Environmental Assessment Addressing Upgrades to Support Maintenance and Energy and Water Supply Project at Navy Installation San Clemente Island, Naval Facilities Engineering Command Atlantic (NAVFAC LANT), San Clemente Island, California. Served as field director/health and safety officer and supported the undertakings of NAVFAC LANT through assessing potential impacts to cultural resources within proposed corridors along all utilities, roads, and structures for maintenance, upgrades, and vegetation management. Conducted a base-wide archaeological site record and literature search. Developed a GIS database containing site locational information of cultural resources impacted by the proposed plan. (Approximate contract value: \$700,000).

Recreation

Cultural Resource Survey for Palomar Mountain State Park Fire Prevention, California Department of Parks and Recreation, San Diego County, California. Served as archaeologist responsible for review of available data, field survey, GIS mapping and navigation, and site recordation.

Cultural and Paleontological Resource Monitoring for the Fletcher Cove Park Improvements, California. Served as archaeological and paleontological monitor during grading and infrastructure alterations within the existing City of Solana Beach Park.

Resource Management

Mitigation, Monitoring, and Reporting for the 1900 and 1912 Spindrift Drive Projects, Private Client. La Jolla, California. Served as field director and health and safety officer responsible for implementation and oversight of a multiphase data recovery program and subsequent monitoring to satisfy City of San Diego and CEQA guidelines and regulations. Specific responsibilities included managing the daily operations of the archaeological excavation and cultural materials inventory program and monitoring effort; orchestrating fieldwork, billing, and staffing; coordinating and consulting with Native American tribes and agencies; supervising the project crew; adhering to a strict health and safety plan in order to guarantee project safety standards; ensuring that project progression is adequate to meet or exceed project end goals; observing and interpreting archaeological excavation data in order to maximize research potential and meet the requirements of the City of San Diego, CEQA, and client/representatives; creating daily schedules and staffing plans; coordinating with various agencies and client representatives; and supervising laboratory work. (Approximate contract value: \$1,000,000).

Cultural Resource Study and Evaluation for LaPozz Claim Test, Kern County, California. Served as archaeologist responsible for review of available data, field excavations and survey, GIS mapping and navigation, site recordation, and data analysis.

Water/Wastewater

Little Lake MDP Line B, Stage 1, Riverside County Flood Control and Water Conservation District, San Jacinto and Hemet, California. Served as project archaeologist for archaeological monitoring during construction, operation and maintenance of approximately 9,000 linear feet of underground storm drain facilities in the cities of San Jacinto and Hemet. Tasks include evaluation and treatment of unanticipated discoveries and preparation of deliverables.

Cultural Resource Study, Padre Dam Municipal Water District, San Diego County, California. Served as archaeologist responsible for review of available data, field excavation, GIS mapping, site recordation, strategy coordination with Native American groups, and laboratory analysis.

Cultural and Paleontological Resource Study for the City of San Diego Reclaimed Water Distribution System Project, San Diego, California. Served as archaeological and paleontological monitor for the City of San Diego's continuing annual water and sewer main replacement program. Examples of projects include:

- ≠ Sewer and Water Group 683A
- ≠ Sewer and Water Group 676
- ≠ Sewer and Water Group 796
- ≠ Sewer and Water Group 741
- ≠ Sewer and Water Group 718
- ≠ Sewer Pump Station 19 Replacement
- ≠ Sorrento Valley Sewer and Pump Station 89

Relevant Previous Experience

Field Director/Health and Safety Officer, HDR, San Diego, California. Responsible for management of all aspects of field projects, including Phase I, II, and III projects under both CEQA and NHPA (Section 106 and 110). Manages crews of up to 20 individuals, supervises all daily field and laboratory operations, and maintains client relationships. Contributed to project's budget management and project report writing. (2009-2014)

Field Crew Chief/Archaeological Technician, ASM Affiliates, Inc., Carlsbad, California. Responsible for management of fieldwork on a long-term night project. Performed survey, monitoring, and excavation on various projects throughout Southern California and Nevada. Performed laboratory work including identification of prehistoric and historic material from site's within the Southwestern region. (2009-2010)

Laboratory Manager/Field Director, Brian F. Smith & Associates, Poway, California. Responsible for management of all aspects of field projects including Phase I, II, and III projects. Managed crews of up to ten individuals, supervised all daily field and laboratory operations, and maintained client relationships. Composed final project reports and curated cultural material. Performed as-needed paleontological monitoring. (2004-2009)

Crew Chief/Archaeological Technician, Richard Grubb & Associates, Cranbury, New Jersey. Performed survey, monitoring, and excavation on various projects throughout New England. Performed laboratory work including identification of prehistoric and historic material. Conducted background research for project's and was responsible for laboratory work and cultural material curation. (2001-2004)

Archaeological Technician, Thunderbird, Washington DC. Performed survey and excavation on various projects throughout the Mid-Atlantic region. Performed laboratory work including identification of prehistoric and historic material. (2000-2001)

Adam Giacinto

Archaeologist

Adam Giacinto is an archaeologist with more than 6 years' experience preparing cultural resource reports, site records, and conducting archaeological survey, evaluation, and data recovery-level investigations. His research interests include prehistoric hunter-gatherer cultures and contemporary conceptions of heritage. His current research focuses on the social, historical, archaeological, and political mechanisms surrounding heritage values. He has gained practical experience in archaeological and ethnographic field methods while conducting research in the Southwest, Mexico, and Eastern Europe.

Mr. Giacinto brings specialized experience in cultural resources information processing gained while working at the South Coastal Information Center. He has worked as part of a nonprofit collaboration in designing and managing a large-scale, preservation-oriented, standardized database and conducting site and impact predictive Geographic Information Systems (GIS) analysis of the existing cultural resources surrounding ancient Lake Cahuilla. He provides experience in ethnographic and applied anthropological methods gained in urban and rural settings, both in the United States and internationally.

EDUCATION

San Diego State University
MA, Anthropology, 2011

Santa Rosa Junior College
AA, Anthropology, 2004

Sonoma State University
BA, Anthropology/Linguistics, 2006

PROFESSIONAL AFFILIATIONS

Register of Professional Archaeologists

Society for California Archaeology American

Anthropological Association Institute of

Archaeomythology

Project Experience

Development

Canergy - Rutherford Road Development Project, Ericsson-Grant, Inc., El Centro, California. As co-principal investigator, Mr. Giacinto coordinated records searches, Native American contact, map preparation and fieldwork.

Park Boulevard Environmental Impact Report (EIR), City of Palo Alto, California. As principal archaeological investigator, Mr. Giacinto coordinated a Northwest Indian College (NWIC) records search, Native American Heritage Commission (NAHC) and Native American consultation, archaeological survey, and preparation of a technical report and EIR section. An appropriate mitigation strategy was developed and provided to the City of Palo Alto for this negative cultural inventory.

Oro Verde Development Fire Protection Planning, Wohlford Land Co., LLC, Valley Center, California. As principal investigator, Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a negative technical letter report for this small residential development. The mitigation strategy did not require additional archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted to the County of San Diego.

Fifth Avenue Development Cultural Inventory, E2 ManageTech, Inc., Chula Vista, California. As principal investigator, Mr. Giacinto coordinated the preparation of a paleontological, archaeological, and historic resource inventory for a proposed residential project. Responsibilities included a SCIC records search, San Diego Natural History Museum (SDNHM) records search, archival research, agency and client communication, GIS, and compiling the technical report and appendices. Results were submitted as a technical report s to the City of Chula Vista.

Normal Street Evaluations, Darco Engineering, Inc., San Diego, California. As principal investigator, Mr. Giacinto managed the preparation of a historic resource evaluation for a number of buildings located in the community of University Heights. Responsibilities included an SCIC records search, agency and client communication, archival research, GIS, and compiling the technical report and appendices. Results were submitted as a technical report and associated appendices to the City of San Diego.

Mapleton Park Centre Site Analysis, Kaiser Foundation Health Plan, Inc., Murrieta, California. As principal archaeological consultant, Mr. Giacinto prepared a project constraints study for Kaiser Permanente, within the County of Riverside.

New Kaiser Permanente Medical Center EIR, Kaiser Foundation Health Plan, Inc., San Diego, California. As field director, Mr. Giacinto conducted a survey of the proposed medical center and reported negative findings to the City of San Diego.

St. John Garabed Church Environmental Services, St. John Garabed Armenian Apostolic Church Trust, San Diego, California. As field director and co-principal investigator, Mr. Giacinto conducted a survey of the proposed church facilities and reported findings to the City of San Diego. Additional responsibilities included preparation of the cultural and paleontological sections for the project EIR.

PMC Quarry Creek Project Phase II Cultural Evaluation, McMillin Land Development, Carlsbad, California. As field director, Mr. Giacinto managed and conducted archaeological testing, data analysis, report writing and mapping of existing cultural resources within the 60-acre Quarry Creek Project study area.

University Office and Medical Park Project Cultural Resource Study Survey, U.S. Army Corps of Engineers, San Marcos, California. As field director, Mr. Giacinto managed a team of archaeologists in conducting survey of the 49.5-acre study area in a general inventory of potentially impacted cultural resources and prepared maps and a report for the presentation of this information.

Education

Mission Beach Elementary School EIR, McKellar McGowan, San Diego, California. As principal archaeological investigator, Mr. Giacinto coordinated a Southern California Indian Center (SCIC) records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report. The mitigation strategy did not require archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted to the City of San Diego.

San Diego State University (SDSU) West Campus Housing EIR/Tech Studies, Gatzke, Dillon and Ballance, San Diego, California. As principal archaeological investigator, Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report and EIR section. An appropriate mitigation strategy was developed and provided to SDSU for this negative cultural inventory.

Orange Coast College Initial Study (IS), Coast Community College District, Orange, California. As principal archaeological investigator, Mr. Giacinto coordinated records search, NAHC and Native American consultation, archaeological survey, preparation of a technical report, and provided management and compliance recommendations relating to cultural resources on three Orange County College campuses.

Energy

Valley Center Solar Site Survey, RBF Consulting, Valley Center, California. As Principal Investigator, Mr. Giacinto managed the inventory and prepared management recommendations for a proposed solar farm in Valley Center, California. A relationship of open dialogue between Mr. Giacinto and the client allowed for the project design to avoid significant direct and indirect impacts to cultural resources the proper the development of compliant mitigation and informed project design. Results were submitted to the County of San Diego Department of Planning and Landuse.

Wind Energy Project, Confidential Client, Riverside, California. As principal cultural investigator, Mr. Giacinto prepared the cultural scope and schedule, coordinated the records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report for the County of Riverside that provided management and compliance recommendations relating to identified cultural resources. Additional responsibilities included coordination of paleontological and Native American monitor subconsultants.

Sol Orchard Solar Farm, RBF Consulting, Ramona, California. As Principal Investigator, Mr. Giacinto coordinated archaeological and Native American monitoring and prepared management recommendations for a proposed solar farm in Ramona, California. All impacts to significant cultural resources in the vicinity were avoided. Results were submitted to the County of San Diego.

Makani Power Wind Turbine Pilot Program, Google Inc., Alameda, California. As principal investigator, Mr. Giacinto coordinated a NWIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a negative technical memo a for this potential wind farm. The mitigation strategy did not require additional archaeological monitoring or other work based on the lack of archaeological sites, and the low potential for encountering unrecorded subsurface cultural resources. Recommendations were submitted as a categorical exemption to the reviewing agency.

Solar Farm Cultural Resources Services, Confidential Client, San Diego, California. As project director, Mr. Giacinto managed a crew of 8 archaeologists in conducting the survey, surface mapping, surface collection, and excavation of 13 prehistoric and historical period sites throughout the McCain Valley.

As-Needed Environmental Analysis for Solar Project Road Access, Confidential Client, San Diego, California. As field director, Mr. Giacinto managed a crew of 12 archaeologists in conducting the survey, surface mapping, surface collection and excavation of 42 prehistoric and historical period sites throughout the McCain Valley.

East County Substation EIR/Environmental Impact Statement (EIS), California Public Utilities Commission (CPUC), San Diego County, California. As field archaeologist, Mr. Giacinto worked as part of a team to survey the possible impacts to exiting and newly recorded cultural resources.

Class III Cultural Resources Inventory for Meteorological Masts 1 and 4 and Access Roads, Iberdrola Renewables, Kern County, California. As field director, Mr. Giacinto managed a team of archaeologists in conducting surveys of the study area in a general inventory of potentially impacted cultural resources.

Wood to Steel Pole Conversion Survey, San Diego Gas and Electric (SDG&E), San Diego County, California. As crew chief, Mr. Giacinto managed a team of archaeologists in conducting a survey of Circuit 75 in a general inventory of potentially impacted cultural resources.

Sunrise Powerlink Project Monitoring, SDG&E, Imperial and San Diego Counties, California. As a field director, Mr. Giacinto assisted in managing an archaeological field crew, aided in data collection, and conducted monitoring by facilitating planned mitigation strategies of construction and pre-construction activities associated with a 500-kilovolt (kV) transmission line, access roads, and work areas.

Cal Valley Solar Ranch-Switchyard Site No. 3 Archaeological Testing, Ecology & Environment Inc., San Luis Obispo County, California. As part of a team of archaeologists, conducted excavations and general testing of a middle prehistoric site.

Wood to Steel Pole Conversion, SDG&E, Cleveland National Forest (CNF), San Diego County, California. As crew chief, Mr. Giacinto managed a team of archaeologists in conducting a survey of Circuit 440 in a general inventory of potentially impacted cultural resources.

Devers to Palo Verde 2 (DPV2) Colorado River Substation Project Monitoring, Southern California Edison (SCE), Blythe, California. As project archaeologist, Mr. Giacinto monitored the geotechnical testing of soils along access road leading into Colorado River Substation from the west.

Sunrise Powerlink Pole Fielding and Environmental Monitoring, SDG&E, Imperial and San Diego Counties, California. As the archaeological representative, Mr. Giacinto worked with SDG&E-contracted engineers, surveyors, and biologists to assess proposed work areas, access roads, and structure locations for possible impacts upon existing cultural resources.

Wood to Steel Pole Conversion Pole Fielding, SDG&E and CNF, San Diego County, California. As the archaeological representative, Mr. Giacinto worked with SDGE-contracted engineers, surveyors, and biologists to assess proposed pole transmission pole locations for possible impacts upon existing cultural resources.

Wood to Steel Pole Conversion, SDG&E and CNF, San Diego County, California. As field archaeologist, Mr. Giacinto worked as part of a team to survey segments of Circuit 449, Circuit 78, TL 625, and TL 629 for possible impacts to existing cultural resources.

Guy Pole and Stub Pole Removal Monitoring, SDG&E, Carlsbad, California. As archaeological representative, Mr. Giacinto monitored activities associated with the removal of existing unused energy transmission infrastructure in an area near recorded cultural resources of noted significance.

DPV2 500 kV Transmission Line Survey, SCE, Riverside County, California. As field archaeologist, Mr. Giacinto worked as part of a team to survey more than 45 miles of linear proposed project area. Conducted an intensive inventory of prehistoric and historical period cultural resources from Desert Center to Thousand Palms.

DPV2 Colorado Switchyard Survey, SCE, Riverside County, California. As project archaeologist, Mr. Giacinto prepared the site records gathered through a pre-field records search and created project area maps in GIS illustrating the location and type of preexisting cultural resources prior field survey for a fiber-optic ground wire project for DPV2 Colorado switchyard in Blythe.

Pole Replacement Projects Surveying, SCE, Orange and Riverside Counties, California. As project archaeologist, Mr. Giacinto prepared the site records gathered through a pre-field records search and created project area maps in GIS illustrating the location and type of preexisting cultural resources prior to fieldwork for the deteriorated pole project within the CNF, and deteriorated pole and pole replacement on private property.

Sunrise Powerlink Environmentally Superior Southern Alternative Survey, SDG&E, San Diego and Imperial Counties, California. As project archaeologist, Mr. Giacinto assisted in preparing the site records gathered through a pre-field records search and digitized the boundaries of archaeological sites in GIS illustrating the location and type of preexisting cultural resources, and a records search of existing site data for alternative route.

Military

Infill Survey Project at Edwards Air Force Base, U.S. Air Force, California. As crew chief, Mr. Giacinto managed a team of five archaeologists in conducting a general pedestrian inventory of cultural resources within a 7,650-acre study area.

Desert Warfare Training Facility Cultural Resources Inventory Project, U.S. Navy Southwest, Imperial County, California. As field archaeologist, Mr. Giacinto worked as part of a team to conduct an intensive inventory of prehistoric and historical period cultural resources in selected areas within the Chocolate Mountains Gunnery Range in Niland.

Morgan/Bircham 55 to 12 kV Project Survey, U.S. Navy-Naval Air Weapons Station (NAWS)-China Lake, Inyo County, California. As project archaeologist, Mr. Giacinto prepared the site records gathered through a pre-field records search and created project area maps in GIS illustrating the location and type of preexisting cultural resources prior to field survey at NAWS China Lake.

Resource Management

Yokohl Ranch Cultural Resources, The Yokohl Ranch Company, LLC, Tulare, California. As co-principal investigator and field director, Mr. Giacinto managed 15 archaeologists in conducting 1,900 acres of survey throughout the Yokohl Valley.

Peter's Canyon Regional Park CEQA Study, Orange County Fire Authority, Orange, California. As principal investigator, Mr. Giacinto conducted a cultural resources inventory of all cultural resources within Peters Canyon planned fuel reduction areas. Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a technical report. Recommendations were provided to agency personnel to assist in mitigating any possible adverse effects to cultural resources in the project vicinity.

Yokohl Ranch Development Project, The Yokohl Ranch Company, LLC, Tulare County, California. As co-principal investigator and field director, Mr. Giacinto managed 15 archaeologists in conducting significance evaluation of 118 historical and prehistoric cultural resources throughout the Yokohl Valley.

Lake Cahuilla Management Plan, ASM PARC, Riverside County, California. As project archaeologist and lead analyst, Mr. Giacinto led in the formation of a standardized database associated with ancient Lake Cahuilla. Performed GIS data integration and predictive analysis, data entry of site record information, and completed multi-day, multi-person record search for Riverside County.

Third Party Review and Monitoring

Ocotillo Wind Energy Facility Third Party Compliance Monitoring, Bureau of Land Management (BLM), Imperial County, California. As third party observer, Mr. Giacinto collaborated with the BLM in maintaining cultural compliance with federal environmental policies. In addition, processed archaeological and Native American comments for BLM attention.

Rio Mesa Solar Electric Generating Facility CEQA Studies, BrightSource Energy, Inc., Riverside, California. As third party reviewer, Mr. Giacinto collaborated with the BLM, the California Energy Commission, and Brightsource to review URS Corporation's cultural report content, quality, and environmental compliance.

Tribal

South Palm Canyon West Fork Flood Emergency Work, Agua Caliente Band of Cahuilla Indians, Palm Springs, California. As principal investigator, Mr. Giacinto worked with the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office to conduct archaeological monitoring on tribal lands of emergency repairs within Andreas Canyon National Register of Historic Places listed district. A monitoring report with a summary of findings and implemented mitigation activities, daily monitoring logs and photos, and confidential figures was provided to the tribe.

South Palm Canyon Improvements, Agua Caliente Band of Cahuilla Indians, Palm Springs, California. As principal investigator, Mr. Giacinto worked with the Agua Caliente Band of Cahuilla Indians Tribal Historic Preservation Office to conduct archaeological monitoring on tribal lands of facility improvements within Andreas Canyon National Register of Historic Places listed district. A monitoring report with a summary of findings and implemented mitigation activities, daily monitoring logs and photos, and confidential figures was provided to the tribe.

Shu'luuk Wind Project Cultural Resource Study Survey, Campo Environmental Protection Agency and Invenergy LLC, Campo Indian Reservation, California. As field director, Mr. Giacinto managed two teams of archaeologists, consisting of seven total practitioners, in conducting a survey of the 2,400-acre study area in a general inventory of potentially impacted cultural resources. Worked with Campo Environmental Protection Agency, of the Campo Kumeyaay Nation, in forming management objectives and integrating six Native American Monitors into daily survey activities.

Water/Wastewater

Carlsbad Desalination Third Addendum to EIR Biological Survey and Monitoring, Poseidon Water LLC, Carlsbad, California. As archaeological consultant, Mr. Giacinto conducted archaeological monitoring and consultation on an as-needed basis.

Old Mission Dam, City of San Diego, California. As principal investigator, Mr. Giacinto conducted an inventory, coordinated survey, and prepared recommendations for the maintenance of the National Register of Historic Places listed resource, Old Mission Dam.

Otay River Wetland Mitigation, Poseidon Water LLC, San Diego, California. As field director, Mr. Giacinto conducted a cultural resources survey of a mitigation property, managed by the U.S. Fish and Wildlife Service (USFWS), to be used for estuary restoration.

Vallecitos Water District Rock Springs Sewer, Infrastructure Engineering Corporation, San Diego, California. As principal investigator, Mr. Giacinto coordinated a SCIC records search, NAHC and Native American consultation, archaeological survey, and preparation of a negative technical letter report for this small residential development. The mitigation strategy did require additional archaeological monitoring based on the potential to encounter subsurface cultural resources. Recommendations were submitted to the Vallecitos Water District.

Relevant Previous Experience

Investigation of Emergent Trends of San Diego Cultural Resource Management, San Diego County, California. As ethnographic researcher, conducted verbal, semi-structured interviews with 17 archaeologists, policy makers, and Native American monitors and curators regarding the history and current practice of Cultural Resource Management. Information was contextualized through extensive background research using legal, academic, specialized, and archival sources. Analysis employed a synthesis of cultural anthropological and archaeological theory and practice. Results were published as *M.A. thesis in Anthropology* at San Diego State University (2012).

Needs Assessment/Diagnostic for the Community of La Sierra de San Francisco, Baja California Sur, Mexico. As ethnographic researcher, worked for San Diego State University through a grant provided by the International Community Foundation to conduct a general needs assessment in a UNESCO protected community within a UNESCO defined region of World Heritage, la Sierra de San Francisco. Resolved to help with improving the infrastructure of potable water, assisting in the construction of a system of telecommunications for education, and conducting workshops aimed at the preservation of local prehistoric and historical cultural and archaeological resources (2010).

Ethnographic Field School, Zimatlan, Oaxaca, Mexico. As ethnographic student/researcher for San Diego State University, lived with local family and conducted interviews with local population regarding microcredit, sustainable/traditional agriculture and husbandry. Additionally, compiled audio/visual digital stories with local youth and conducted training in research and appropriate documentation. Emphasis was placed on dietary and generational cultural changes (2009).

Publications

Emergent Trends of Cultural Resource Management: Alternative Conceptions of Past, Present and Place. M.A. thesis in Anthropology, San Diego State University. 2012.

A Qualitative History of "Cultural Resource" Management. anthropologiesproject.org. May 15, 2011.

A Qualitative Investigation of "Cultural Resource" Management In San Diego. The Society for the Anthropology of North America. April 2010.

A Qualitative History of "Cultural Resource" Management. ethnographix.org. May 15, 2010.

Conway, F., R. Espinoza, and A. Giacinto. 2010 Results of Needs Assessment Conducted with Communities of La Sierra de San Francisco, 2009-2010. Submitted to the International Community Foundation.

Technical Reports

- Giacinto, A. 2014. *Phase I Archaeological Inventory Report for the Mission Beach Residences Project, San Diego County, California*. Prepared for McKellar-Ashbrook LLC. Submitted to the City of San Diego Development Services Department.
- Giacinto, A. 2014. *Phase I Archaeological Inventory Report for the Santa Barbara Place Residences Project, San Diego County, California*. Prepared for McKellar-Ashbrook LLC. Submitted to the City of San Diego Development Services Department.
- Giacinto, A. 2014. *Negative Cultural Resources Phase I Survey Report for the Oro Verde Project, San Diego County, California*. Submitted to County of San Diego Department of Planning and Landuse.
- Giacinto, A. 2014. *Cultural Resources Technical Report for the West Campus Student Housing Complex Project, San Diego County, California*. Submitted to County of San Diego Department of Planning and Landuse.
- Hale, M. and A. Giacinto 2014. *Negative Cultural Resources Phase I Inventory for the Canergy Project, Brawley, Imperial County, California*. Prepared for Ericsson-Grant Inc. Submitted to Imperial County Planning and Development.
- Castells, J. and A. Giacinto 2014. *Historic Resources Inventory for the Normal Street Project, City of San Diego, California*. Submitted to City of San Diego..
- Giacinto, A. 2013. *Phase I Cultural Resources Assessment Report for the Smoke Tree Wind Project, Riverside County, California*. Prepared for Ogin, Inc. Submitted to County of Riverside Planning Department.
- Castells, J. and A. Giacinto 2013. *Archaeological, Historical, and Paleontological Resources Inventory for the 5th Avenue Chula Vista Development Project, City of Chula Vista, California*. Prepared for E2 ManageTech, Inc. Submitted to City of Chula Vista.
- Giacinto, A. 2013. *Archaeological Monitoring Summary Memo for the South Palm Canyon Improvements Project, Agua Caliente Band of Mission Indians Reservation, California*.
- Giacinto, A. 2013. *Cultural Resources Phase I Survey Report for the NorthLight Power Valley Center Solar Power Project, San Diego County, California*. Prepared for RBF Environmental. Submitted to County of San Diego Department of Planning and Landuse.
- Giacinto, A. and M. Hale 2013. *Phase I Cultural Resources Assessment Report for the WCSS0011R1 and WCS00012R1 Project, Riverside County, California*. Prepared for FloDesign Wind Turbine Corp. Submitted to County of Riverside Planning Department.
- Giacinto, A., and M. Hale. 2013. *Cultural Resources and Paleontological Survey Report for the St. John Garabed Church Project, San Diego County, California*. Submitted to the City of San Diego, California.
- Giacinto, A. 2013. *Cultural Resources Phase I Addendum Report for the Old Mission Dam Maintenance Project, San Diego County, California*. Prepared for the City of San Diego.

- Giacinto, A. 2013. *Archaeological Reconnaissance for Categorical CEQA Exemption for the Makani/Google Airborne Wind Turbine Pilot Project, Alameda County, California.*
- Giacinto, A. 2013. *Negative Findings Letter Report for a Phase I Cultural Resources Study Conducted for the VWD Rock Springs Project, San Diego County, CA.* Submitted on behalf of IEC Corporation to the Vallecitos Water District.
- Hale, M., A. Giacinto, and N. Hanten, ed. 2013. *Cultural Resources Inventory and Evaluation for the Yokohl Ranch Project, Tulare County, California.* Contributions by S. Hector, A. Garcia-Herbst, L.. Akyüz, M. Becker, S. Ní Ghabhláin, and S. Stringer-Bowsher
- Hale, M., and A. Giacinto 2013. *Yokohl Ranch Project EIR, Chapter 4.6, Yokohl Valley, Tulare County, California*
- Giacinto, A., and M. Hale 2012. *Cultural Resources Survey Report for the St. John Garabed Church Project, San Diego County, California*
- Hale, M., and A. Giacinto 2012. *Cultural Resources Inventory for the U.S. Fish and Wildlife Service Otay River Estuary Restoration Project, Otay Mesa, San Diego County, California*
- Giacinto, A. 2012. *Negative Cultural Resources Survey Report for the Kaiser Permanente San Diego Central Medical Center, San Diego County, California*
- Hale, M., and A. Giacinto 2012. *Cultural Resources Inventory for the Orange County Fire Authority Project, Peters Canyon, Orange County, California*
- Hale, M., and A. Giacinto 2012. *North Embarcadero Port Master Plan Amendment (NE-PMPA) EIR, Chapter 4.9, Port of San Diego, San Diego, California.*
- Hale, M., and A. Giacinto 2012. *Rio Mesa Solar EIS, Chapter 4.6, Brightsource, Riverside County, California.*
- Daniels, J.T., A. Giacinto, I. Scharlotta, N. Hanten, M.J. Hale 2012. *Archaeological Evaluation for the Rugged Solar Project.* San Diego County, California.
- Giacinto, A., J.T. Daniels, M.J. Hale, 2012. *Archaeological Evaluation for the Tierra Del Sol Project.* San Diego County, California.
- Hale, M., S. Andrews, M. Dalope, A. Giacinto, and N. Hanten 2012. *Phase I Cultural Resources Inventory of 7,650 acres in Management Areas 1B, 3D, and 3E Edwards Air Force Base, Kern County, California.* Prepared for Richard Bark, JT3 LLC, Subcontract Number 1A10000101.
- Hale, M., A. Giacinto, and J. Schaefer 2012. *Class III Cultural Resources Inventory for the Campo Invenenergy Project, Campo Indian Reservation, San Diego California.*
- Giacinto, A., and M. Becker 2012. *Padre Dam Eastern Service Area Secondary Connection-Alternative Site Location.* Letter Report. San Diego County, California.
- Giacinto, A., and J. Cook 2011. *Cultural Resource Study for the UOMP Project.* Letter Report. San Diego County, California.

Ghabhláin, S., A. Giacinto, and T. Quach 2011. *Cultural Resources Evaluation for the Quarry Creek Project*. City of Carlsbad, California.

DeCarlo, M.M., A. Giacinto, and W.T. Eckhardt 2010. *Cultural Resources Inventory for the Proposed Colorado River Substation Expansion Project*. Riverside County, California.

Cook, J.R., A. Garcia-Herbst, A. Giacinto, and M. Dalope 2010. *Addendum to HDR/e²M 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.

Presentations

A GIS Analysis of Ancient Lake Cahuilla Archaeological Sites, Riverside County, CA, United States. For Society for California Archaeology, San Diego, 2012.

Emergent Trends of San Diego Cultural Resource Management. For Society for California Archaeology, San Diego, 2012.

A GIS Analysis of Ancient Lake Cahuilla Archaeological Sites, Riverside County, CA, United States. For Balancias y Perspectivas, National Institute of Archaeology and History (NIAH), Mexicali, MX, 2011.

RESUME

DENNIS R. GALLEGOS PRINCIPAL

**Gallegos & Associates
5671 Palmer Way, Suite A
Carlsbad, CA 92008
(760) 929-0055**

EDUCATION

B.A. Anthropology, California State University, Northridge, 1974
B.S. Business, California State University, Northridge, 1973

PROFESSIONAL AFFILIATION

Society for American Archaeology
Archaeological Conservancy
Society for California Archaeology
San Diego County Archaeological Society
Carlsbad Historic Preservation Commission 1989-1993

PROFESSIONAL EXPERIENCE

**Gallegos & Associates
1990 to Present**

Principal Investigator for cultural resource studies within southern California for federal, State and local compliance. These projects include constraint level evaluations, surveys, CEQA testing programs, evaluations for National Register status, and data recovery programs. Mr. Gallegos is knowledgeable of Federal legal requirements as well as, City, County and CEQA requirements, having worked on over 500 projects within the past 30 years. He has served as principal investigator for a number of recent federal cultural resource projects which involved agency and 106 compliance. These projects include: surveys and test programs for SR 905 and the widening of Otay Mesa Road, the Otay Mesa Management Plan, Camp Pendleton Santa Margarita River Valley Inventory (5,000 acres), NAS Miramar inventory (sample inventory of 20,000 acres), Naval Radio Receiving Facility inventory, Cleveland National Forest report preparation; and testing of a 5,000 year-old site along the San Luis Rey River Valley to determine site significance.

Major cultural resource overviews include San Dieguito River Valley Park (80,000 acres); and overviews for the City of Escondido, San Marcos planning areas, City of Encinitas, Otay River Valley, and San Luis Rey River Valley. Recent projects managed by Mr. Gallegos include: an inventory for Anza-Borrego Desert State Park; Oceanside-Escondido Bike Trail; Viejas Village inventory and test; survey and testing for Carlsbad Ranch, constraint level study for Carrillo Ranch Specific Plan; Batiquitos Lagoon Enhancement Project; and inventories for Subareas III (3,000 acres), Subarea IV (1,500 acres), and Subarea V (2,000 acres) for the City of San Diego.

DENNIS R. GALLEGOS

Ogden/ERC Environmental and Energy Services Company
1978 to 1990

Project manager responsible for management and direction of cultural resource surveys, test excavations, and data recovery programs. Major projects include the data recovery programs for Ballast Point, Batiquitos Ridge, Twin Oaks Valley Ranch, Kuebler Ranch - Otay Mesa, Fieldstone Northview, and Daon's Santa Fe Ridge. Utility line projects involving FERC, NEPA, and 106 compliance include the SCE Palo Verde/Devers 200-mile transmission line corridor survey, testing, and data recovery program; SDG&E La Rosita transmission line; and the SDG&E La Jet solar study. Large-scale Class II cultural resource inventories include the Bureau of Land Management's 2.5-million acre Central Mojave and Colorado Desert regions and the BLM's 250,000-acre East/West Mesa Imperial Valley studies.

Archaeological Consultant
1977 to 1978

Archaeological consultant with Wirth Associates, Inc. for SDG&E including: Talega Substation survey (field director); Phase II archaeological inventory report, plant site to Devers and Miguel Substations, Sundesert Nuclear Project transmission system environmental study; archaeological study of the Jamul Mountain Alternative, Sundesert Nuclear Project transmission system environmental study (field director); and Phase I archaeology report, plant site to Victorville/Lugo and Devers to Victorville/Lugo, Sundesert Nuclear Project transmission system environmental study.

Bureau of Land Management
1975 to 1977

Archaeologist for the USDI, Bureau of Land Management, California Desert Planning Staff, Sacramento/Riverside, California. Lead archaeologist for the Saline Valley Unit Resource Analysis (cultural resource inventory of 500,000 acres).

Assisted in the cultural resource inventory, unit resource analysis, and management framework plan for the East Mojave Planning Units (2,000,000 acres in the California Desert). Developed survey inventory and data collection methods for computer input and analysis. Developed a predictive model for locating prehistoric sites on the basis of environmental variables. This model also identified site type and relative site density for each site type on the basis of environmental setting.

State of California
1975

Archaeologist for the State of California, Department of Parks and Recreation. Responsible for site testing and excavation of the 1812 Russian Fort Ross, Fort Ross, California.

Archaeological Consultant
1972 to 1974

Archaeological consultant for historic and prehistoric sites to include mapping, survey, excavation, and data recovery programs for private contractors, utilities, universities, Caltrans, HUD, and museums. Project areas include: Ventura Mission site, Ventura, California; Kirk Creek, Big Sur, California; Salton Sea area, Imperial County, California; Crowder Canyon, San Bernardino County, California; and Cuyama, California. Responsibilities included data recovery, analysis, photography, and report writing.

DENNIS R. GALLEGOS

State of California
1970 to 1973

Park aide for the Department of Parks and Recreation. Responsible for survey, excavation, payroll, and disbursement of funds for the Castaic, Hardluck, and Pyramid projects, Los Angeles National Forest, California.

AWARDS

Special Achievement Award, presented by the Bureau of Land Management, California Desert Planning Staff, April 1977.

Outstanding Achievement in the Field of Historic Preservation, Leo Carrillo Ranch Master Plan, California Preservation Foundation, February 1998

MAJOR REPORTS

- 2002 Otay/Kuchamaa: Cultural Resource Background Study, prepared for the Bureau of Land Management. For this 30,000 acre overview, the final report included a record search and literature review, mapping of previously recorded cultural resources using GIS, identification of significant cultural resources, preparing sections on Kumeyaay Native Americans in both the US and Mexico and the historic period, and providing management recommendations.
- 2002 Data Recovery Program for the McCool/Lohman Homestead: 1880s to 1940s, Otay Mesa, San Diego, California. Project completed for the Larkspur Generating Facility under CEC review. This project included a literature review, record search, field survey, test to determine site significance and eligibility to the California Register of Historical Resources, mitigation program through data recovery, and monitoring during construction. The literature review identified occupation by the McCool and Lohman families from circa 1880 to 1940. Features documented include four cisterns and three privy/dumps with materials documenting the early historic occupation of Otay Mesa.
- 2001 Cultural Resource Test, Data Recovery and Monitoring Program for the Otay Mesa Generating Project. This study included determining site significance and eligibility to the National Register for 13 cultural resources, data recovery for site CA-SDI-9975, and monitoring during construction of the power plant and related facilities. Tasks included survey, artifact collection using GPS and GIS, excavation of STPs and units, artifact analysis, special studies, and a report of finding. This study was prepared for the California Energy Commission.
- 2000 Cultural Resources Evaluation Report for the Palomar College Science Building Project, San Marcos, California. Literature review, review of collections made by Palomar students, field survey and testing of one prehistoric site for Palomar College. Testing of this 3600 year old site included surface collection, excavation of STPs and units, artifact analysis, special studies, and a report of finding. The site was identified as significant under CEQA criteria and mitigation of impacts through data recovery excavation was scheduled for student programs over the next five year.

DENNIS R. GALLEGOS

- 2000 Cultural Resource Survey and Evaluation for the North Sand Sheet Full Buildout program, Owens Lake California. Literature review, inventory of 5,000 acres and testing to determine National Register eligibility for 14 cultural resources sites. Testing included surface collection of artifacts, mapping using GPS and GIS, subsurface excavation, artifact analysis and a report of finding. Report prepared for Los Angeles Department of Water & Power.
- 1999 Historical/Archaeological Inventory Report for the Otay Mesa Generating Company, LCC. Project. Literature review, field inventory of 250 acres, and site recording for the Otay Mesa Generating Company.
- 1999 5000 Years of Occupation: Cultural Resource Inventory and Assessment Program for the Carlsbad Municipal Golf Course Project. Report prepared for the City of Carlsbad.
- 1999 (with others)
Oceanside-Escondido Bikeway Project: Cultural Resource Inventory and Significance Test for Prehistoric Site CA-SDI-14340. Report (HPSR and technical attachments) prepared for the City of San Marcos and Caltrans.
- 1998 (with others)
Cultural Resources Survey for the Alternate Route of Travel for the Coyote Canyon Anza-Borrego Desert State Park Feasibility Study. Report prepared for State of California Department of Parks and Recreation.
- 1998 Management Plan for Otay Mesa Prehistoric Resources, San Diego, California. Preparation of a management plan for prehistoric resources within a 10,000 acre study area. Report prepared for Caltrans and City of San Diego.
- 1997 (with others)
Route 905 Reports: HPSR, Survey of approximately 2,000 acres, and Test Report for Sites CA-SDI-6941, Loci G and Y; CA-SDI-11423; and CA-SDI-11424. Reports and technical attachments prepared for City of San Diego and Caltrans.
- 1997 Batiquitos Lagoon Monitoring Program, Archaeological Test at Site CA-SDI-11953, Carlsbad, California. Report prepared for City of Carlsbad.
- 1996 Carlsbad Ranch Survey and Test Report. Field survey, testing to determine site significance, mitigation through data recovery excavation, and monitoring. Report prepared for Caltrans and the City of Carlsbad.
- 1995 (with others)
Otay Mesa Road Widening Project Cultural Resources Technical Report. Literature review and field survey of 1,750 acres. Report prepared for City of San Diego and Caltrans.
- 1995 (with others)
Historical/Archaeological Survey Report for Subarea V Future Urbanizing Area, San Diego, California. Literature review and field survey of approximately 2,000 acres in north San Diego County.

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- 1995 (with others)
Cultural Resource Inventory of the Santa Margarita River Valley, Camp Pendleton. Background study and field inventory of approximately 5,000 acres for Camp Pendleton, north San Diego County.
- 1994 (with Kyle)
Archaeological Testing of Seven Sites for the Stardust Golf Course Realignment Project, City of San Diego, California. Testing program to determine site significance for 10 prehistoric sites. Two major habitation sites within the San Diego River Valley were identified as significant.
- 1993 (with others)
Historical/Archaeological Survey Report for the Reclaimed Water Distribution Master Plan for the Northern and Central Service Areas Phase Ia, San Diego County, California. Literature review and field survey for approximately 100 linear miles.
- 1993 (with Strudwick)
The Archaeological Investigation of CA-SCLI-847 San Clemente Island, California. Data recovery program for a 4,000 year old site on San Clemente Island for conducted for the U.S. Navy.
- 1993 (with others)
Historical/Archaeological Survey and Test Report for Subarea III Future Urbanizing Area, San Diego, California. Literature review and field survey for 3,000 acres in north San Diego County.
- 1993 (with others)
Historical/Archaeological Survey Report, One City Block Within Downtown Oceanside Redevelopment Core Block Area, Oceanside. Testing program to determine presence/absence of historic resources and the significance of resources.
- 1993 (with others)
Historical/Archaeological Survey and Test Report for Subarea IV Future Urbanizing Area, San Diego, California. Literature review and field survey of 1,500 acres in north San Diego County.
- 1992 (with Strudwick)
Historical/Archaeological Test Report for Daley Ranch, Escondido, California. CEQA test program to determine importance for 23 prehistoric and historic sites.
- 1992 (with Strudwick)
Historical/Archaeological Survey Report for Montecito Ranch Property, Ramona, California. Literature review and field inventory for 953 acres producing 36 prehistoric and historic sites.
- 1992 (with Kyle)
Historical/Archaeological Survey and Test for Carlsbad Ranch, Carlsbad, California. Literature review, field survey and significance testing conducted for five sites.

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- 1992 (with Schroth and Strudwick)
Historical/Archaeological Sample Inventory for Naval Air Station, Miramar, San Diego, California. Fifteen percent sample inventory of the 18,433 acre facility to provide data for GIS ARC-INFO and site probability modeling for land use planning.
- 1992 (editor)
Cultural Resource Evaluation for the Village of Tenaja, CA-RIV-271 and CA-RIV-3973, Trabuco Ranger District, Cleveland National Forest. Testing program conducted to determine National Register eligibility.
- 1992 (with Kyle)
Historical/Archaeological Survey and National Register Evaluation Report for Camp Pendleton Military Family Housing, San Diego, California. Survey and testing program to identify and determine National Register properties.
- 1990 (with Schroth)
Archaeological Investigations of a Five Hundred Year Old Settlement at Twin Oaks Valley Ranch, San Marcos, California. A data recovery program for a late period habitation site in compliance with federal, state and local requirements.
- 1990 (with Kyle)
Early Period Occupation at the Kuebler Ranch Site SDi-8654, Otay Mesa, San Diego County, California. A data recovery program for a 7,000 years old site on Otay Mesa prepared for the County of San Diego.
- 1989 (with others)
Cultural Resource Inventory and Testing Program for Lilac Ranch, Valley Center, California. Survey of 1,000 acres and testing program for 20 prehistoric and historic sites.
- 1989 (with others)
Cultural Resource Inventory and Testing Program for Salt Creek Ranch, Chula Vista, California. Survey of 1,000 acres and testing of historic and prehistoric sites for site importance under CEQA.
- 1988 (with others)
Cultural Resource Inventory and Data Acquisition Program, GEO East Mesa Geothermal Project, Imperial Valley, California. Cultural resource inventory of 1000 acres for geothermal energy development on USDI, BLM lands in the California desert.
- 1988 (with others)
Cultural Resource Inventory for a Series of Drill Sites within the Amir, Indian Rose Area Lease. Inventory conducted in southeastern California for the development of gold exploration on federal lands by Amir Mines, Ltd.
- 1988 (with others)
Cultural Resource Inventory and CEQA Test for Site Importance, Rancho Bernardo Lake Course. Inventory of 315 acres, identification and testing of ten prehistoric sites for the J.W. Colachis Company.

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- 1988 (with others)
Cultural Resource Survey and Testing Program for the East Mesa Detention Facility, San Diego California. Project involved the survey of 523 acres, the identification of eight prehistoric and one historic site, and the testing of these sites with respect to CEQA. Three of these sites were quarry localities on Otay Mesa. Report prepared for the County of San Diego.
- 1988 (with others)
Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDI-48 (W-164), San Diego, California. Report involved the excavation of a 2.5 percent sample within a coastal shell midden site, dated from 6000 to 1500 years before present. Report prepared for the U.S. Navy.
- 1987 (with others)
Historical/prehistoric Inventory for the Green Dragon Colony, La Jolla California. Report documents the historical development of the Green Dragon Colony. EIR report for the City of San Diego.
- 1987 (with others)
Cultural Resource Inventory for Rancho La Quinta. Inventory of 1272 acres identifying six prehistoric sites within Coachella Valley, Riverside County, California. Report prepared for the Landmark Land Company.
- 1987 (with others)
Subsurface Testing Program to Identify and Evaluate Cultural Resources for the Santa Barbara Retail Revitalization Project. Testing program to identify historical and prehistoric sites within four city blocks of downtown Santa Barbara. Report prepared for the City of Santa Barbara.
- 1986 (with others)
Cultural and Paleontological Survey and Testing for Pacific Rim, Carlsbad, California. Project involved the survey of over 1,000 acres along the northern shore of Batiquitos Lagoon, the identification of 14 prehistoric, 1 historic, and 1 paleontological site, and the testing of prehistoric and historic sites to determine importance under CEQA. Report prepared for the City of Carlsbad.
- 1986 (with Cheever)
Cultural Resource Testing Program for Archaeological Sites SDI-607, -612, -212, 6825 and W-105, Carlsbad, California. Testing program for five sites located along the south shore of Batiquitos Lagoon for the City of Carlsbad.
- 1986 (with Cheever)
Carmel Mountain Ranch Data Recovery Program for Early Period Archaeological Site SDI-6087. Report prepared for Carmel Mountain Ranch.
- 1986 (with others)
Lake Cahuilla Prehistoric Occupation at IMP-4434 and IMP-5167, Imperial Valley, California. Data recovery for Ryerson Concrete Company.
- 1985
Early and Late Period Occupation at Rogers Ridge (SDI-4845, W-182), Carlsbad, California. Data recovery program to include the excavation of 94, 1 by 1 m units at six loci dating from 850 to 7000 years B.P. for Resource Microsystems Inc. and Daon Inc.

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- 1984 (with others)
Archaeological Investigations at SDI-5130, Mar Lado Project, Oceanside, California. Data recovery program for L and L Development.
- 1984 Cultural Resource Data Recovery Program for SDG&E's Imperial Valley to La Rosita 230-kV Transmission Line. Report prepared for SDG&E, San Diego, California.
- 1984 Windsong Shores Data Recovery Program for Site W-131 (Agua Hedionda), Carlsbad, California. Excavation of a 5 percent sample at a 7,000 to 8,500 year old site for Hunts Partnership.
- 1984 West Mesa Cultural Resource Survey and Site Evaluation, Imperial Valley, California. Report prepared for the Bureau of Land Management.
- 1983 Excavation of Diegueño/Ipai Subsistence Camps above Encinitas Creek: A Data Recovery Program for Fieldstone Northview, Encinitas, California. Report prepared for the Fieldstone Development Company.
- 1983 Archaeological Overview for the City of San Marcos, Business/Industrial, Richman, Lake San Marcos, and Barham/Discovery Community Plan. Report prepared for the City of San Marcos.
- 1980 (with others)
Cultural Resource Inventory and National Register Assessment of the Southern California Edison Palo Verde to Devers Transmission Line Corridor (California portion). Prepared for Southern California Edison, Rosemead, California.
- 1980 (with others)
Class II Cultural Resource Inventory of East Mesa and West Mesa Regions, Imperial Valley, California. Prepared for USDI, Bureau of Land Management, Riverside, California.
- 1979 (with others)
Class II Cultural Resource Inventory of the Central Mojave and Colorado Desert Regions. Prepared for USDI, Bureau of Land Management, Riverside, California.
- 1978 (with White)
An Archaeological Survey of the Talega Substation Site. Prepared for San Diego Gas & Electric by Wirth Associates, Inc., San Diego, California.
- 1978 (with others)
Documentation of the Phase II Archaeology Inventory Report, Plant Site to Devers and Miguel Substation, Sundesert Nuclear Project Transmission System Environmental Study. Prepared for San Diego Gas & Electric Company by Wirth Associates, Inc., San Diego, California.
- 1978 Jamul Mountains Alternative Route Suitability Review, Sundesert Nuclear Project Transmission System Environmental Study. Prepared for San Diego Gas & Electric Company by Wirth Associates, Inc., San Diego, California.
- 1977 (with others)
Phase I Archaeology Report, Plant Site to Victorville/Lugo and Devers to Victorville/Lugo, Sundesert Nuclear Project Transmission System Environmental

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Study. Prepared for San Diego Gas & Electric Company by Wirth, Associates, Inc., San Diego, California.

1977 Saline Valley Unit Resource Analysis - Cultural Resources. Prepared for USDI, Bureau of Land Management, California Desert Planning Staff, Riverside, California.

1976 (with Hanks)
East Mojave Management Framework Plan - Cultural Resources. Prepared for USDI, Bureau of Land Management, California Desert Planning Staff, Riverside, California.

PUBLICATIONS

Five Thousand Years of Maritime Subsistence at Ballast Point Prehistoric Site SDi-48 (W-164), San Diego, California. (with Carolyn Kyle). Coyote Press, Salinas, California, No. 40, 1998

Environmental Change and Coastal Adaptations in San Diego County (with Patricia Masters, Ph.D.). In: *Archaeology of the California Coast During the Middle Holocene*, University of California, Los Angeles, California, Vol. 4, 1997.

A Review and Synthesis of the Archaeological Record for the Lower San Diego River Valley. Society for California Archaeology, San Diego, California, Volume 8, 1995

Patterns and Implications of Coastal Settlement in San Diego County: 9000 to 1300 Years Ago. In: *Essays on the Prehistory of Maritime California.* Center for Archaeological Research at Davis, No. 10, 1992.

Antiquity and Adaptation at Agua Hedionda, Carlsbad, California. In: *Hunter-Gatherers of Early Holocene Coastal California*, Institute of Archaeology, University of California, Los Angeles, 1991.

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

Relocation of the Ballast Point Tryworks Oven Foundation (with Adella Schroth). In *Fort Guijarros Quarterly*, 3:2, 1989

Early Man and a Cultural Chronology for Batiquitos Lagoon. In: *Casual Papers*, Cultural Resource Management Center, Department of Anthropology, San Diego State University, 1986.

Batiquitos Lagoon Revisited. In: *Casual Papers*, Cultural Resource Management Center, Department of Anthropology, San Diego State University, 1985.

Class II Cultural Resource Inventory, East Mesa and West Mesa Region, Imperial Valley, California, (with others). USDI, BLM, 1980.

Cultural Resource Inventory of the Central Mojave and Colorado Desert Regions, (with others). USDI, BLM, Cultural Resources Publications, Archaeology, 1980.

**MONICA C. GUERRERO
PROJECT ARCHAEOLOGIST**

Gallegos & Associates
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Carlsbad, California 92008
(760) 929-0055

EDUCATION

M.A. San Diego State University, 2001
B.A. Anthropology, University of California, Santa Barbara 1996

PROFESSIONAL AFFILIATION

Society for California Archaeology 1997- Present
Register of Professional Archaeologists 2001- Present
Archaeological Survey Association of Southern California 1997- Present

PROFESSIONAL EXPERIENCE

Gallegos & Associates
2000 - Present

Duties include literature reviews, record searches, direction of field crews for survey and testing programs, ceramic analysis, creation of surface collection maps, graphics, report editing, and contributing author for various San Diego County reports. Recent projects include the test/evaluation report for the NCTD Oceanside-Escondido Rail Project; inventory, testing and data recovery program for the Otay Generating Plant Project; BLM Kuchamaa Overview study; and the monitoring program for the Otay Plant and facilities.

San Diego State University
San Diego, CA
09/98-05/01

Laboratory Assistant: Duties included the identification, sorting, and cataloging of artifacts from a San Diego County late prehistoric archaeological site. Additional duties included artifact and pottery analyses and updating State of California site record forms.

Teaching Assistant: Assisted professor in teaching archaeological field methods class. Duties included instruction and supervision in surveying, mapping, excavating, water screening, flotation, site documentation and unit documentation, illustration of unit profiles, and laboratory analysis.

Collections Management: Duties included revitalization of artifact collections, identification and re-cataloging of artifacts, entering data into Collection Management's database, and provided public based educational programs to local elementary students.

University of California, Los Angeles
Los Angeles, CA
6/99 - 7/99

Archaeological Assistant: Assisted with archaeological field class in Mocollope, Peru. Duties included student field instruction and supervision of excavation, dry screening, artifact sorting, profile illustration, and level record forms.

Central Coast Information Center
Santa Barbara, CA
3/96- 6/96

Data Management: Duties included mapping newly recorded archaeological sites onto USGS quadrangle maps, entering new site information into the CCIC database, updating quad maps by mapping all previous sites onto new quad maps, and assisting local archaeologists with site record form requests.

PUBLICATIONS AND CULTURAL RESOURCE MANAGEMENT REPORTS-PRIMARY AUTHOR

- 2001 Archaeological Investigations at CA-SDI-945, San Diego County, California. Society for California Archaeology, San Diego, California, Volume 14, 2001.
- 2001 Hual-Cu-Cuish: A Late Prehistoric Kumeyaay Village Site in the Cuyamaca Rancho State Park, San Diego County, California. Masters Thesis on file at San Diego State University, San Diego, California.

RECENT PUBLICATIONS AND CULTURAL RESOURCE MANAGEMENT REPORTS-CONTRIBUTING AUTHOR

- 2001 Cultural Resource Test Program for the Wilson Property, Carlsbad, California. Prepared for the City of Carlsbad.
- 2001 Cultural Resource Letter Report for the Rancho Santa Fe Force Main Project, San Diego County, California. Prepared for Dudek & Associates.
- 2001 Cultural Resource Letter Report for the Vista-Oceanside Project, San Diego County, California. Prepared for Shapouri & Associates.

- 2001 Historical/Archaeological Survey for the Palomar Transfer Station Project, Carlsbad, California. Prepared for Dudek & Associates.
- 2001 Cultural Resource Test Report for the Oceanside-Escondido Rail Project, Oceanside, California. Prepared for Dudek & Associates.
- 2001 Historical/Archaeological Survey for the Brookside Plaza Project, Vista, California. Prepared for Land Planning Consultants.
- 2001 Archaeological Test Program for CA-SDI-14112, Mesa Norte Project, San Diego, California. Prepared for Hunsaker & Associates.
- 2001 Cultural Resource Test Program for CA-SDI-12508, San Diego, California. Prepared for Garden Communities.
- 2001 Cultural Resources Technical Report for the Otay Mesa Generating Project – Gas Line Corridor. Prepared for the California Energy Commission.
- 2001 Historical/Archaeological Survey for the Vineyard Project, County of San Diego, California. Prepared for Shapouri & Associates.
- 2001 Cultural Resource Survey Report for the Great Oak Ranch Property, Riverside, County, California. Prepared for Dudek & Associates.
- 2002 Historical/Archaeological Survey for the Vintage Timberworks Project, Temecula, California. Prepared for Vintage Timberworks, Inc.
- 2002 Cultural Resource Letter Report for the California State University San Marcos Student Housing and Associated Facilities Project, San Marcos, California. Prepared for O'Day Consultants.
- 2002 Historical/Archaeological Survey for the La Costa Greens Trunk Sewer Replacement Project, Carlsbad, California. Prepared for Dudek & Associates.
- 2002 Data Recovery Program for Pacbell Site CA-SDI-5633, San Marcos, California. Prepared for Joseph Wong Design Associates.
- 2002 Cultural Resource Literature Review for National Enterprises Major Use Permit, Otay Mesa, San Diego County, California. Prepared for National Enterprises, Inc.
- 2002 Cultural Resource Letter Report for the Hu Residence, City Required Update Study. Prepared for the Sea Bright Company.
- 2002 Cultural Resource Survey for the Creekside Marketplace and Adjacent Retail Project, San Marcos, California. Prepared for P & D Consultants.

- 2002 Cultural Resource Survey for the Rancho Vista Del Mar Property, Otay Mesa, San Diego County, California. Prepared for National Enterprises, Inc.
- 2002 Cultural Resource Survey for the Perris Valley Lateral "B" Stage 2 Project, Moreno Valley, California. Prepared for Dudek & Associates.
- 2002 Class III Cultural Resource Inventory for the Steele Peak Property, Riverside County, California. Prepared for Bureau of Land Management.
- 2002 Otay/Kuchamaa Cultural Resource Background Study, San Diego County, California: Prepared as Part of the Otay/Kuchamaa Resource Management Plan. Prepared for USDI Bureau of Land Management.
- 2002 Cultural Resource Survey and Test Report for the Johnson Canyon Parcel, Otay Mesa, San Diego County, California. Prepared for Otay Mesa Property, L.P.
- 2002 Cultural Resource Literature Review for National Enterprises Major Use Permit, Otay Mesa, San Diego County, California. Prepared for National Enterprises, Inc.
- 2002 Cultural Resource Survey for the Torrey Pines Reserve Habitat Restoration Site, San Diego, California. Prepared for ProjectDesign Consultants.
- 2002 Cultural Resource Survey for the University Commons Extension Project, San Marcos, California. Prepared for Dudek & Associates.
- 2003 Cultural Resource Survey for the Rancho Santa Fe Parklands Project, San Diego, California. Prepared for Shapouri & Associates.
- 2003 Cultural Resource Survey and Test Report for the Lonestar Parcel, Otay Mesa, San Diego County, California. Prepared for Otay Mesa Property, L.P.
- 2003 Cultural Resource Inventory for the Concho Circle Project, Oceanside, California. Prepared for Dave Zernik.
- 2003 Monitoring Program for the LMXU/Torrey Ranch Export Plan Project, San Diego, California. Prepared for Western Pacific Housing.
- 2003 Cultural Resource Survey for the San Dieguito Academy Project, San Diego, California. Prepared for Dudek & Associates.
- 2003 Cultural Resource Survey for the Sunset Continuation High School Project, San Diego, California. Prepared for Dudek & Associates.
- 2003 Historical/Archaeological Survey for the La Costa Resort and Spa Project, Carlsbad, California. Prepared for P & D Consultants.

- 2003 Cultural Resource Survey for the Bonita Library Project, Chula Vista, California. Prepared for BRG Consulting, Inc.
- 2003 Cultural Resource Survey for the Sycamore Landfill EIR Project, City of San Diego, California. Prepared for BRG Consulting, Inc.
- 2003 Cultural Resource Survey for the Champa Property, City of San Diego, California. Prepared for Alta Consultants.
- 2003 City of Carlsbad Water and Sewer Master Plan, Cultural Resource Background Study, City of Carlsbad, California. Prepared for Dudek & Associates.
- 2003 Cultural Resource Survey for the Villa De La Valle Project, San Diego, California. Prepared for Shapouri & Associates.

PAPERS PRESENTED

- 2000 Archaeological Investigations at CA-SDI-945, San Diego County, California. Presented to San Diego Archaeological Society, San Diego, California.
- 2000 Preliminary Archaeological Investigations at Hual-Cu-Cuish (CA-SDI-945), San Diego County, California. Presented at the Thirty-Fourth Annual Meeting,, Society for California Archaeology, Riverside, California.
- 2001 Boundary Identification Through the Use of Ceramics in San Diego County. Presented to the Annual Southern Data-Sharing Meeting, Society for California Archaeology, San Luis Obispo, California.
- 2003 New Perspectives on San Diego County Ceramics. Presented to the Annual Southern Data-Sharing Meeting, Society for California Archaeology, San Diego, California.

