ARCHAEOLOGICAL EVALUATION
for the
RUGGED SOLAR PROJECT, 3300 12-007 (MUP)
ENVIRONMENTAL REVIEW PROJECT NUMBER 3910-120005
SAN DIEGO COUNTY, CALIFORNIA

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NATIONAL ARCHAEOLOGICAL DATABASE INFORMATION

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Client/Project Proponent: Rugged Solar Farm, LLC; Soitec

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Report Title: Archaeological Evaluation for the Rugged Solar Project, San Diego County, California

Type of Study: Phase II Archaeological Evaluation

Sites: CA-SDI-4788; CA-SDI-5171; CA-SDI-10,359/20,059; CA-SDI-16,367; CA-SDI-16,373/16,374; CA-SDI-19,872; CA-SDI-19,873; CA-SDI-20,068; CA-SDI-20,116; CA-SDI-20,118; CA-SDI-20,386; CA-SDI-20,618; CA-SDI-20,624; CA-SDI-20,625; CA-SDI-20,626; CA-SDI-20,628; CA-SDI-20,629; CA-SDI-20,630; CA-SDI-20,632; CA-SDI-20,634; CA-SDI-20,635; CA-SDI-20,636; CA-SDI-20,637; CA-SDI-20,639; CA-SDI-20,641; CA-SDI-20,642; CA-SDI-20,643; CA-SDI-20,644; CA-SDI-20,645; CA-SDI-20,646; CA-SDI-20683; P-37-031676; and P-37-031680.

Isolates: P-37-024671; P-37-024672; P-37-024675; P-37-024676; P-37-024677; P-37-024678; P-37-030257; P-37-032701; P-37-032703; P-37-032705; P-37-032706; P-37-032707; P-37-032708; P-37-032709; P-37-032711; P-37-032712; P-37-032713; P-37-032714; P-37-032716; P-37-032717; P-37-032718; P-37-032719; P-37-032720; P-37-032721; P-37-032722; P-37-032723; P-37-032724; P-37-032725; P-37-032726; P-37-032727; and P-37-032729

USGS Quads: Live Oak Springs 7.5' T17S/R7E/Section 8, 9, 15, 16, 17, 20, and 21

Acreage: 600 acres

Permit Numbers: (3300-12-007 [MUP]; 3910 12-210-03 (ER))

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LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	Above mean sea level
APE	Area of Potential Effect
APN	Assessor's Parcel Number
ASM	ASM Affiliates, Inc.
BLM	U.S. Bureau of Land Management
BRM	Bedrock milling
cmbs	centimeters below the surface
CEQA	California Environmental Quality Act
CHRIS	California Historical Resources Information System
CPV	Concentrated photovoltaic
CRHR	California Register of Historical Resources
CRM	Cultural resource management
CUDA	Current Urban Development Area
CU	Control unit
DPLU	County of San Diego Department of Planning and Land Use
DPR	California Department of Parks and Recreation
FAR	Fire-affected rock
GPS	Global positioning system
KCRC	Kumeyaay Cultural Repatriation Committee
MLD	Most Likely Descendant
MUP	Major Use Permit
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
O&M	Operations and maintenance
pXRF	Portable X-ray fluorescence
RPA	Register of Professional Archaeologists
RPO	County of San Diego Resource Protection Ordinance
SCA	Sun-colored amethyst
SCIC	South Coastal Information Center
SDAC	San Diego Archaeological Center
SDG&E	San Diego Gas & Electric Company
SDSU	San Diego State University
STP	Shovel test pit
STU	Shovel test unit
USGS	U.S. Geological Survey
UTM	Universal Transverse Mercator

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EXECUTIVE SUMMARY

This document presents the results of a Phase II archaeological evaluation for the Rugged Solar Project. The 600-acre project is located on the Rough Acres Ranch in McCain Valley, San Diego County, California. The Project is located in Sections 8, 9, 15, 16, 17, 20, and 21, Township 17S, Range 7E, on the Live Oak Springs USGS 7.5' quadrangle.

ASM Affiliates, Inc. (ASM) and Dudek completed a cultural resources inventory and evaluation associated with this project. Brian Glenn conducted the initial records search and inventory. This study was completed to satisfy requirements of the California Environmental Quality Act (CEQA), which requires evaluation of the historical significance of cultural resources and the significance of potential adverse effects on lands planned for development. ASM and Dudek prepared this report in compliance with *County of San Diego Guidelines for Determining Significance* (County of San Diego 2007a), *Report Format and Content Guidelines* (County of San Diego 2007b), Resource Protection Ordinance (RPO), Section 21083.2 of the Public Resources Code, and the San Diego County CEQA Guidelines. The results of this cultural resources inventory and evaluation program will assist the County in determining the direct and indirect construction impacts to resources and in the creation of a preservation plan or mitigation for any significant resources.

Brian Glenn's initial Phase I inventory conducted for this project covered an approximate 852-acre study area. Glenn identified 48 archaeological sites and 34 isolates. Following design modifications, the project area has since been reduced to approximately 600-acres. The current project boundary, including off-site improvement areas, was found to contain 32 archaeological sites and 30 isolated artifacts. One additional previously recorded resource, CA-SDI-16,367, was not relocated during the Phase II testing program conducted by ASM Affiliates. All 32 identified archaeological sites within the MUP limits and off-site improvement areas were evaluated for significance under CEQA, the County RPO, eligibility for listing in the California Register of Historical Resources (CRHR), and the San Diego County Local Register of Historical Resources (Local Register) within the Project area in March and April 2012. Artifact collections were analyzed and catalogued at ASM's laboratory in Carlsbad, California. The collections were transferred to Dudek on May 22, 2013 and are currently kept at Dudek's laboratory in Encinitas, California.

Past fieldwork has independently recorded two overlapping sites (CA-SDI-16,373 and CA-SDI-16,374) as descrete historic and prehistoric resources. These have subsequently been combined as CA-SDI-16373/16,374 throughout the current study in order to maintain data continuity.

Based on the results of the evaluation program by ASM, none of the archaeological sites meet the criteria to be considered eligible for listing in the CRHR or the Local Register. None of the sites are recommended as eligible for protection under the County RPO and none of the sites are recommended as significant under CEQA. The resources evaluated do not possess substantial

archaeological deposits or extensive artifact variability. The lack of ample artifact densities and variability exemplifies the sites' low potential to yield information important to the prehistory or history of the local area, California, or the nation.

The County of San Diego is the lead review agency for the Project. Therefore, the sites have been evaluated for eligibility to be listed in the CRHR under CEQA Guidelines as well as evaluated for importance under the County Guidelines. While all 32 evaluated sites are recommended as not eligible for listing in the CRHR based on Criterion 4 (data potential), under the County Guidelines all sites are considered "important." Although all sites are considered important under the County Guidelines, impacts to the "importance" of sites recommended as not eligible for listing in the CRHR can be mitigated by the curation of artifacts recovered during the current evaluation effort and through monitoring during construction.

Combined with the testing program documented in this report, grading monitoring within the current project's area of potential effect (APE) and the curation of artifacts will reduce the impacts to all sites to less than significant, including the historic home site (P-37-031680), since impacts to that structure will be avoided.

Artifacts will be curated at the San Diego Archaeological Center (SDAC) or a culturally affiliated Tribal Curation facility, or alternatively repatriated to a Tribe of appropriate affinity. California Department of Parks and Recreation (DPR) forms for each resource documented are provided as a confidential appendix to this report and have been submitted to the SCIC of the California Historical Resources Information System (CHRIS) at San Diego State University (SDSU).

1.0 INTRODUCTION

This report documents the results of an archaeological survey and evaluation for the Rugged Solar Project, which was conducted to provide compliance with the County of San Diego Guidelines, the County RPO, and CEQA. The Project proponent is planning to install an 80-megawatt (MW) concentrated photovoltaic (CPV) farm located in the unincorporated community of Boulevard, San Diego County, California (Figure 1.1). The Project is located in Sections 8, 9, 15, 16, 17, 20, and 21, Township 17S, Range 7E, shown on the Live Oak Springs USGS 7.5' quadrangle (Figure 1.2).

This report was compiled in accordance with the *County of San Diego Guidelines for Determining Significance* (County of San Diego 2007a) and *Report Format and Content Guidelines* (County of San Diego 2007b), the RPO, Section 21083.2 of the Public Resources Code (CEQA), and the County of San Diego CEQA Guidelines. This report addresses the direct construction impacts to resources and makes an assessment of impact severity as outlined in Section 4.2 of the County Guidelines, as well as any indirect impacts from the Project.

1.1 Project Description

The Project includes a Major Use Permit to authorize a Major Impact Services and Utility Pursuant to Sections 1350, 2705, and 2926 of the Zoning Ordinance. The Rugged Solar Energy Project would produce up to 84 megawatts of alternating current (AC) solar generating capacity. The Project would consist of approximately 3,588 concentrating photovoltaic (CPV) electric generation systems utilizing dual-axis tracking CPV trackers on 600-acres in southeastern San Diego County in the unincorporated community of Boulevard, California. In addition to the CPV trackers and inverter transformer units, the Project includes the following primary components:

- A collection system linking the CPV trackers to the on-site Project substation composed of (i) 1,000-volt (V) direct current underground conductors leading to (ii) 34.5-kilovolt (kV) underground and overhead AC conductors.
- A 7,500-square-foot (sf) (60 feet by 125 feet) operations and maintenance (O&M) building.
- A 2-acre on-site private collector substation site with a pad area of 6,000 sf (60 feet by 100 feet) with maximum height of 35 feet and includes a 450-sf (15 feet by 30 feet) control house.
- 61 Inverter/Transformer enclosures. The dimensions of each inverter unit are 10 feet by 25 or 40 feet (250 or 400 sf each) with a total structure height of up to 12 feet.

- A 69-kV overhead generator transmission line (gen-tie) connecting the on-site substation to SDG&E's proposed new Boulevard Substation[1]. There will be approximately 5,130 feet of 69-kV Gen-Tie line between the on-site substation and McCain Valley Road. Approximately 3,180 feet will be on-site and 1,940 feet will be off site. The 50 to 125 feet tall steel poles, spaced up to 300 feet apart, will also support 34.5-kV overhead conductors.
- 20.5 miles of newly constructed load-bearing on-site access roads.
- 46.5 miles of graded, non-load-bearing dirt service roads.
- Three permanent on-site water wells for project construction, the O&M building and to facilitate washing of the CPV trackers.
- Two 20,000 gallon water storage tanks to be located at the O&M building and to be dedicated exclusively for fire suppression.
- Three additional on-site 20,000 gallon water storage tanks to support tracker washing. Each of these three 20,000 gallon water storage tanks would include 10,000 gallons of water dedicated solely for fire suppression. The outlet on the tank for tracker washing and any other non-fire uses would be located at the midpoint on the tank making it impossible to draw the water level down below 10,000 gallons in each tank for non-fire suppression use.
- A septic tank system and leach field for the O&M building.
- 6 foot perimeter fencing topped with an additional 1 foot of security barbed wire.
- Vista Oaks Road and Roadrunner Lane are existing roadways that would be improved to a width of 24 feet to meet County fire standards for access to the western side of the project site from Ribbonwood Road. Vista Oaks Road would be constructed across APN 611-090-02-00. Roadrunner Lane would be constructed on APN 611-091-09-00. A third road, which would be newly created if Rough Acres Ranch Road were to not be constructed as part of Tule Wind Project MUP (MUP P3300-09-019), would provide an optional access route to the eastern portion of the project site, west of McCain Valley Road, from McCain Valley Road. This optional access route would cross APN 611-100-01-00.

[1] The environmental review associated with the 69 kV Gen-tie interconnection to the Boulevard Substation was fully evaluated in the Joint Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects. Therefore, this report does not evaluate the environmental effects associated with construction and operation of the 69 kV Gen-tie line to the Boulevard Substation because the environmental effects were fully evaluated in the Joint Final EIR/EIS for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects approved by the California Public Utilities Commission (CPUC) and Bureau of Land Management (BLM). [Note to County reviewer – the Tule Wind project is pending County approval].

Figure 1.1 Regional map

Figure 1.2 Vicinity map

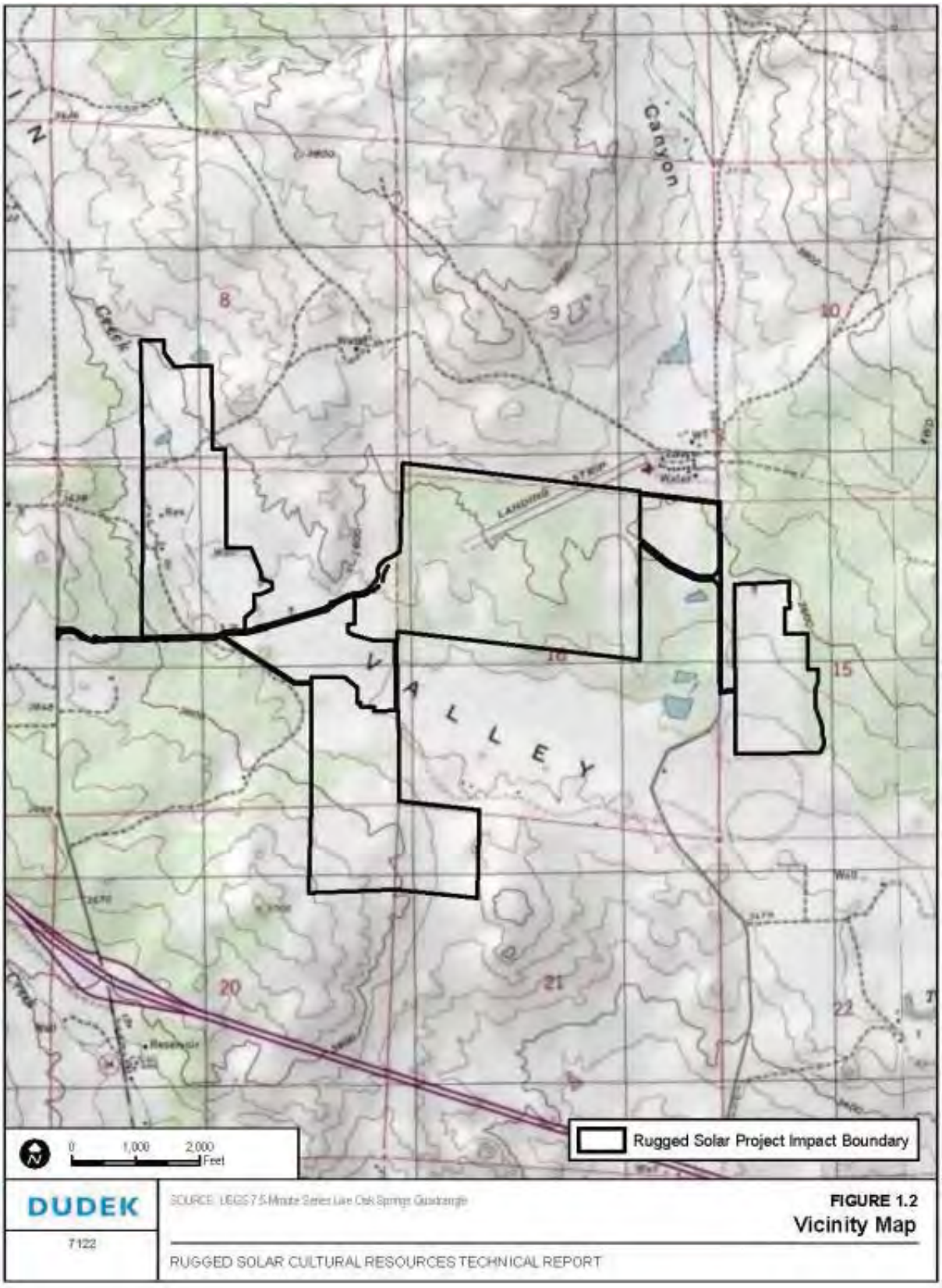
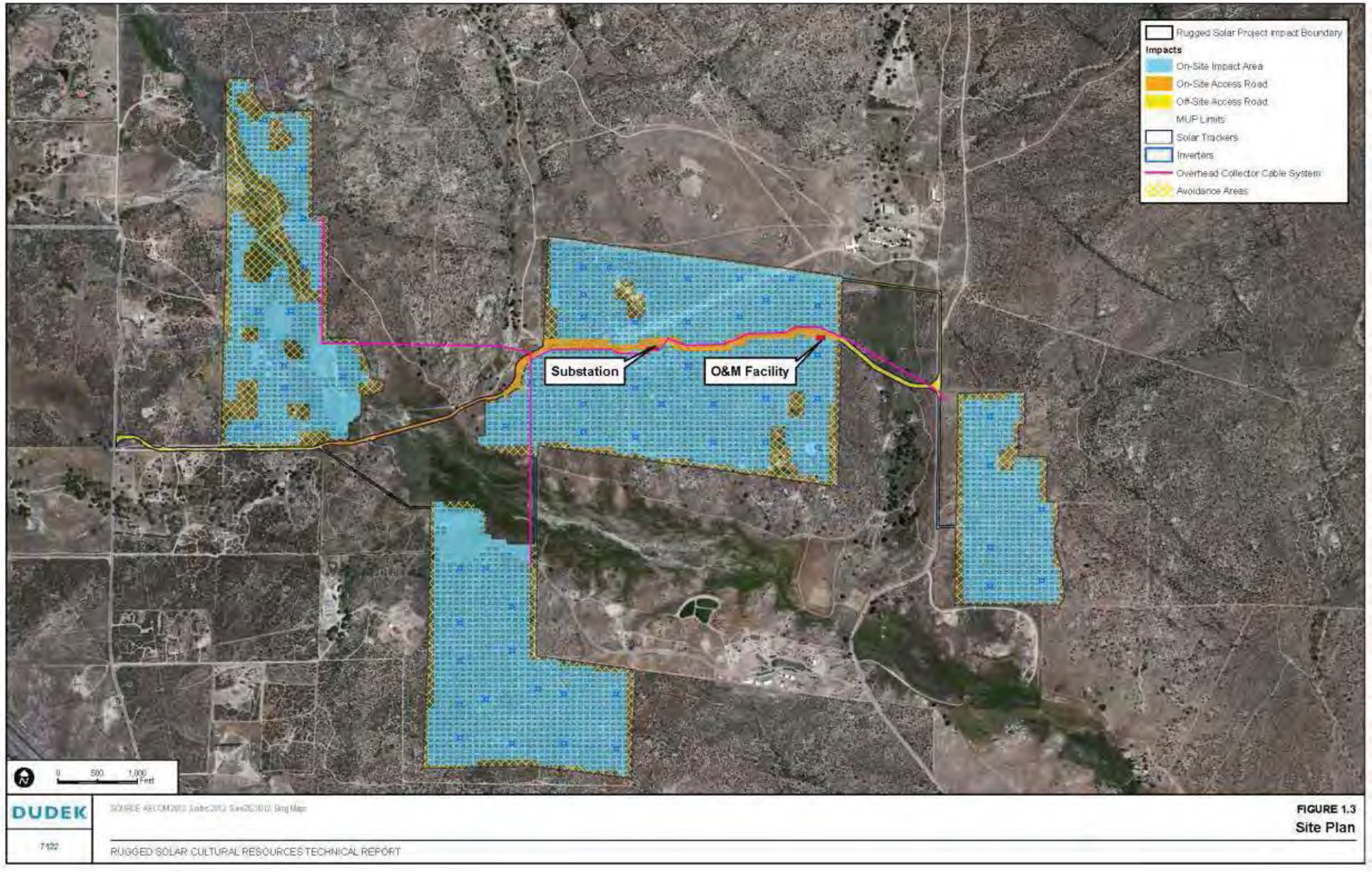


Figure 1.3 Site plan



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The Proposed Project includes a total installation of 3,588 CPV trackers installed in groups or "building blocks composed of approximately 61 individual Soitec Concentrix^{TM} CX-S530 systems (includes dual-axis tracker), with any of the following inverter combinations: two 630-kW inverters, two 680-kW inverters, or three 680-kW inverters; and either a 1.5- or 2.0-megavolt ampere (MVA) transformer. The project site plan is depicted on Figure 1.3.

Individual tracker dimensions are approximately 48 feet across by 30 feet tall. Each tracker would be mounted on a 28-inch-diameter steel post, likely to be integrated into a concrete foundation designed to suit the on-site soils, and surface and subsurface conditions and materials. In its most vertical position, the top of each tracker would be no more than 35 feet above grade, and the lower edge would be no less than 1 foot above the ground. In its horizontal "stow" mode (for high winds), each tracker would have a minimum ground clearance of 11 feet. Solar panels would be mounted on the surface of each tracker.

A solar resource and meteorological measurement station may be installed on the site to inform the Supervisory Control and Data Acquisition (SCADA) system as part of the overall Project monitoring and equipment operation.

The Project requires the construction of a 6,000-sf (60 feet X 100 feet) private on-site collector substation that would be located within the central portion of the Project site. The substation site would be located approximately 0.5 mile west of the O&M building on the Project site. The purpose of the substation is to collect the energy received from the overhead and underground collector system and increase the voltage from 34.5 kV to 69 kV. Once the voltage is stepped up to 69 kV, the power would be conveyed through a 35-foot-high dead-end structure that terminates the gen-tie within the on-site collector substation. The power is then conveyed through the gen-tie line to the proposed Tule Wind LLC gen-tie line, as a shared facility to minimize impact that would deliver power to the new Boulevard Substation.

The major components of the on-site substation are as follows:

- One 52.8/70.4/88-MVA rated step up transformer. The cooling system for the transformer is as follows: Oil Assist, Fan Assist, Fan Assist (OA/FA/FA), respectively.
- One circuit breaker used to protect equipment from an electrical short circuit.
- One disconnect switch.
- Wire, cables, and aluminum bus work used to connect and isolate the major pieces of equipment.
- The substation also includes a 450-sf (15 feet by 30 feet) control house that contains relays used to detect short circuits, equipment controls, communication equipment used to monitor system performance remotely, and the meters used to measure electrical power generated from the Project.
- The tallest structure within the substation boundaries will be the 69-kV dead-end structure that has a maximum height of 35 feet.

In addition to the substation, an O&M building is located at the north-central portion of the Project site approximately 0.5 mile east of the on-site private substation. The O&M building would be used for storage, employee operations, and maintenance of equipment. The O&M facility would consist of a 7,500-sf building. The building would include administrative and operational offices and meeting facilities, material storage and equipment warehouse, and lavatory facilities served by a private on-site septic system and groundwater well. The building would be surrounded by an improved parking area and parking spaces. The building and parking areas would include security lighting designed to minimize light pollution and preserve dark skies, while enhancing safety, security, and functionality.

Project Construction

Construction of the Proposed Project would involve selective clearing and grubbing of vegetation, some grading, construction of CPV foundations, trenching for the electrical collection system and communication lines within each building block, installation of a small concrete footing at each pair of inverters, construction of the small switch station, and installation of the short 12.5-kV dedicated gen-tie line from the switch station to the Boulevard Substation. Of the 600 acres of the project site, approximately 455 acres would be cleared, grubbed, and graded. Of the 455 disturbed acres approximately seven acres would be disturbed on a given day; 140 acres on a given month. After construction, approximately 455 acres of the project site would be permanently disturbed with project facilities. Preliminary plans show total excavation to be 260,570 cubic yards and total fill to be 235,125 cubic yards, leaving 25,445 cubic yards of export, likely to another nearby project site.

The construction period would be 18 months and add approximately 100 average daily trips (ADT) to the local roadway system. Construction staging and material laydown areas would be distributed across the Project site evenly to allow for efficient distribution of components to different parts of the Project. One staging and material laydown area is typically set up for every 250 acres of a project site.

Selective clearing and grubbing would be required for construction and access, and, as necessary, to comply with fire code. The Project site would be revegetated with a native seed mix, except around Project components and where primary and/or secondary service road access is required.

Trenching for the electrical collection system and communication lines within each building block would entail a trench up to approximately 3 feet deep and up to 2 feet wide. The trenches would be filled with base material above and below the conductors and communications lines to ensure adequate thermal conductivity and electrical insulating characteristics. Any non-road disturbed area would be revegetated upon completion of construction; however, an effort to place trenches beneath secondary access roads, which would not be revegetated, would minimize disturbance. Material from the foundation and trench excavations would be negligible and used for site leveling, foundation pads, inverter and transformer pads, and the switch station pad.

Trackers would be assembled on-site. Recycling during construction would be in compliance with the County of San Diego Construction Demolition and Debris Management Plan requirements (in accordance with County Ordinance 68.508-68.518).

Project Operations

Operations of the Project would entail real-time monitoring of the Project through the SCADA system using on-site sensors. The SCADA system would enable the tracker control system to maintain orientation toward the sun. At night, the trackers would be positioned vertically to minimize dust collection. At all times, however, when winds are high, the trackers would be positioned in a horizontal "stow" mode.

On-site operations would include in-place panel washing every 6 to 8 weeks by mobile crews who would also be available for dispatch whenever on-site repairs or other maintenance is required. Panel washing would be undertaken using a tanker truck and smaller "satellite" panel washing trucks. Traffic generation during the operations and maintenance phase of the Project would be 40 ADT.

1.2 Existing Conditions

This section reviews the environmental setting of the Project area, along with prehistoric, ethnohistoric, and historic contexts. Previous archaeological research conducted in the area is also included. The discussion that follows is a summary describing how pertinent investigations in the general region have contributed to the current constructions of past cultural history, and is not intended to be an exhaustive account of all research conducted in the area.

1.2.1 Environmental Setting

Natural Setting

The Project lies with the mountain province of San Diego County. Geologically, the project area is underlain by pre-Cretaceous rock, which outcrops as granite and gneiss, as well as other patches of exposed quartz diorite and granodiorite (Strand 1962). Much of the surrounding area contains Mesozoic granitic rocks. Metamorphic and granitic rocks provided material for milling tools used by the prehistoric inhabitants of the region, and quartz dikes within the granitic rocks provided a local material for manufacturing flaked stone tools. The region's prime source of material for flaked stone tools was the volcanic rock of the Santiago Peak formation, which is available in streambeds in low-lying areas approximately 20 km to the southwest. The valley floor is composed of Quaternary non-marine alluvium characterized by coarse loamy sand derived from granodiorite.

The climate is classified as Mediterranean Hot Summer, or Csa in the Köppen classification (Pryde 2004). Rainfall is about 33 cm per year, falling primarily between December and

March. The average January daily minimum temperature is 4°C (39°F), and the average July daily maximum is 32°C (90°F). The climate would have imposed few constraints on prehistoric hunter-gatherers in the region.

The predominant natural vegetation community of the region is chaparral, although perhaps mixed with coastal sage scrub (Pryde 2004). Typical plant species include laurel sumac (*Rhus laurina*), black sage *(Salvia mellifera*), manzanita (*Arctostaphylos* spp.), redshank (*Adenostoma sparsifolium*), oak (*Quercus* spp.), chamise (*Adenostoma fasciculatum*), and California lilac (*Ceanothus* spp.*),* along with various grasses and legumes. Riparian species are associated with drainages. Mammals, birds, and reptiles within these communities provided potential food resources to prehistoric inhabitants. Much of the natural vegetation in low-lying areas has been displaced by modern land uses for grazing and orchards. However, the steep mountain slopes harbor relatively intact, dense chaparral and oak communities. These vegetation communities have been in place since the early Holocene, by at least 5500 B.C., when the climate became noticeably warmer and drier (Axelrod 1978).

1.2.2 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. Most of these reconstructions describe essentially similar trends in assemblage composition in more or less detail. The present research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 B.C.), Archaic (8000 B.C.-A.D. 500), Late Prehistoric (A.D. 500-1750), and Ethnohistoric (post-A.D. 1750).

Paleoindian (pre-5500 B.C.)

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 9920-9590 years before present (B.P.) (95.4 percent probability range) (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 Naval Air Weapons Station China Lake near Ridgecrest, California.

These sites contained fluted and stemmed points as well as large numbers of formal flake tools (e.g., shaped scrapers, bifaces). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted-point site—and MNO-680—a single-component Great Basin Stemmed point site (see Basgall et al. 2002). 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 scenario—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-5500 B.C.) that submerged as much as 1.8 km of the former coastline to the west of San Diego. If this were true, however, it would be expected that such sites would also 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 Great Basin Stemmed points (pre-6000 B.C.) that are commonly found at sites in California's high desert (see Basgall and Hall 1990). SDI-210 yielded one corrected radiocarbon date of 9520-8520 B.P. (see Warren et al. 2008). 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. (2008) 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 B.P. (Warren et al. 2008). Termed San Dieguito (see also Rogers 1945), the assemblage at the Harris site is qualitatively distinct from most others in the San Diego region because the site has large numbers of finely made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of milling tools (see also 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 by some 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 (including projectile points), 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. (2008) 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 on 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 socioeconomic strategy distinct from the non-San Dieguito Archaic processing regime, the rarity of San Dieguito components implies that they were not only short-lived, but that they were 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 (see Basgall and Hall 1990).

Archaic (8000 B.C.-A.D. 500)

The 2,500-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. (2008) 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 (see Hale 2001, 2009).

The Archaic pattern is relatively easy to identify (albeit hard to define), with assemblages that consist primarily of processing tools: millingstones, handstones, battered cobbles, heavy crude scrapers, 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 variability over time and space among Archaic sites has been equated with cultural conservatism (see Byrd and Reddy 2002; Warren 1968; Warren et al. 2008). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition has been identified until the bow and arrow was adopted at around A.D. 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appeared in large quantities and already low amounts of formal flake tools were replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decreased 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 remained stable, complemented only by the addition of the bow and ceramics.

Late Prehistoric (A.D. 500-1750)

The interval following the Archaic and prior to ethnohistoric times (A.D. 1750) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2008). 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-A.D. 1450 artifact assemblage is referred to as the San Luis Rey Complex (Meighan 1959), while within the same time period in southern San Diego County the Cuyamaca Complex is present, and is thought to extend from A.D. 500 until ethnohistoric times (True 1980). Rogers (1945) also subdivided the last 1,000 years into the Yuman II and III periods, based on the distribution of ceramic types and attributes. Despite these regional complexes, each is defined by the addition of arrow points and ceramics, the widespread use of bedrock mortars, and the cremation of human remains. 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 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, 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 rare in the San Diego region. Some argue that the ethnohistoric intensive acorn economy extended as far back as A.D. 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 A.D. 1400. Meighan (1959) 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 A.D. 1450. For southern San Diego County, the picture is less clear. The Cuyamaca Complex is the southern counterpart to the San Luis Rey pattern, however, and is most recognizable after A.D. 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-A.D. 1750)

The project area lies within the territory usually ascribed to speakers of the Kumeyaay language, but near their boundary were speakers of the very closely related Ipai language to the north. Kumeyaay and Ipai are Yuman languages, with ties to other groups in northern Baja California, on the lower Colorado River, and in western Arizona. The separation of the Ipai and Kumeyaay languages from their closest relative, Cocopa in the Colorado River delta, may date back about 1,000-1,200 years, and the separation from other Yuman groups may have occurred around 1,500-2,000 years ago (Laylander 1985).

Aboriginal subsistence in the region was based largely on acquiring natural plants and animals, rather than the cultivation of agricultural crops. Acorns were a staple for the western groups, as were agave and mesquite for eastern groups. Numerous other plants were valued for the dietary contributions from their seeds, fruit, roots, stalks, or greens, and a still larger number of species

had known medicinal uses. Game animals included deer first and foremost, but mountain sheep and pronghorn antelope were also present, as well as bear, mountain lions, bobcats, coyotes, and other medium-sized mammals. Small mammals were probably as important in aboriginal diets as larger animals, with jackrabbits and cottontails being preeminent, but woodrats and other rodents were commonly exploited. Various birds, reptiles, and amphibians were consumed as well; food taboos were few in number and inconsistent, judging from the surviving ethnographic record. The only pre-contact domesticated animal was the dog. It is not clear whether marine fish and shellfish were a mainstay for some coastal groups or merely provided supplemental or emergency food sources for groups that were oriented primarily toward terrestrial resources. Interregional exchange systems are known to have linked the coast with areas to the east in particular, but exchange may have been concerned more with facilitating social and ceremonial matters than with meeting material needs.

The Kumeyaay had developed a varied material culture that functioned well but was not highly elaborated, at least by global standards. A variety of tools were made from stone, wood, bone, and shell, and these served to procure and process the resources of the region. Needs for shelter and clothing were minimal, but considerable attention was devoted to personal decoration in the form of ornaments, painting, and tattooing. The local pottery was well made, although infrequently decorated. Basketry was a craft that was particularly refined.

The Kumeyaay were subdivided into essentially sovereign local communities or tribelets. Community membership was generally inherited from the male line. In practice, however, some degree of intermixing of these patriclans was certainly present during the historic period, and this may have reflected a considerable degree of flexibility in community membership during prehistoric times as well. Later descriptions of the settlement systems have been inconsistent, and there may have been considerable variability in practice (cf., Laylander 1991, 1997; Owen 1965; Shipek 1982; Spier 1923). In some areas, substantially permanent, year-round villages seem to have existed, with more remote resources beyond the daily foraging range being acquired by special task groups. In other areas, communities appear to have followed an annual circuit among seasonal settlements, or to have oscillated between summer and winter villages, often with the group splitting up into its constituent families during certain seasons. Some differences in settlement strategies may have reflected local differences in resource availability or cyclical effects of variability between times of plenty and times of stress. Rights of ownership over the land and its various resources were vested both in individual families and in the clans or communities as a whole. Leadership within communities had at least a tendency to be hereditary, but it was relatively weak; authority was more ceremonial and advisory than administrative or judicial. Headmen had assistants, and shamans exerted an important influence in community affairs, beyond their role in curing individual illness.

Historic Context of Greater Campo Area

San Diego County's backcountry area historically known as "Campo Country" stretched from west to east from Potrero to Campo (named Milquatay by the Kumeyaay) and on to Boulevard, and north from the international border to Mount Laguna. Campo Country was difficult to traverse due its mountainous terrain, yet the Kumeyaay people forged seasonal trails that explorers and homesteaders later followed (Vezina 1989:1, 11). The Kumeyaay people largely inhabited Campo Country until the mid-1860s, when settlers began moving in and homesteaded land under the new federal land acts. Settlers sought land they could ranch or cultivate, and when they claimed that land they pushed Native Americans into other areas that eventually became reservations (Robinson 1948; Vezina 1989).[1] Due to the terrain, many settlers in Campo Country were ranchers.

Cattle ranching was well entrenched in the economy of San Diego County by the mid-1850s. This is largely attributable to its vast acreage of uninhabited land that was ideal for cattle drives (Garcia 1975). Ranchers drove their cattle seasonally amongst the coast, mountains, and deserts on land they owned or leased, in order for the cattle to graze. San Diego County's cattle industry was well connected with Mexico and Arizona. Some cattle were pastured in Mexico and Arizona and then driven to San Diego or Temecula for slaughter or shipping. Vast rangelands meant ranches were typically the home base of major activities, such as branding and doctoring the cattle. By the mid-1860s, the cattle boom prompted by the Gold Rush had suffered devastating effects from depressed cattle prices, and the impact of droughts in the early 1860s meant southern California was no longer a dominant supplier of cattle to northern California. Raising sheep became more lucrative, prompting a conversion of some cattle ranches around the county. From the 1870s to 1880, sheep were the dominant livestock in the county but that industry also suffered difficult hardships in the late nineteenth century due to drought and animal sickness. In the 1880s, the cattle industry was starting to make a resurgence that would be solidified in the early 1900s. Cattle ranching was a tough business, and many rancho owners were hard pressed to maintain their large ranchos, but even smaller independent cattle operations were able to survive droughts and depressed prices in the late nineteenth century (Wade et al. 2009:i-ii, 17-23).

One of the first Anglo settlers in Campo Country was George W. Lawrence, who settled in Campo Valley. Campo was the first community that developed, and it became the social and commercial hub of Campo backcountry. The area's first school district was established and a schoolhouse constructed in 1867. A general store and post office soon followed in the 1870s. The first McCain Valley School was constructed around 1868-1869, shortly after the McCain family's arrival. People isolated by far distances and difficult terrain came together at Campo for religious revivals, dances, and other social events. The community's accessible valley made it a place that was easier for people to congregate for social events and business transactions. In

[1] The Campo, Cuyapaipe, La Posta, and Manzanita Indian reservations were established by 1893.

addition, its close proximity to Mexico and its designation as a stage stop on the San Diego-Yuma route via Mexico and Mountain Springs made Campo a prime location as a commercial hub for ranchers (McCain 1955:12, 86, 93; San Diego History Center 1912; Vezina 1989:12-14, 20-21, 26, 31, 33).

Milquatay or Campo became an early center of activity not only due to its accessible valley but also its proximity to two major transportation routes (L.L. Paulson 1875; Vezina 1989:56). By 1865, there were two major east-west wagon routes through Campo. One was a northern route (a county road) from San Diego to La Mesa, El Cajon, Alpine, Descanso, Pine Valley, Buckman Springs, north of Campo, and then through Mountain Springs. The other was an alternate eastern route that extended from San Diego in a southeasterly direction to Tijuana and then easterly to Tecate, Campo, Jacumba, and continued beyond Mountain Springs (Miller and Ross 1937). By 1889, another route extended westward from Campo through Potrero, Dulzura, and Jamul with several divergent routes from there (Humphrey 1889). These often ill-maintained roads were essential thoroughfares, since construction of a railroad through the difficult backcountry terrain would not be attempted until the early twentieth century.

In the 1870s, many agricultural communities developed across San Diego County that successfully cultivated vegetables and fruits, raised sheep and cattle, and developed apiaries after John Stewart Harbison established San Diego as a prime honey-producing county (Paulson 1875; McCain 1955:20). Valleys in Campo Country were largely secluded, with terrain most suitable for ranching, prompting most settlers in the area to raise cattle. They drove their herds seasonally to the mountains in the summer and the deserts in the winter. Both the Anza-Borrego Desert and the Imperial Valley were important feeding grounds (Cook and Fulmer 1980:272-273; Vezina 1989:56). Other Campo County settlers were skilled tradesmen who worked in Campo at the Gaskill mill, blacksmith, and woodworking shop, and others worked in the hotel or general store (Vezina 1989:34-35). Many European-born settlers moved into the greater area, including Germans, Scots, and Irish. Ranches like Peter Larkin’s ranch in Jacumba raised horses and cattle (McCain 1955:55-56).

Some of the early ranching families are remembered in place names across Campo Country such as Buckman Springs after Amos and Francis Buckman who traveled from northern California, the Camerons of Cameron Valley who traveled from Yuma, and the McCains who were cattle ranchers from Arkansas (McCain 1955:69-70; Vezina 1989:18). The McCain family was one of the largest cattle-owning families in the backcountry. George Washington McCain and Martha McCain settled in San Diego County in 1868, in an area now known as McCain Valley. The couple had heard that this unsettled part of the county would provide them with green grass and lakes, but neither awaited them, as the semi-arid terrain was more suitable for ranching than agriculture. There were 17 children raised by George and Martha McCain, including John, Robert Lee, James, Henry, Horace, Thomas, Pete, George, William, Lawrence, and Catherine. Most stayed in McCain Valley, but others moved out to Julian. In the early

years, the McCains partnered with other local ranchers to corral and brand livestock (McCain 1959:5, 78; *San Diego Union* 1945, 1960). In addition to cattle driving, some of the McCains carried mail along the San Diego-Yuma route (*San Diego Union* 1936a). The McCains grew their own grains and provided dairy products to Julian miners (Cook and Fulmer 1980:272-273). Managing cattle in the tough terrain and open land made it, at times, difficult to keep herds safe from thieves (McCain 1955:55-56).

Local historian Meredith R. Vezina noted that settlers in Campo Country between 1875 and 1900 experienced a period of violence among ranch owners, Mexicans, and Native Americans, largely due to the region's outlying location, the proximity of the border, the demand for cattle and horses, and a well-stocked Campo general store (McCain 1955; Vezina 1989:35-53). However, by the turn of the century, San Diego was growing again and construction of Morena Dam in 1895 had established a bustling area in Moreno Valley. Newly appointed border patrollers and wire fencing along the border to control cattle seemed to have provided a calming effect on violence in the backcountry (Vezina 1989:53-57). Campo remained a small frontier town, and Campo Country remained largely comprised of ranchers. San Diego's pursuit of a better connection with eastern markets and a road linking its port with the bountiful Imperial Valley meant important changes in Campo Country during the first few decades of the twentieth century.

Two major transportation improvements in first three decades of the twentieth century affected Campo County: Highway 80, and the San Diego and Arizona Railway (later called the San Diego and Arizona Eastern Railway). Expanding trade markets in San Diego County by land and sea were a top priority in the late nineteenth and early twentieth centuries. San Diego was a relatively small coastal California city that trailed Los Angeles in terms of population and commerce. The city had been linked to Los Angeles via the California Southern railroad line since the late nineteenth century, which opened up passenger travel and agricultural trade, but San Diego followed behind Los Angeles' San Pedro Harbor as an important seaport hub (Bryant 1974; McGrew 1922:180; Pourade 1965:133). As the city grew in the early 1900s, so did an automobile culture of touring clubs. In an effort to develop a more preferred direct coastal link with Los Angeles, the Automobile Club of Southern California worked with the San Diego County Board of Supervisors to develop a coastal public highway. Locals also worked toward establishing a public highway to link San Diego with Yuma for its potential tourism and commercial value, as both Yuma and Imperial Valley had developed as agricultural communities by tapping Colorado River water (Pourade 1965:85; Stringer-Bowsher et al. 2009). By 1912, the main San Diego County road from San Diego to the eastern county line extended along the old southern wagon route from the city to Lemon Grove, then through Jamul, Dulzura, Potrero, Campo, and on to Jacumba and Mountain Springs (Humphrey 1889; San Diego Historical Society 1912). Faster-growing communities such as El Cajon, Lakeside, Alpine, and Descanso successfully lobbied for a highway that could stimulate their local economies; as a result, the northern portions of the early wagon trail were developed and commissioned as Highway 80 in

1926 (Humphrey 1889; Krintz et al. 2012; Lortie 2001:4). Over the years, Highway 80 provided an important transportation corridor for backcountry areas such as Jacumba, Campo, La Posta, Buckman Spring(s) (Buckmann's and Emery), and Descanso. The southerly wagon route remained as the predecessor to State Route 94. After a realignment of Highway 80 between 1922 and 1929,[1] an alternate route bypassed the town of Campo, thereafter disconnecting the town from the tourism traffic of Highway 80 (Automobile Club of Southern California 1922, 1929).

Completion of the "Impossible Railroad" through Campo Country also provided new commercial traffic to the backcountry. Construction of John D. Spreckels' San Diego and Arizona Railway began in 1908, but many years of trials and tribulation followed. Engineers and workers eventually conquered Carrizo Gorge and completed the line from San Diego to El Centro in November 1919. By that time, the railroad company acquired San Diego & Southeastern Railway (SD&SE) Company (1917), which included the San Diego, Cuyamaca & Eastern Railway (merged with SD&SE in 1912) (Dodge 1956; Heibron 1936:430). Construction of the railroad brought renewed excitement to Campo and prompted the plotting of a small city that did not materialize. It did prompt construction of a new hotel to serve the civil engineers who surveyed the treacherous Carrizo Gorge. The Campo general store remained as a community cornerstone. Once the railroad was completed, Campo became a port of entry (Vezina 1989:103-106, 111).

In the 1900s-1920s, federal agents began increasingly policing the border, with federal customs border patrol agents seeking illegal Chinese immigrants and contraband of precious metals and precious commodities, notably cattle. During Prohibition (1920-1933), alcohol was outlawed and transportation across international lines was under greater scrutiny as customs officers in Campo stopped motorists and railroad travelers suspected of bootlegging or carrying alcohol (Vezina 1989:109-111). Episodic altercations between settlers and Native Americans and between police and Native Americans continued as locals dealt with more border and passenger travelers as well as the close proximity of reservations to residents within greater Campo Country (Vezina 1989:113). Settlement remained sparse, with concentrations of properties along the county road that became Highway 80, connecting the Imperial Valley and San Diego (Alexander 1910).

Roadside towns along early Highway 80 were sparsely populated by 1918 (Jacumba – 50 residents; Boulevard - 50; Campo – 75; Buckman Springs – 10) (California Development Board 1918). Towns such as Boulevard largely developed because of tourist traffic. Originally part of the early county road linking San Diego and Imperial Valley, the town of Boulevard was named

[1] Buckman Springs Road had been part of the original county road (1865), and was part of the early Highway 80 route that extended from Dewey (Cameron Corners) to Pine Valley. It remained an important thoroughfare for Campo.

as such because it was part of the "boulevard" to Imperial Valley. The larger Boulevard[1] area was associated with ranching and became a stop for Highway 80 auto tourists.

Famed Wisteria Candy Cottage (1921) was one such attraction of the town, along with a general store, resort cabins, and restaurants (MacDonald 1978). Agricultural production varied, depending on the homestead, but farmsteads were largely self-sufficient until Highway 80 brought mountain-resort seeking tourists into the backcountry, thereby prompting the production of fruits, vegetables, butter, and eggs on small parcels (California Development Board 1918:53, 73-74). Jacumba Hot Springs resort was one mountain resort stop between San Diego and El Centro. B. L. Vaughn had converted the western town into a health resort centered on the medicinal hot springs. A three-story hotel served the weary traveler, and medicinal baths, outdoor sports, a theater, and shopping combined city amenities with outdoor serenity. Carrizo Gorge Lodge was another nearby respite spot (San Diego Mountain Resorts Association 1925). Ranching, the service industry along Highway 80, and work around Campo were the main employment opportunities for the sparsely populated backcountry in Campo Country.

At the start of the Great Depression, the greater Jacumba area was the least populated township in the county with 1,157 inhabitants (U.S. Census Bureau 1930:131, 137). In 1938, much of the development paralleled Highway 80, and towns with sidings or stations on the San Diego and Arizona Eastern Railroad (SD&AE), such as Hipass, were more populated but still small (San Diego County 1938; United States Geological Survey 1939). World War II changed that for Campo. On the brink of war, a new military facility was constructed in Campo for the same reasons it had remained a vital hub for the backcountry: its proximity to Mexico, it was a port of entry on the only remaining east-west railroad line in San Diego County (the SD&AE), and it was located near important dams (Morena and Barrett). The facility would be home, for a time, to the 11th Cavalry Regiment from the Presidio in Monterey (Vezina 1989:127-128, 135). The influx of new federal employees in the area meant the transformation of a relatively small Campo with a dozen structures and a few hundred people in the greater Campo area. Pastures were quickly replaced many buildings and thousands of troops made their way to the valley, most of which were from Los Angeles. Camp Lockett reenergized the economy and expanded the employment possibilities. Amidst the Depression, small cattle ranching operations were dissipating in response to costs and grazing restrictions. Some turned to new work in construction on the base or worked as linemen on the railroad. Services developed in response to the population influx that facilitated work in hotels and other businesses for men and women. Others continued to raise cattle, chickens and turkeys, and gardens as the Depression was still very much present for many (Vezina 1989: 128-133, 142, 161). Preparatory maneuvers meant that the military marched through Campo Country, affecting towns across the backcountry

[1] Construction on Interstate 8 began in 1958 and had been completed by June 1975.The wider alignment bypassed portions of Old Highway 80 and absorbed other segments. Boulevard was one of those towns that were bypassed (Lortie 2001:6).

(Vezina 1989:145). Mobilization and the busyness of an expanding military facility impacted Campo and the local economy, but for most in Campo Country ranching "continued to dominate" (Vezina 1989:162).

Cattle had again become the dominant livestock raised in San Diego County by 1910 as a result of the development of more wells and better disease control at the border and elsewhere. Fluctuating numbers of cattle still typified the industry. Similar to other western states, those owners who owned large tracts of land were the dominant forces of the twentieth century, but changes in accessibility to rangeland affected large and small scale ranching operations (Wade et al. 2009:23-24). The Cleveland National Forest began issuing permits for farming and grazing cattle, horses, sheep, goats, and hogs as well as for apiaries (California Development Board 1918:53, 73-74). Increasingly federal, state, or local authorities implemented range restrictions and regulated permits in an effort to protect land from chaparral burn-off and overgrazing. Officials and ranchers were often at philosophical odds with each other, but many large outfits, such as the Campo Cattle Company, eventually recognized most of the range restrictions (Vezina 1989:124-125).

During the 1930s and 1940s, beef production in San Diego County was one of the most important agricultural industries, given the impacts of the Great Depression and World War II. Many smaller scale rural ranching operations on reservations and the backcountry provided for families during the Great Depression, and the demand for meat during the war fueled ranching in the 1940s (Wade et al. 2009:24, 26). Changes had already been made too many ranching operations. Cattle drives largely ended in the mid-1930s when better roads and larger trucks meant ranchers could drive cattle to slaughter, although even in the 1940s some cattle were shipped from Campo (Wade et al. 2009:24). Following World War II, cattle ranching "declined dramatically, especially along the coast" (Wade et al. 2009:32). Much of that decline is attributable to the need to convert ranch land into housing developments in the postwar era. Despite that pressure, ranching in the backcountry has survived to the present day (Wade et al. 2009:32). One example of backcountry ranching is the McCain Valley. Cattle ranching remained essential until 1961, when the California State Fish and Game Department withdrew 38,691 acres for a Wildlife Management program. By 1980, the ranch had been reduced to 160 acres, but it survived (Cook and Fulmer 1980:272-273). Cattle ranching in San Diego County increasingly competed with and was largely defeated by an expansion of crop agricultural and urbanization from 1870 to 1970, though ranching enclaves persist (Wade et al. 2009:5).

1.2.3 Record Search Results

A records search was conducted by SCIC staff at San Diego State University on November 21, 2011. This records search was based on the initial ASM Affiliates 765-acre Phase II study area, which representes a larger area than the current 600-acre project area (MUP limits, off-site imprvemets, on-site improvements, and collector alignimnets). The results of that records search

indicated 95 previously recorded sites and 42 additional cultural resources including isolates within a one-mile radius of the Rugged Solar Project Area (Table 1.2). The SCIC also identified 39 previous reports on archaeological investigations within one mile of the Project Area (Glenn and Victorino 2012 Appendix A and B).

Previous Studies

A total of 39 previous reports have previously addressed areas within a one-mile radius of the Project Area. Nine of those reports address all or a portion of the Project area (Table 1.1).

Table 1.1 Previous Cultural Resources Reports Addressing the APE

NADB No.	Authors	Date	Title
1121990	Cook, John R., and Scott G. Fulmer	1981	The Archaeology of the McCain Valley Study Area in Eastern San Diego County, California: A Scientific Class II Cultural Resource Inventory.
1122268	Berryman, Judy and Mary Lou Heuett	1982	Archaeological Phase II Study on Seven Sites Located on the Halabu Parcel.
1122534	Jenkins, Richard C.	1987	Archaeological Assessment of the McCain Valley Conservation Camp Treaties Project.
1123285	Cook, John R., and Scott G. Fulmer	1980	The Archaeology of the McCain Valley Study Area in Eastern San Diego County, California: A Scientific Class II Cultural Resource Inventory.
1125760	Cook, John R., and Scott G. Fulmer	1980	Archaeology and History of the McCain Valley Study Area, Eastern San Diego County, California: A Class II Cultural Resource Inventory.
1130382	De Barros, Philip and Joel Paulson	2003	Cultural Resources Survey and Assessment of A 168-Acre Parcel off Roadrunner Lane Near Manzanita, San Diego County, California.
1131373	Hector, Susan, Ken Moslak, and Drew Pallette	2007	Archaeological Survey of Eastern San Diego County Roads, Trails, and Campgrounds.
1131977	SWCA	2008	Final Cultural Resources Survey of Alternatives for the Sunrise Powerlink Project in Imperial, Orange, Riverside, and San Diego Counties, California.
1132711	Garcia-Herbst, Arleen, David Iversen, Don Laylander, and Brian Williams	2010	Final Inventory Report of the Cultural Resources Within the Approved San Diego Gas & Electric Sunrise Powerlink Final Environmentally Superior Southern Route, San Diego and Imperial Counties, California.

Previously Recorded Sites

Table 1.2 Previously Recorded Cultural Resources within a 1-mi. Radius of the APE

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
24023		Historic (1928-1933)	HP37: Old Highway 8	33 miles long	Hale, Micah, Brad Comeau and Chad Willis, 2010
24671		Prehistoric	AP16: secondary flake isolate		DeBarros, 2002
24672		Prehistoric	AP16: one ceramic sherd and one flake		DeBarros, 2002
24673		Prehistoric	AP16: one flake		DeBarros, 2002
24674		Prehistoric	AP16: unifacial handstone		DeBarros, 2002
24675		Prehistoric	AP16: one flake		DeBarros, 2002
24676		Prehistoric	AP16: projectile point fragment		DeBarros, 2002
24677		Prehistoric	AP16: one flake		DeBarros, 2002
24678		Historic	AP16: possible tobacco can isolate		DeBarros, 2002
24679		Historic (mid-20th century)	HP39: iron and cement Windmill		DeBarros, 2002
24680		Historic (1945)	HP2: wood, cement, and cobble structure		DeBarros, 2002
29747		Prehistoric	AP16: one flake isolate		SWCA Environmental Consultants and Applied Earthworks, 2008
29748		Prehistoric	AP16: one flake isolate		SWCA Environmental Consultants and Applied Earthworks, 2008
30257		Prehistoric	AP16: one flake isolate		Noah and Gallegos, 2008
31579		Historic (post-1945)	AP16: single glass fragment and one electrical pole	3	Bowden-Renna, 2010
31592		Historic (post-1945)	AH15: stone masonry Building	725	Hale, Comeau and Willis, 2010
31594		Historic (post-1945)	AH4: trash scatter	350	Hale, Comeau and Willis, 2010
31613		Historic (post-1945)	AH4: bottle and can dump	225	Hale, Comeau and Willis, 2010

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
31614		Historic (post-1945)	AH4: can and glass dump	225	Hale, Comeau and Willis, 2010
31615		Historic (post-1945)	AH4: trash scatter	230	Hale, Comeau and Willis, 2010
31667		Historic (post-1945)	AH4: can and glass dump	150	Hale, Comeau and Willis, 2010
31676		Historic (post-1945)	AH4: can and glass dump	800	Hale, Comeau and Willis, 2010
31680		Historic (post- 1945) Prehistoric (possible)	AH15: wood and concrete structure; would: two grinding stones and flake	2000	Hale, Comeau and Willis, 2010
31685		Historic (post-1914)	AH4: trash dump; AH5: water catch basin	2450	Hale, Comeau and Willis, 2010
31686		Historic (post-1914)	AH4: can and glass dump	900	Hale, Comeau and Willis, 2010
31688		Historic (post-1914)	AH5: water tanks; AH6: water trough AH15: windmill	600	Hale, Comeau and Willis, 2010
31931		Historic (1910-1960)	HP2: single family, wood-framed structure	600	Ghabhláin, Humphrey, Stringer-Bowsher, and Gunderman, 2010
32135		Historic (1925+)	HP2: single family, wood-framed structures		Hale, Comeau and Willis, 2010
32136		Historic (1946)	HP2: single family, wood-framed structure		Hale, Comeau and Willis, 2010
32137		Historic (1946)	HP2: multi-family, wood-framed structure		Hale, Comeau and Willis, 2010
32138		Historic (1910+)	HP6: commercial Building		Hale, Comeau and Willis, 2010
32139		Historic (1930+)	HP2: single family, wood-framed, stucco structure		Hale, Comeau and Willis, 2010
32140		Historic (1950+)	HP6: commercial Building		Hale, Comeau and Willis, 2010
32141		Historic (1950+)	HP2: single family, wood-framed, stucco structure		Hale, Comeau and Willis, 2010

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
32142		Historic (1945)	HP2: single family, wood-framed, stucco structure		Hale, Comeau and Willis, 2010
32153		Historic (1950+)	HP2: single family, wood-framed and sided structure		Hale, Comeau and Willis, 2010
32154		Historic (1920+)	HP2: single family, wood-frame, stone siding structure		Hale, Comeau and Willis, 2010
32155		Historic (1955+)	HP2: single family, wood-frame, stone siding structure		Hale, Comeau and Willis, 2010
32156		Historic (1929 -1960)	HP2: 15-20 single family, wood-frame and sided structures		Hale, Comeau and Willis, 2010
32158		Historic (1935+)	HP6: restaurant complex of three commercial buildings		Hale, Comeau and Willis, 2010
32159		Historic (1935+)	HP2: single family, wood-frame, stucco structure; HP4: two barn ancillary buildings		Hale, Comeau and Willis, 2010
4344	4344	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (10 slicks);	3000	
4788	4788	Prehistoric	AP2: Sparse lithic Scatter; AP4: Bedrock Milling	107200	Garcia-Herbst, Iversen, Williams and Laylander, 2009
5162	5162	Prehistoric	AP2: Sparse lithic Scatter; AP3: Sparse Ceramic Scatter; AP14: Rock Shelter	7425	Hale, Comeau and Willis, 2010
5171	5171	Prehistoric	AP2: Sparse lithic Scatter; AP3: Sparse Ceramic Scatter; AP14: Rock Shelter	63020	Hale, Comeau and Willis, 2010
5417	5417	Prehistoric	AP2: Sparse lithic Scatter; AP3: Sparse Ceramic Scatter; AP14: Rock Shelter	1750 (not relocated during 2005 resurvey)	Hector, Moslak, and Pallette, 2006
5418	5418	Prehistoric	AP2: Sparse lithic Scatter; AP3: Sparse Ceramic Scatter;	9	Hector, Moslak, and Pallette, 2006
5430	5430	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (5 mortars);	5000	Breece, 1978

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
6895	6895	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (5 mortars); AP14: Rock Shelter	16500	Bowden-Renna, C., 2010
6898	6898	Historic/Possibly Prehistoric	HP2: cobble structure AP2: Lithic Scatter;	6	Chase & Associates, 1979
6899	6899	Prehistoric	AP4: Bedrock Milling (single slick)	232	Clifford and Smith, 2003
7141	7141	Historic/Possibly Prehistoric	HP2: cement and brick structure; AH4: trash scatter trash scatter; AH6: watering trough; AP2: Lithic Scatter (one flake); AP4: Bedrock Milling (one millingstone fragment);	30	Johnson, 1979
7159	7159	Prehistoric	AP3: Ceramic Scatter; AP4: Bedrock Milling (3 mortars)	100	Clifford and Smith, 2003
9225	9225	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (2 milling stations); AP14: Rock Shelter	16500 30000 m	Hale, Comeau and Willis, 2010
9226	9226	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (2 millingstones);	425	Hector, Moslak, and Pallette 2006
9714	9714	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (1 millingstone);	1600	Quillen and Clevenger, 1983
10359/31616	10359/20059	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling	800	Hale, Comeau and Willis, 2010
10360	10360	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling	3	Fulmer, Case, Healey, and Schiowitz, 1979
10595	10595	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (17 milling stations and millingstones); AP15: Habitation Debris (midden)	92000	Dallas, 2010
10596	10596	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (2 milling stations)	31250	Hale, Comeau and Willis, 2010
10597	10597	Prehistoric	AP4: Bedrock Milling (1 milling station)	12	Jenkins, 1987

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
17239	15188	Historic	HP21: Dam	85	Berryman and Heutt 1982
17240	15189	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter	8500	Berryman and Heutt 1982
17241	15190	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter;	3600	Berryman and Heutt 1982
24667	16364	Prehistoric	AP2: Lithic Scatter;	1800	De Barros 2001
24668	16365	Prehistoric	AP2: Lithic Scatter; AP15: Habitation Debris (Fire affected rock, millingstone fragment)	11250	Pigniolo, 2004
24669	16366	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter	11000	De Barros 2001
24670	16367	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter;	2600	De Barros 2001
24693	16373	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter	4000	De Barros 2001
24694	16374	Historic	AH4: Trash Scatter (metal cans and glass bottles)	400	De Barros 2002
24751	16394	Historic	AH4: Trash Scatter (metal cans, glass bottles, ceramics)	30	Smith and Guerrero 2002
25362	16825	Historic	AH4: Trash Scatter	8400	James and Smith 2003
27248	17821	Historic	AH4: Trash Scatter (metal cans, glass bottles, ceramics)	180	Hector, Moslak, and Pallette 2006
27346	17869	Prehistoric	AP6: Pictographs	None	None
29586	18921	Historic	AH4: Trash Scatter (metal cans, glass bottles, ceramics)	1000	None
29698	18993	Historic	AH4: Trash Scatter (metal cans, glass bottles, ceramics)	165	Hale, Comeau and Willis, 2010
29699	18994	Historic	AH4: Trash Scatter (metal cans, glass bottles, ceramics)	350	Hale, Comeau and Willis, 2010
29728	19019	Historic	AH4: Trash Scatter (metal cans, glass bottles, ceramics)	10000	SWCA Environmental and Applied Earthworks 2008
29729	19020	Historic	AH16: Historical refuse	1000	SWCA Environmental and Applied Earthworks 2008

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
29781	19042	Prehistoric	AP2: Sparse lithic Scatter	240 (Not relocated)	Garcia-Herbst, Iversen, Williams and Laylander, 2009
29784	19045	Prehistoric	AP2: Sparse lithic Scatter	10500	Hale, Comeau and Willis, 2010
30223	19255	Prehistoric	AP4: Bedrock Milling (1 milling station)	35	Noah and Gallegos, 2008
30224	19256	Prehistoric	AP4: Bedrock Milling (1 milling station)	324	Noah and Gallegos, 2008
31301	19868	Prehistoric	AP2: Sparse lithic Scatter	800	Hale, Comeau and Willis, 2010
31303	19870	Prehistoric	AP2: Sparse lithic Scatter	1	Garcia-Herbst, Iversen, Williams and Laylander, 2009
31305	19872	Prehistoric	AP2: Sparse lithic Scatter	620	Hale, Comeau and Willis, 2010
31306	19873	Prehistoric	AP4: Bedrock Milling (1 milling station)	100	Garcia-Herbst, Iversen, Williams and Laylander, 2009
31578	20030	Prehistoric	AH4: Trash Scatter; AP2: Sparse lithic Scatter	3	Bowden-Renna, 2010
31585	20036	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (1 milling station); AP5 Petroglyph/Cupule	6205	Dallas, 2010
31591	20040	Prehistoric	Bedrock Milling (1 milling station);	144	Hale, Comeau and Willis, 2010
31593	20041	Prehistoric	AP2: Lithic Scatter; AP3: Ceramic Scatter; AP4: Bedrock Milling (8 milling slicks);	4242	Hale, Comeau and Willis, 2010
31612	20058	Prehistoric	AP2: Lithic Scatter (1 piece); AP3: Ceramic Scatter (2 fragments);	264	Hale, Comeau and Willis, 2010
31624	20067	Prehistoric	AP2: Lithic Scatter	210	Hale, Comeau and Willis, 2010

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
31625	20068	Prehistoric	AP2: Lithic Scatter (including handstones and biface); AP3: Ceramic Scatter (two loci)	10140	Hale, Comeau and Willis, 2010
31626	20069	Prehistoric	AP2: Lithic Scatter (including handstone fragments); AP4: Bedrock Milling (1 milling station);	8091	Hale, Comeau and Willis, 2010
31627	20070	Prehistoric/ Historic	AP2: Lithic Scatter (including handstone fragments); AP3: Ceramic Scatter; AP4: Bedrock Milling (1 milling station); AH2: Foundations; AH4: Trash scatter; AH7: Roads/railroads; AH9: Mines/quarries/tailings; AH15: Standing Structures	97650	Hale, Comeau and Willis, 2010
31628	20071	Prehistoric	AP2: Lithic Scatter (including handstone fragments); AP3: Ceramic Scatter; AP4: Bedrock Milling (10 milling station);	95700	Hale, Comeau and Willis, 2010
31630	20073	Prehistoric	AP2: Lithic Scatter (including handstones); AP4: Bedrock Milling (3 slicks);	1125	Hale, Comeau and Willis, 2010
31631	20074	Prehistoric	AP4: Bedrock Milling (2 slicks);	6	Hale, Comeau and Willis, 2010
31632	20075	Prehistoric	AP2: Lithic Scatter (including 1 hammerstone); AP3: Ceramic Scatter; AP4: Bedrock Milling (2 stations);	8550	Hale, Comeau and Willis, 2010
31633	20076	Prehistoric	AP2: Lithic Scatter (including handstones); AP4: Bedrock Milling (1 station);	5700	Hale, Comeau and Willis, 2010
31642	20085	Prehistoric	AP3: Ceramic Scatter; AP14: Rock shelter/cave	756	Hale, Comeau and Willis, 2010
31643	20086	Prehistoric	AP4: Bedrock Milling (2 station);	52	Hale, Comeau and Willis, 2010

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
31644	20087	Prehistoric	AP2: Lithic Scatter (including millingstones and handstones); AP3: Ceramic Scatter; AP4: Bedrock Milling (3 stations);	11550	Hale, Comeau and Willis, 2010
31645	20088	Prehistoric	AP4: Bedrock Milling (1 station, 5 slicks);	63	Hale, Comeau and Willis, 2010
31646	20089	Prehistoric	AP3: Ceramic Scatter	12	Hale, Comeau and Willis, 2010
31647	20090	Prehistoric	AP2: Lithic Scatter (I piece shatter); AP4: Bedrock Milling (1 station);	3	Hale, Comeau and Willis, 2010
31648	20091	Prehistoric	AP2: Lithic Scatter	90	Hale, Comeau and Willis, 2010
31670	20110	Prehistoric	AP2: Lithic Scatter (including millingstone and handstones); AP3: Ceramic Scatter; AP4: Bedrock Milling (1 station);	34500	Hale, Comeau and Willis, 2010
31671	20111	Prehistoric	AP3: Ceramic Scatter; AP4: Bedrock Milling (1 station, 3 slicks);	450	Hale, Comeau and Willis, 2010
31677	20116	Prehistoric	AP3: Ceramic Scatter; AP14: Rock shelter	36	Hale, Comeau and Willis, 2010
31678	20117	Prehistoric	AP2: Lithic Scatter	400	Hale, Comeau and Willis, 2010
31679	20118	Prehistoric	AP2: Lithic Scatter (including millingstone and handstones); AP3: Ceramic Scatter; AP4: Bedrock Milling (5 station, 6 slicks);	5400	Hale, Comeau and Willis, 2010
31689	20124	Prehistoric	AP2: Lithic Scatter (including scraper and core); AP3: Ceramic Scatter	6400	Hale, Comeau and Willis, 2010
31690	20125	Prehistoric	AP2: Lithic Scatter (including scraper and core); AP3: Ceramic Scatter; AP14: Rock Shelter	400	Hale, Comeau and Willis, 2010
31691	20126	Prehistoric	AP2: Lithic Scatter (including handstone); AP3: Ceramic Scatter	15	Hale, Comeau and Willis, 2010

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
32182	20384	Prehistoric	AP4: Bedrock Milling (1 slick); AP14: Rock shelter	400	Hale, Comeau and Willis, 2010
32183	20385	Prehistoric	AP2: Lithic Scatter (including handstone); AP3: Ceramic Scatter	1152	Hale, Comeau and Willis, 2010
32184	20386	Prehistoric	AP2: Lithic Scatter (including 5 handstones and 1 millingstone fragments, cores, scrapers);	10000	Hale, Comeau and Willis, 2010
32185	20387	Prehistoric	AP4: Bedrock Milling (1 slick, 1 millingstone fragment); AP14: Rock shelter	400	Hale, Comeau and Willis, 2010
32186	20388	Prehistoric	AP2: Lithic Scatter; AP4: Bedrock Milling (2 stations);	2500	Hale, Comeau and Willis, 2010
32187	20389	Prehistoric	AP2: Lithic Scatter; AP8: Cairns/rock feature	400	Hale, Comeau and Willis, 2010
32188	20390	Prehistoric	AP2: Lithic Scatter (including 1 handstone)	900	Hale, Comeau and Willis, 2010
32191	20393	Prehistoric	AH4: trash Scatter (1 jar and 1 hubcap); AP8: Cairns/rock feature (3 cairns)	400	Hale, Comeau and Willis, 2010
32192	20394	Prehistoric	AP2: Lithic Scatter (including 2 handstone fragments and projectile point); AP3: Ceramic Scatter; AP4: Bedrock Milling (1 station, 10 slicks);	6000	Hale, Comeau and Willis, 2010
32198	20400	Prehistoric	AP2: Lithic Scatter (including 1 milling slab fragment); AP3: Ceramic Scatter; AP4: Bedrock Milling (1 slick, 1 millingstone fragment); AP14: Rock shelter (four)	20250	Hale, Comeau and Willis, 2010
32199	20401	Prehistoric	AP2: Lithic Scatter (including 1 milling slab fragment); AP4: Bedrock Milling (1 slick);	1125	Hale, Comeau and Willis, 2010

Designation		Era	Site Type	Area (m^2)	Recorder, Date
Primary Number P-37-	Trinomial CA-SDI-				
32200	20402	Prehistoric	AP2: Lithic Scatter (including 2 handstone fragments and projectile point); AP3: Ceramic Scatter; AP4: Bedrock Milling (1 station);	4000	Hale, Comeau and Willis, 2010

Brian Glenn of Pacific West Archaeology Initiated the Phase I inventory of the original 852-acre project area in 2011; Glenn conducted the original survey fieldwork on October 12 through 24, 2011 and December 7, 2011 through January 7, 2012. Brian Glenn and Ken Victorino of Dudek documented the survey results in a formal Phase I inventory report (Glenn and Victorino 2012). The cultural resources study was then contracted to ASM for evaluation of archaeological sites that would be affected by construction of the Project area, then being reduced to 765 acres. Subsequent revisions to the project design resulted in further reduction of the project area for this project, which is now approximately 600 acres. This most recent modification to the MUP has resulted in 12 sites and seven isolates being excluded from the Project. Phase I and Phase II investigation results relating to these studies has been included as Appendix H. These resources are not discussed further, as they are now outside of the current Project.

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.

1.3.1 California Register of Historic Resources and CEQA

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

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

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

- it is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or
- it is associated with the lives of persons important to local, California, or national history; or
- it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or
- it has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

1.3.2 San Diego County Local Register of Historical Resources

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

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

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

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

Under County guidelines for determining significance of cultural and historical resources, any site that yields information or has the potential to yield information is considered a significant site (County of San Diego 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).

1.3.3 County Of San Diego Resource Protection Ordinance (RPO)

The County uses the CRHR criteria to evaluate the significance of cultural resources. In addition, other regulations must be considered during the evaluation of cultural resources. Section 86.601 (O) of the San Diego County Resource Protection Ordinance (2007b) provides definitions for

historic and prehistoric site significance that are to be broadly interpreted and construed to provide maximum protection to the environmentally sensitive lands and resources

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

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

2.0 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. As previously outlined, the criteria for resource significance that are applied within the current project are defined within CEQA (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852 and Section 86.601 (O) of the San Diego County Resource Protection Ordinance (2007b). The County applies CEQA definitions of substantial adverse change:

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

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

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

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

When a project will impact an archaeological site, a lead agency shall first determine whether the site is an historical resource, as defined in subsection (a).

If a lead agency determines that the archaeological site is an historical resource, it shall refer to the provisions of Section 21084.1 of the Public Resources Code, and this section, Section 15126.4 of the Guidelines, and the limits contained in Section 21083.2 of the Public Resources Code do not apply.

If an archaeological site does not meet the criteria defined in subsection (a), but does meet the definition of a unique archaeological resource in Section 21083.2 of the Public Resources Code, the site shall be treated in accordance with the provisions of section 21083.2. The time and cost

limitations described in Public Resources Code Section 21083.2 (c-f) do not apply to surveys and site evaluation activities intended to determine whether the project location contains unique archaeological resources. If an archaeological resource is neither a unique archaeological nor an historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment. It shall be sufficient that both the resource and the effect on it are noted in the Initial Study or EIR, if one is prepared to address impacts on other resources, but they need not be considered further in the CEQA process.

Section 15064.5 (d) & (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.

3.0 RESEARCH DESIGN

The objective of the current evaluation program was to obtain information from archaeological sites that could be used to evaluate each resource's historical significance under CEQA and County guidelines. Current research is typically structured in a way that links anthropologically oriented research issues to the archaeological record. The following discussion embraces this trend, and identifies potential questions and appropriate archaeological evidence within a series of broad research themes. General issues pertinent to the assessment of the sites include determination of the extent and integrity of cultural deposits, age and probable cultural affiliation, site function and subsistence strategies, overall insight into settlement organization, and the presence of any cultural remains having special Native American or historical heritage value.

3.1 Management Concerns and Potential Regional Research Topics

3.1.1 Integrity

Delineation of the horizontal and vertical limits of the site is necessary for an assessment of research potential. Of particular importance is the integrity of the deposits: whether or not features or surfaces are preserved and whether the potential exists for identifying horizontal and vertical spatial patterning evident of human behavior.

A variety of postdepositional processes can greatly alter the original character of prehistoric sites (e.g., Gross and Robbins-Wade 2008; Schiffer 1987; Waters 1992). Formation processes such as alluvial deposition, erosion, bioturbation, and modern disturbance can considerably affect the integrity of archaeological sites. The nature of site occupation (e.g., food procurement and/or processing, other types of resource procurement, social events, and short-term or seasonal occupation) can lead to spatial patterning of artifacts, food remains, and site features. Here, we attempt to identify and interpret the processes that formed the site, with particular attention given to the character of postdepositional processes and the extent to which they have affected the integrity of the archaeological deposits.

The results of testing at the sites have been used to assess the following issues:

- Does the horizontal and vertical extent of the archaeological record within the sites represent continuous or discrete occupations?
- Is it possible to discern depositional versus postdepositional processes that have contributed to the present condition of the archaeological record at any of the sites? In other words, what are the factors, both natural and anthropogenic that altered the position and condition of artifacts from the prehistoric and historic occupations of the sites?

- What kinds of features are potentially preserved at the sites (e.g., structures, hearths, earth ovens)? Are there features that are highly disrupted by postdepositional processes but that are still recognizable? Can these features be associated with particular functions?
- By examining spatial patterns in the horizontal distribution of artifacts, is it possible to discern areas that were associated with specific functions? Do patterns in the vertical distribution of artifacts tell us anything about changes in the function, materials exploited, or human activities at the sites through time?
- Is there substantial evidence of occupational "overprinting"? How has this affected the temporal integrity of habitation components or refuse deposits?

3.1.2 Chronological Placement

Chronological issues are basic to any archaeological research design, as they provide the primary framework of prehistory. Previous research in the southern San Diego region has documented a range of prehistoric sites dating to both the Archaic (6000 B.C. to A.D. 500) and Late Prehistoric periods (post-A.D. 500). To the west, near Jamul, Yohe and Chace (1995) documented a late La Jolla (i.e., Millingstone) deposit dominated by millingstones, handstones, cobble tools, and other items. Rodent protein residue was collected from a basin millingstone in a buried context, implying the functional generality of such tools. In the eastern foothills and in the valley floors to the west a strong record that postdates A.D. 1000 has been documented. These sites have assemblages with large numbers of arrow points, small flake-based tools, and ceramics, but also include sizeable numbers of millingstones and handstones relative to mortars and pestles. The distribution of such artifacts is uneven at many sites in the region, and there may be temporal patterning in how sites were occupied, leaving differential traces of assemblage constituents. Along these lines, potential research issues derived from this basic problem include:

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

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

- Can the chronological placement of project sites be determined?
- What kinds of chronometric data can project sites provide? Of those obtained, how well do they correlate in terms of the age estimates they provide (e.g., projectile point types vs. obsidian hydration dates).
- Are there data indicating the presence of multiple occupation episodes at project sites?
- Do marker artifacts appear to fit with temporal patterns recognized in the surrounding region? Are there any unique diagnostic items present?
- Can chronometric data from project sites help to refine dating schemes in the local region?

Chronometric evidence from the study sites is limited to diagnostic artifact forms. Chronologically diagnostic artifacts include various projectile point forms and pottery, although these only define very broad time periods. Specific types or attributes of buffware ceramics may have a potential to define somewhat more precise time ranges, but that potential is not yet well established. Assemblages that cannot be securely placed chronologically, either because they lack datable material or because of extensive intermixing of chronologically diverse components, would be less likely to possess a significant research potential. For historic sites, time-sensitive artifacts are generally common, consisting of cans or bottles with specific dates of manufacture. Archival research provided an additional level of chronology for historical archaeological sites, yielding information on the persons that inhabited the area.

3.1.3 Settlement and Site Function

Interpretation of the study sites depends upon an assessment of their places within the larger settlement-subsistence system of their occupants. Sites belonging to functional types that are relatively ubiquitous within the region tend to have similar assemblage profiles, together producing redundant datasets. Thus, common site types, such as lithic scatters or historic refuse deposits would be less likely to be considered significant than unusual site types, such as large habitations. The latter are sites with evidence of multiple functions that tend to possess richer assemblages than simple sites, and by extension, the promise of a greater contribution to regional research themes. On the other hand, single-function sites may have a greater research potential when considered together and in light of regional patterning.

Evidence for the functional uses represented by the site comes from surface observations made during both the survey and testing phases, as well as through the results of subsurface

excavations. Interpretations of functions rest upon both the range and the relative and absolute frequencies of various classes of features, artifacts, and ecofacts.

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

While several important prehistoric sites and ethnohistoric villages have been extensively studied, the character of settlement and subsistence shifts has not been fully explored. A key variable in understanding social organization during this time is the kinds of socioeconomic shifts that occurred after adoption of the bow and arrow and the subsequent widespread use of ceramics. Sites from the Rugged Solar Project area may have the potential to generate important data for addressing this issue, particularly the presence of arrow points and abundant amounts of pottery. Specific data requirements include information on arrow point manufacture, general patterns of lithic reduction, and raw material use, including the use of exotic stone. Was arrow point production occurring at sites in the project area, or were points being discarded in exhausted condition? What does the debitage assemblage imply about the production and/or maintenance of stone tools at project sites?

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

3.1.4 Subsistence

The issues related to subsistence orientation are interwoven with the previously discussed settlement organization, and this section complements the issues discussed previously.

Among the questions addressed are the following:

- Are floral and faunal remains present?
- Which specific resources was the focus of exploitation?

- What was the role of marine resources in the subsistence system?
- Was there diachronic change in the emphasis on specific resources, and can these differences be related to specific factors, such as changes in procurement strategies?
- With respect to floral resources, the initial question is whether they have been preserved, as has been documented at an increasing number of coastal sites in the general region (e.g., Klug 1992; Klug and Popper 1995; Miksicek 1993). Archaeobotanical data are essential to address questions related to prehistoric plant resource exploitation and the seasonal availability of specific plant resources and their interface with settlement patterns.
- Finally, can changes in resource emphasis be tied to alterations in settlement organization, extractive technologies, and the availability of local resources due to coastal environmental changes (Inman 1983)?

Regarding historic resources, issues of subsistence are typically addressed from refuse deposits while settlement relates to land patents, ranching activity, etc. Refuse deposits typically contain a variety of different food and beverage containers that not only speak to the kinds of resources consumed, but also whether luxury or high-end items were purchased for consumption—a reflection of the socioeconomic context of local inhabitants. It is typical for refuse deriving from miners or other somewhat transient occupants to consist of basic food cans and liquor containers, while household refuse deposits tend to be more diverse, including cosmetics, cleaners, etc. Thus, historic refuse deposits have the potential to add to our understanding of the historical occupation of the region beyond basic titleholder information.

To address these issues, a number of data sets and analytical procedures are needed. Faunal and floral remains were targeted for collection, and were as rigorously analyzed as permitted by recovery and preservation. Fine-screen sieving (1/8-in.) of all excavated matrix was undertaken in the field to recover bone and shell remains. The interpretation of recovered archaeological materials has been undertaken in the context of the regional and local environments, and of reconstructions of past environments.

3.1.5 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:

1. a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
2. a rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
3. an urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
4. 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
5. a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

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.

4.0 ANALYSIS OF PROJECT EFFECTS

4.1 Methods

4.1.1 Survey Methods

The Phase I inventory for the Project was conducted under the supervision of Brian K. Glenn of Pacific West Archaeology, Inc. The field personnel for the survey phase consisted of Kurt McLean, Charles Bouscaren, Hillary Warren, Stephanie Hernandez, and Kyle Griffith. Whitefeather Roque of the Campo Band of Mission Indians participated in the survey as the Native American monitor. The results of the survey were presented in a report submitted to Dudek (Glenn and Victorino 2012).

As documented in the survey report by Glenn and Victorino (2012), the entire 852-acres of the initial Project study boundary were surveyed using standard pedestrian parallel transects spaced no more than 15 m (~50 ft.) apart. The exception to the parallel transect method was in area of rock outcrops. These areas were intensively inspected for evidence of bedrock milling, rock shelters, and other prehistoric or historic use.

The survey was conducted between October 12 and 24, 2011. Newly encountered and revisited sites were then formally recorded between November 18, 2011 and January 7, 2012. GPS location data were recorded for features, diagnostic artifacts, and site boundaries.

Ground surface visibility was reported as excellent (between 80 and 100 percent) in 55 percent of the Project area. This area consisted of the elevated portions of the Project area that are dominated mainly of chaparral vegetation. Visibility in the lower grassland portions of the study area was fair to good (between 25 and 80 percent). Disturbance in the grassland portions of the Project was reported as moderate to substantial, due to ranch activities, roads, and various support structures and 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, but they lacked substantial detail. Therefore, new and fully completed DPR forms were completed for the current evaluation effort performed by ASM and are provided in Confidential Appendix C of this report.

4.1.2 Test Methods

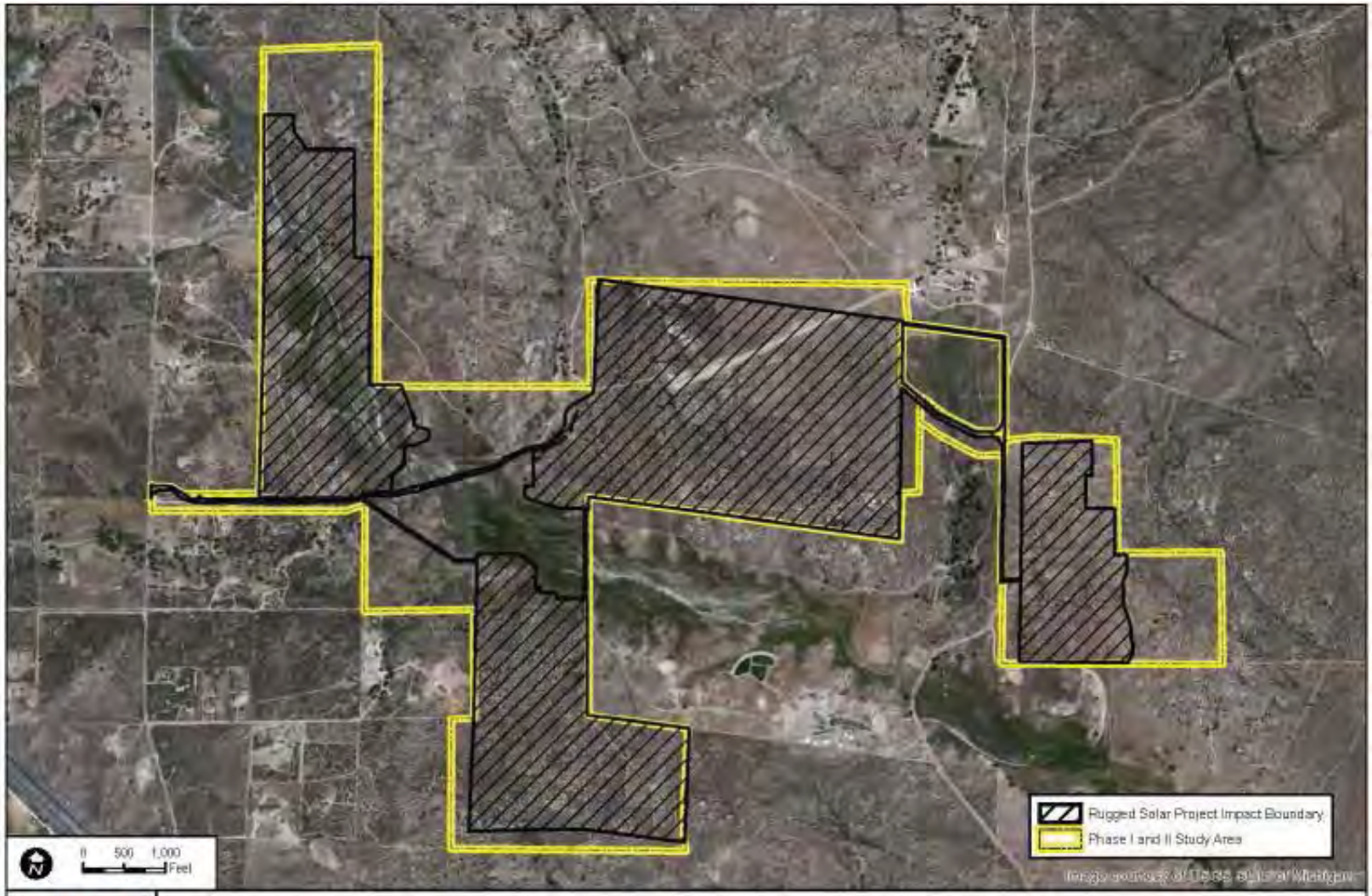
The Phase II evaluation conducted by ASM Affiliates was reduced from the initial 852-acre to a 765-acre area. Through subsequent modifications to the project design, the final Project impact area is now comprised of a total 600-acres (Figure 4.1). As a result of this most recent reduction in Project area size,12 archaeological sites and 7 isolates that were included within the initial Phase I and Phase II studies have been removed from the current evaluation. Discussion related to these resources has been included as Appendix H.

Adam Giacinto served as Field Director for the evaluation. Ian Fraser-Shapiro, Nick Hanten, Joshua Tansey, Lucas Piek, Epifonio Figueroa, Lourdes Sanchez, Clint Cole, Eric Hall, and Mike Ryan acted as the field personnel, and Howard Cuero served as the Native American monitor.

The methods used during this archaeological evaluation have been designed according to methods and procedures developed by ASM and others over many years of archaeological study in southern California, and they comply with federal and state guidelines regarding cultural resource evaluations and eligibility recommendations (Giambastiani and Basgall 2000; Hale and Becker 2006; Hale and Comeau 2010; Schaefer 1994, 2000a, 2000b). Field methods and techniques are intended to maximize artifact recovery from sparse archaeological deposits, while at the same time allowing for the careful documentation, exposure, and removal of surface and subsurface features and affording a practical level of provenience control. Because many known cultural deposits consist primarily of surface manifestations, having only limited quantities of artifacts buried at shallow depths, recovery efforts must emphasize surface collection as much as subsurface testing in order to obtain artifact samples large enough for meaningful technological and statistical analyses. Artifact treatments focused on examining aspects of morphology, condition, technology, and function. Analytical interpretations are approached largely from a functional-materialist perspective, with patterns of artifact production, use, and discard being viewed within a framework of a socioeconomic adaptation with a utilitarian technological system.

Evaluation methods are essentially sampling methods geared toward recovering a reasonable-sized assemblage to estimate the density and diversity of the cultural deposit, and to expose enough of the site deposit to determine integrity. A general approach is described below, from surface inspection and collection to the various kinds of subsurface investigation. Considerations of site-specific methods are described next, with particular attention paid to excavation unit distribution relative to proposed areas of impact.

The first step in each site evaluation was to re-locate datums, artifact concentrations, features, and landforms noted on the original site forms. Each site was then subjected to an intensive surface survey with regular-interval sweeps of the site surface, and pin-flagging of artifacts, concentrations, and features to confirm the originally mapped items and site boundaries. This phase was made more efficient with the use of color-coded pin flags representing diagnostic artifacts, features, etc. After the site was defined with pin-flags, the artifacts were collected and their positions were recorded with a decimeter-accurate Trimble global positioning system (GPS) unit.


Rugged Solar Project Impact Boundary
Phase I and II Study Area
0 500 1,000
Feet
DUDEK
7122
FIGURE 4.1
Study Area
RUGGED SOLAR CULTURAL RESOURCES TECHNICAL REPORT

Three types of units were used for subsurface excavations. All units were excavated with square corners to enable their expansion in order to more thoroughly explore deposits. Shovel Test Pits (STPs) are small, 0.5 x 0.25 m exploratory units excavated in 20-cm increments to depths of no more than 80 cm, and typically spaced at 10- to 20-m intervals or subjectively placed. It is ASM's experience that excavation below 60 cm in an STP increases the probability of error in determining the depth of artifact recovery because of the extensive sidewall scraping that occurs to remove matrix at lower depths. STPs are typically used to explore the edges of cultural deposits, providing a positive-negative indication with little reliability in terms of estimating depth of cultural deposits or integrity. The second type of excavation unit—Shovel Test Units (STU)—measures 1 x 0.5 m in size; STUs can be excavated in 10-cm or 20-cm levels, generally to depths between 40 and 100 cm, and can provide a profile of sediments. The number and placement of STUs depended upon the distributions of artifacts on the surface and from STPs. STUs were placed in areas identified through STP excavation as having higher concentrations of artifacts, and at least one STU is placed in the areas between the artifact concentrations. If features were identified during STP or STU excavation, a 1 x 1 m Control Unit (CU) was used to explore the feature. CUs were excavated in standard 10-cm levels.

All excavated matrix, regardless of unit type, was screened through $^{1}/_{8}$-in (3-mm) mesh. Typically, most of the excavation at prehistoric sites terminated between 20 and 40 cm below the surface, when either subcultural compact sediments or bedrock was typically encountered. Where deeper deposits were encountered but artifact yields dropped to trace quantities, an auger with a 10-cm diameter blade was used to assess the depth of the cultural material. Sidewall profiles from STUs and CUs were drawn and photographed where appropriate, with small soil samples taken for Munsell color and constituent classification.

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

Table 4.1 presents levels of field effort expended at each site within the current study area. The variation in the numbers and kinds of excavation units per site was based on the differences between sites, some having more extensive cultural deposits and thus requiring more work than others.

Table 4.1 Level of Effort for Evaluated Archaeological Sites within the Current Study Area

Primary	Trinomial	Age	Site Dimensions	STP (0.5 x 0.25 m)	STU (1 x 0.5 m)	CU (1 x 1 m)
37-004788	SDI-4788/20,647	Prehistoric	720 x 220 m	33	4	0
37-005171	SDI-5171	Prehistoric	330 x 160 m	10	1	--
37-010359	SDI-10,359 /20059	Prehistoric	380 x 200 m	35	6	1
37-024694/ 024695	SDI-16,373/16,374	Prehistoric	135 x 40 m	6	--	--
37-031305	SDI-19,872	Prehistoric	31 x 20 m	5	--	--
37-031306	SDI-19,873	Prehistoric	30 x 15 m	4	--	--
37-031625	SDI-20,068	Prehistoric	150 x 95 m	20	--	--
37-031676	N/A	Historic	45 x 20 m	2	--	--
37-031677	SDI-20,116	Prehistoric	140 x 73 m	7	1	--
37-031679	SDI-20,118	Both	170 x 120 m	23	2	1
37-031680	N/A	Both	185 x 70 m	19	2	--
37-032184	SDI-20,386	Prehistoric	165 x 160 m	19	1	1
37-032495	SDI-20,618	Both	220 x 35 m	5	--	--
37-032501	SDI-20,624	Prehistoric	49 x 39 m	5	--	--
37-032502	SDI-20,625	Prehistoric	31 x 6 m	4	--	--
37-032503	SDI-20,626	Both	110 x 63 m	10	--	1
37-032505	SDI-20,628	Prehistoric	75 x 48 m	8	--	--
37-032506	SDI-20,629	Prehistoric	3 x 2 m	4	--	--
37-032507	SDI-20,630	Both	63 x 32 m	5	--	--
37-032509	SDI-20,632	Both	9 x 8 m	1	--	1
37-032511	SDI-20,634	Both	175 x 80 m	10	--	--
37-032512	SDI-20,635	Prehistoric	6 x 6 m	2	--	--
37-032513	SDI-20,636	Prehistoric	95 x 25 m	7	--	--
37-032514	SDI-20,637	Both	215 x 190 m	13	--	--
37-032516	SDI-20,639	Prehistoric	20 x 6 m	3	--	--
37-032518	SDI-20,641	Prehistoric	29 x 11 m	3	--	--
37-032519	SDI-20,642	Prehistoric	4 x 5 m	2	--	--
37-032520	SDI-20,643	Prehistoric	35 x 30 m	5	--	--
37-032521	SDI-20,644	Both	100 x 35 m	5	--	--
37-032522	SDI-20,645	Prehistoric	89 x 50 m	6	--	--
37-032523	SDI-20,646	Historic	45 x 20 m	2	--	--
37-032630	SDI-20,683	Historic	70 x 35 m	2	--	--
			TOTAL UNITS	**285**	**17**	**5**

Note: CA-SDI-16367 was not relocated.

4.1.3 Laboratory and Cataloging Procedures

Initial lab procedures included cleaning (as appropriate), sorting, and cataloging of all items. Each item was individually examined and cataloged according to class, subclass, and material; counted (except for bulk invertebrate and vertebrate remains); and weighed on a digital scale. All coded data were entered into a Microsoft Access database. Data manipulation of a coded master catalog combining all sites was performed in Microsoft Excel.

The cultural material was sorted during cataloging into the following potential categories: 13 classes of prehistoric artifacts; two classes of ecofacts; ethnohistoric items, historic and modern items; and organic samples. The prehistoric artifact classes potentially included debitage, cores, utilized core tools, modified core tools, utilized flakes, retouched flakes, bifaces, percussing tools, groundstone, ceramics, bone artifacts, shell artifacts, and miscellaneous items.

When possible, cores were to be separated by platform variability into subclasses such as multidirectional, unidirectional, and bifacial types. Debitage, including both flakes and debris, were sorted by material type and cortical variation (primary, secondary, and interior) during cataloging. Length, width, and thickness measurements were to be taken for all tools and cores using a sliding caliper.

Percussing tools, potentially including hammers and abraders, were defined based on their morphology and the type of macroscopic use-wear they exhibit. Groundstone artifacts were classified by type, including millingstones and handstones. Length, width, and thickness measurements were taken on complete groundstone items.

Organic artifact classes (ecofacts) consisted of vertebrate and shell specimens. After shell was cataloged, it was sorted to taxon and coded into an Access subcatalog. Modified bone and shell artifacts were to be separated from the unmodified bone and shell assemblages. Historic and modern items were cataloged and identified as specifically as possible, but further study was not undertaken, as none were of ethnohistoric origin. Finally, other organic samples were cataloged by type.

After preliminary cataloging of the material was completed, more detailed attribute analysis of lithics and groundstone was performed. Stone artifacts (both flaked and ground) were individually analyzed for selected morphological and technological attributes, as well as material and condition, in an attempt to gain insight into the period of occupation and the range of activities undertaken. Specific analytical methods are described in the analytical results chapter. All artifacts, ecofacts, and samples were subject to appropriate conservation in the field and laboratory, including proper packaging and handling.

4.1.4 Curation

All materials recovered by ASM from this Project were placed in 4-mm bags, along with artifact tags providing catalog number, artifact description, and provenience information. All artifacts were

then placed in archival-quality boxes. At the completion of the project, all materials will be turned over for permanent curation to the SDAC or a culturally affiliated Tribal curation facility, or alternatively the materials may be repatriated to a Tribe of appropriate affinity. All DPR forms and updates created by ASM and/or Dudek will be submitted to the SCIC at the completion of the project, along with any updated studies by ASM and/or Dudek.

4.1.5 Native American Participation

Brian Glenn requested that the NAHC search their files for any recorded Native American cultural resources located within a seven Section area that includes, and surrounds, the APE (Glenn and Victorino 2012). Dave Singleton of the NAHC responded that the Sacred Lands File does indicate the presence of Native American cultural resources within the records search area (Appendix F). As the information relating to such resources is managed by the NAHC, and held by local tribal communities, it is not clear whether the recorded resource(s) intersects the MUP limits, the original 852-acre archaeological study area, or the surrounding 3,593 acres within the records search buffer. Per the County of San Diego Project Scoping Letter (DPLU 2011:17), County staff took charge of contacting the local tribal representatives provided on the Native American Contact List. Letters were sent to the individuals listed by the NAHC on June 18, 2012. To date, County staff has reported no tribal responses. During the current testing activities conducted by ASM Affiliates, Howard Cuero of the Campo Kumeyaay Nation acted as the Native American monitor. Following this testing, a single-day pedestrian survey of two additional access corridors was conducted. Gabe Kitchens of Red Tail Monitoring and Research, Inc. served as the Native American monitor. No specific concerns were expressed to the ASM field crew regarding the project or sites in the area by either tribal representative.

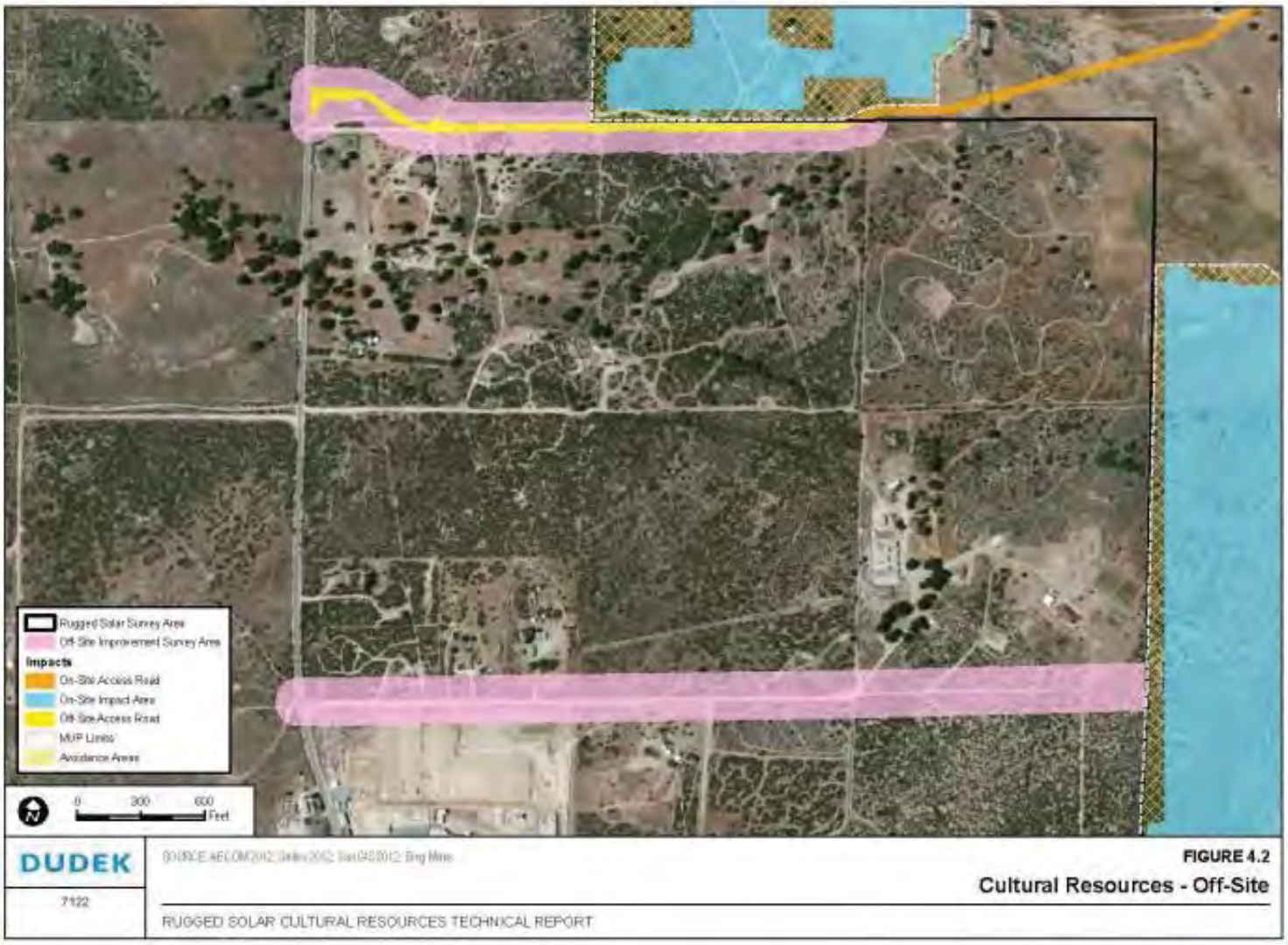
4.2 Results

This section presents the results of the current Phase II evaluation conducted by ASM Affiliates for the area within the current Project limits.

4.2.1 Test Results

A total of 32 sites are located within the current 600-acre study area (Figure 4.4a; Confidential Appendix B). All of these sites were evaluated during the current investigation. Each site is treated separately, with a discussion of the kinds and numbers of analytical units employed during fieldwork. Site assemblage compositions and distributions are detailed and used to assess the function and significance for each site. A sketch map of the levels of effort at each site, along with the location of surface artifacts and features, is included in Confidential Appendix B.

Figure 4.2 Map showing the areas surveyed for the off-site improvements not previously surveyed during the Phase I investigation



A total of 30 isolates have been documented within the current study area. In addition to the MUP, on-site access routes, and collection allignments, two off-site access were proposed to provide access from the west of the Project (Figure 4.2). These corridors were surveyed on June 4, 2012 by James Daniels, Tom Taylor, and Sarah Stringer-Bowsher of ASM Affiliates. Gabe Kitchens of Red Tail Monitoring and Research, Inc. served as the Native American Monitor. The southern-most of these proposed access routes has since been revised, and will no longer be used. The results of the access road survey identified a possible historic well (P-37-032699) and a single flake isolate (P-37-032700). During the evaluation effort, a single unifacial millingstone fragment (P-37-032729) was also identified while traversing between sites. The remaining 27 isolated finds were identified within the MUP (Figure 4.4b Confidential Appendix B).

4.2.2 Field Results from Sites within the Proposed APE

SDI-4788/20,647

SDI-4788/20647 is a large prehistoric habitation site that consists of bedrock milling and an associated low-density scatter of flaked lithic tools, lithic debitage, groundstone, ceramic sherds, lithic cores, modified cobbles, and percussing tools. Mixed chaparral and buckwheat community plants dominate this area, including scrub oak, chamise, redshank, buckwheat, *Ephedra*, and assorted native and nonnative grasses. Moderately thick ground cover, as bolstered by recent rains, allowed for approximately one-third of the ground surface to be directly observed.

As part of this project conducted by ASM, the central and southeastern portions of this site were surveyed, recorded, collected, and tested. The greatest concentration of surface and subsurface cultural material was distributed around the single milling station within the current project area, located in the southeast portion of the site. SDI-4788/20647 has been surveyed and evaluated a number of times since its initial recording. As it is currently recorded, the site covers an approximate 720 x 220 m area along McCain Valley Road.

May and Berryman originally recorded SDI-4788 in 1973 as a prehistoric bedrock milling complex with a house pit and milling stations. The noted house pit has not been relocated during any subsequent investigation. P. Haynal of the SDSU CRM Center resurveyed the northern and western portion of the site in 1986, observing two milling features and an associated scatter of ceramic sherds, lithic tools, and lithic flakes. ASM updated information on the site in 2005 and relocated three flakes, the milling outcrop, and five pieces of reworked glass within the site boundary. In December 2005, the Bureau of Land Management (BLM) conducted a survey of the narrow portion of land between the McCain Valley Road and the Rough Acres Ranch fence line, noting three lithic flakes.

During archaeological monitoring for the SDG&E 13 Pole Installation Project in 2010, 30-in.-diameter holes were excavated for eight transmission poles and one anchor within SDI-4788. P245830 was the only one of these poles within the current project area that yielded subsurface

cultural material. The soil that was removed at approximately 1 ft. depth contained a single felsite flake, recorded by Brian Williams of ASM (Williams 2010). The monitoring report for this project suggested that the impacted portions of the site are not contributing elements.

Shortly after the pole installation was completed for the SDG&E 13 Pole Installation Project, ASM evaluated the southernmost portion of SDI-4788 for the SDG&E Sunrise Powerlink. Three negative STPs were excavated within the footprint of structure EP 209, located east of McCain Valley Road, at the southern extent of the recorded site boundary (Williams and Whitley 2012).

In 2010, Micah Hale and Brad Comeau of ASM evaluated the central portion of SDI-4788 for the Tule Wind Project. Overall, surface inspection and artifact collection generated a total of 45 artifacts, including two crude biface fragments, six cores, 36 pieces of lithic debitage, and one Tizon Brownware ceramic sherd. Hale and Comeau recorded one ceramic sherd, five volcanic cores, 12 pieces of lithic debitage, and one handstone within the portion of SDI-4788 that intersects both the Tule Wind Project and the Rugged Solar Project boundaries. All but the handstone and one volcanic core were collected. These two items were relocated and collected as part of the current evaluation activities. Of the total 40 STPs that were excavated by Comeau and Hale, 24 intersected the proposed area for the Rugged Solar Project (Figure 4.5 Confidential Appendix B). Two of these STPs, located within the middle portion of the site, west of McCain Valley Road, each yielded four pieces of debitage. The remaining 22 STPs, primarily distributed east of McCain Valley Road, were negative for subsurface cultural material. Based on the results of this archaeological evaluation, the tested areas were recommended as not significant, having no cultural deposits that could contribute to the potential NRHP or CRHR eligibility of this site.

During the Phase I survey conducted for the Rugged Solar Project in 2012, Brian Glenn of Pacific West Archaeology re-recorded the southeastern portion of SDI-4788 as RS-71 (Glenn 2012). This resulted in the site being assigned a redundant trinomial at the SCIC, SDI-20,647. A spatial gap in the deposition of surface material was created through the collection of artifacts during the Tule Wind Project investigation, effectively dividing this area from the artifacts to the north. For this reason, Glenn recorded this southeastern portion as a separate site, RS-71 (Glenn 2012). ASM has continued to use the label “SDI-4788,” including in the testing plan submitted to the County of San Diego, as this most closely corresponds with the SCIC protocol. However, in order to maintain clarity, a DPR site record update has also been submitted to the SCIC for SDI-20,647.

Site Structure, Artifact Recovery, and Assemblage Composition

The investigation conducted by ASM was restricted to those areas of SDI-4788/20647 that intersected the proposed project APE. The site surface was intensively surveyed, mapped, and collected. The subsurface character of the site was then assessed through excavation of 33 STPs and four STUs. Evaluation efforts yielded three biface fragments, three retouched flakes, 373 pieces of lithic debitage, 28 pieces of groundstone, 67 prehistoric ceramic sherds, four lithic cores, 76 pieces of vertebrate remains (including gopher, squirrel, rabbit and ungulate), two

modified cobbles, two percussing tools, and one historic "HEINZ" bottle (*n* = 559 total artifacts). Detailed material analysis is provided within the Laboratory Analyses section.

Disturbances/Integrity

Natural aeolian and alluvial processes have served to transport and deflate the surface soil throughout this area. Bioturbation was noted in nearly every unit, though most evidently in STU-1, STU-2, and STU-2B. The construction of McCain Valley Road, ranching activities, energy projects, and previous archaeological evaluations has impacted the integrity of this site. It is evident, based on aerial imagery for this location, that a number of east/west-trending paths have been graded from McCain Valley Road through the site area. As intensive ranching of this property has occurred for over 100 years, it is unclear as to when, or for what purpose, these areas were graded.

Following an intensive pedestrian survey of the site, conducted in 5-m transects, the locations of surface artifacts were recorded with a Trimble GPS. Artifacts were collected, bagged, and assigned a unique field identifier. A total of 270 surface artifacts were collected (Figure 4.6 Confidential Appendix B). The general surface scatter was noted to include two biface fragments; three retouched flakes; 175 pieces of quartz, chert, and volcanic debitage; 16 handstones (both complete and fragmentary); six millingstone fragments; one piece of unidentified groundstone (fire-affected); 54 ceramic sherds; four quartz and volcanic cores; two modified cobles; and two percussing tools.

During pedestrian survey, the greatest quantity and variety of surface artifacts was noted to be within the central and southeastern portions of SDI-4788/20647. Surface material was concentrated in the areas just south of the Rough Acres Ranch fence line and east of McCain Valley Road, as well as around the bedrock milling feature near the southeastern extent of the site.

Features within the current study area of SDI-4788/20647 were noted to include a wind-powered water pump and cistern, two possible midden deposits, and a single milling station. The wind-powered pump feature consists of a metal turbine, gearbox, frame, pump rod, and concrete reservoir. Based on USGS maps, it was likely constructed between 1956 and 1960. The northern midden-like deposit, located near the center of the recorded boundary for the site, measures approximately 25 x 10 m. It is characterized by a slightly darker brown coloration and a more silty composition than the surrounding surface soil matrix. The southeastern midden-like deposit was recorded just to the northwest of the bedrock milling feature. It measures approximately 8 x 6 m, and is characterized by dark brown sandy silty loam with an increased density of lithic debitage, lithic tools, ceramic sherds, and groundstone on the surface. The milling station, located just to the south, is comprised of one nearly flat granitic boulder, measuring 15 x 8 m, with more than nine highly exfoliated slicks and slick remnants (Figure 4.7). Artifacts noted upon the feature, or within less than 50 cm of its perimeter, included 41 pieces of debitage, three handstone fragments, two undifferentiated pieces of groundstone, 45 ceramic sherds, and three volcanic cores.

ASM excavated a total of 33 STPs and four STUs within the portion of SDI-4788/20647 that is encompassed by the proposed project APE (Figure 4.8 Confidential Appendix B). Of these, 11 units yielded subsurface cultural material, while the remaining 22 contained no evidence for any subsurface deposits. Excavated depths ranged from 10 to 80 cm. STPs were used to determine the extent and relative densities of the subsurface deposits. The defined boundary of the site was considered accurate when perimeter STPs were sterile or yielded very limited subsurface cultural material. With the exception of the southeastern portion of SDI-4788/20647, the subsurface cultural deposit at SDI-4788/20647 has been observed to be low in density and artifact variety. A total of 27 pieces of lithic debitage and two pieces of vertebrate remains were recovered through this excavation (see analysis section, Vertebrate Faunal Remains).

Figure 4.7 North facing overview of SDI-4788/20647 and milling station within southeastern portion of the site

The western portion of the site, located west of McCain Valley Road, yielded very sparse subsurface material. Of the total six STPs that were excavated, three yielded subsurface material from 0 to 20 centimeters below surface (cmbs). Excavation recovered four pieces of lithic debitage and one piece of vertebrate remains. Excavation was ceased for these STPs when a distinct soil change to decomposing granitic rock was observed, generally below a depth of 40 cm.

In general, composition of the subsurface deposit within the central portion of SDI-4788/20647, east of McCain Valley Road, did not reflect the relative diversity and density of artifacts that was represented on the surface. A total of 27 STPs were excavated in this area. Of these, 11 yielded subsurface material and 16 were sterile. Artifacts were recovered from 0 to 60 cmbs, with the majority yielded from less than 40 cmbs. Excavation recovered 23 pieces of lithic debitage and one piece of vertebrate remains. The western portion of this area, in the vicinity of the northern midden-like concentration, provided the deepest deposits. STP-16 yielded one quartz flake in the 0-20-cm level and two volcanic flakes from 40-60 cm. STP-17 yielded nearly the same subsurface content, with four pieces of debitage extending to a depth of 60 cmbs. Within both of these units, the soil transitioned at approximately 45 cm below the surface, from moist, moderately compact silty, sandy loam to olive brown, compact loamy sand with increased gravel content. Based on the sparse composition of cultural material and the shallow depth of the darker soil transition, it appears that the midden-like deposit in this area is poorly developed. STP-28, located just east of the milling station, yielded five pieces of debitage, charcoal, and one piece of fire-affected rock (FAR) from 0-20 cm. The 20-40-cm level was nearly equivalent, providing four pieces of debitage and one piece of FAR. Below this depth, the soil transitioned from a moderately compact reddish-brown loam to a sterile, very compact gravely subsoil. Excavation was terminated at 60 cmbs.

All four STUs were excavated in 10-cm arbitrary levels, with terminal depths ranging from 30 to 40 cmbs. All STUs yielded cultural material, which totaled 250 artifacts. Total recorded artifacts included one cryptocrystalline silica biface fragment; 171 pieces of volcanic, quartz, chert, and chalcedony debitage; one piece of groundstone; 13 prehistoric ceramic sherds; and 64 pieces of vertebrate remains (see analysis section, Vertebrate Faunal Remains).

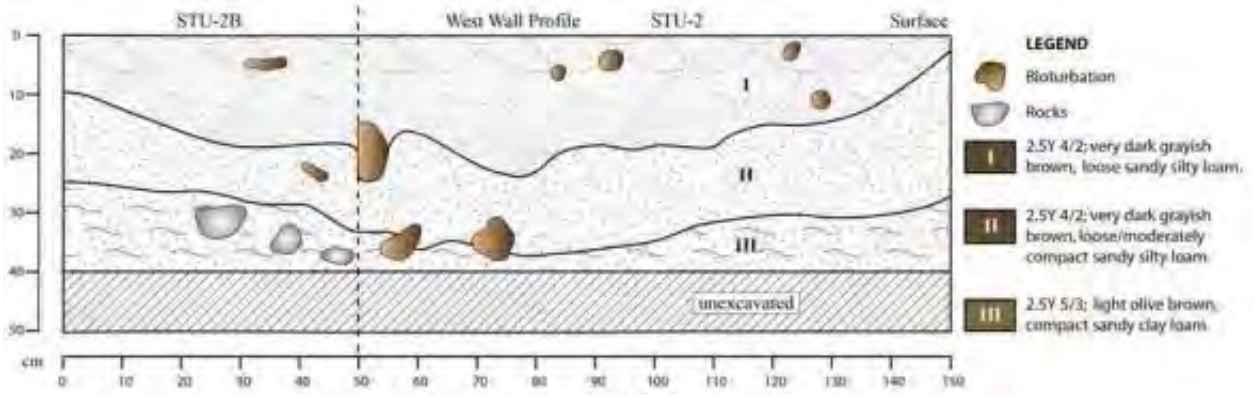
STU-1 was excavated to a depth of 40 cm (Figure 4.9). The unit was placed within a concentration of surface artifacts comprised of debitage, groundstone, and lithic cores. The surface soil surrounding STU-1 appeared to be more midden-like than other portions of the site. Relative to the surface, the subsurface soil was observed to be limited in introduced organic content, and the distribution of cultural material was much lower in density. Excavation yielded a total of five pieces of debitage from 0 to 40 cmbs. It is quite likely that the activities relating to the construction of McCain Valley Road may have destroyed the primary cultural deposit associated with this portion of the site.

Figure 4.9 South facing overview of SDI-4788/20647 from the location of STU-1

STU-2 was placed just north of the bedrock milling feature, within an area of dark brown midden-like soil and dense surface artifacts. A total of one cryptocrystalline silica biface fragment, 63 pieces of debitage, one groundstone fragment, six ceramic sherds, and 22 pieces of vertebrate remains were recovered (n = 96 subsurface artifacts). Charcoal and two pieces of FAR were noted from 0 to 30 cmbs. Soil transitioned from a very dark brown sandy silty loam to olive brown gravelly silty loam in the 20-30 cm level, though soil continued to be mottled until the terminal depth of 40 cm. Bioturbation was noted within the sidewalls of the 20-30-cm level.

STU-2B was excavated as a southern expansion of STU-2 in order to gain additional insight into the subsurface character of this location. Excavation yielded 98 pieces of lithic debitage, five ceramic sherds, and 42 pieces of vertebrate remains from 0 to 40 cmbs (n = 145 subsurface artifacts). Charcoal and two pieces of FAR were noted from 0 to 30 cmbs. As with STU-2, the final 30-40-cm level marked a significant decrease in the quantity of subsurface cultural material. Indications of bioturbation were noted in the sidewall of this unit to a depth of 38 cm. The subsurface soil transition reflected the same pattern as the adjacent unit (Figure 4.10)

Figure 4.10 East wall profile of STU-2 and STU-2B at SDI-4788/20647



STU-3 was placed on the southern, downhill, side of the milling feature. A total of two pieces of debitage and two ceramic sherds were recovered from 0 to 20 cmbs (n = 4 subsurface artifacts). Limited evidence of bioturbation was observed in the sidewall profiles. The soil transitioned from brown sandy silt to yellow-brown very compact gravely silty sand at 20 cmbs. The unit was terminated at a depth of 30 cmbs.

The artifacts recovered from the evaluation effort at SDI-4788/20647 include three bifaces, three retouched flakes, four cores, two modified cobbles, 373 pieces of debitage, two hammer stones, 28 pieces of groundstone, 67 potsherds, 76 pieces of vertebrate remains (see analysis section, Vertebrate Faunal Remains), and one historic artifact (Table 4.2).

Discussion and Site Summary

SDI-4788/20647 is a large prehistoric habitation site characterized by a highly weathered milling station and a general sparse to moderately dense surface scatter of prehistoric material. The artifact assemblage indicates that this was a seasonal camp subject to serial occupation, in which activities were principally associated with food processing/production and the manufacturing of tools, using primarily locally procurable materials. The distribution of cultural material was encompassed by the boundaries previously established by ASM in 2010 and the Phase I survey conducted by Pacific Western in 2012. Testing revealed one primary area of subsurface cultural material, located northwest of the bedrock milling feature near the southeastern extent of the site. Approximately 43.8 percent of the total subsurface material from SDI-4788/20647 came from STU-2 and STU-2B. Subsurface testing surrounding this area yielded significantly less cultural material. This suggests that this deposit is relatively isolated and that the densest and most variable area of subsurface archaeological material has been identified in these testing units.

Table 4.2 Artifacts Recovered From the Evaluation of SDI-4788/20647

			Class										
Recovery Type	**Unit**	**Level**	**Biface**	**Retouched Flake**	**Core**	**Modified Cobble**	**Debitage**	**Percussing Tool**	**Groundstone**	**Ceramic (Aboriginal)**	**Vertebrate Remains**	**Historic Artifact**	**Grand Total**
Surface			2	3	4	2	175	2	27	54		1	**270**
STP	2	0-20	-	-	-	-	2	-	-	-	1	-	**3**
	4	0-20	-	-	-	-	1	-	-	-	-	-	**1**
	6	0-20	-	-	-	-	1	-	-	-	-	-	**1**
	9	0-20	-	-	-	-	2	-	-	-	-	-	**2**
	10	0-20	-	-	-	-	2	-	-	-	-	-	**2**
		20-40	-	-	-	-	1	-	-	-	-	-	**1**
	14	0-20	-	-	-	-	-	-	-	-	1	-	**1**
	16	0-20	-	-	-	-	1	-	-	-	-	-	**1**
		40-60	-	-	-	-	2	-	-	-	-	-	**2**
	17	0-20	-	-	-	-	1	-	-	-	-	-	**1**
		20-40	-	-	-	-	1	-	-	-	-	-	**1**
		40-60	-	-	-	-	2	-	-	-	-	-	**2**
	19	0-20	-	-	-	-	1	-	-	-	-	-	**1**
	27	20-40	-	-	-	-	1	-	-	-	-	-	**1**
		40-50	-	-	-	-	-	-	-	-	10	-	**10**
	28	0-20	-	-	-	-	5	-	-	-	-	-	**5**
		20-40	-	-	-	-	4	-	-	-	-	-	**4**
STU	1	0-10	-	-	-	-	2	-	-	-	-	-	**2**
		20-30	-	-	-	-	2	-	-	-	-	-	**2**
		30-40	-	-	-	-	1	-	-	-	-	-	**1**
	2	0-10	-	-	-	-	28	-	-	1	3	-	**32**
		10-20	-	-	-	-	19	-	-	5	10	-	**34**
		20-30	1	-	-	-	14	-	1	-	9	-	**25**
		30-40	-	-	-	-	2	-	-	-	-	-	**2**
	2B	0-10	-	-	-	-	52	-	-	3	12	-	**67**
		10-20	-	-	-	-	16	-	-	2	16	-	**34**
		20-30	-	-	-	-	26	-	-	-	12	-	**38**
		30-40	-	-	-	-	4	-	-	-	2	-	**6**
	3	0-10	-	-	-	-	1	-	-	-	-	-	**1**
		10-20	-	-	-	-	4	-	-	2	-	-	**6**
Grand Total			**3**	**3**	**4**	**2**	**373**	**2**	**28**	**67**	**76**	**1**	**559**

While it is possible that additional cultural material may be recovered through additional subsurface investigation, the assemblage would closely correspond with that which has already been recorded. For this reason, it is determined this area has been adequately evaluated, and that data redundancy has been achieved. Based on the previous work conducted on this site (Hale et al. 2010; Williams 2010; Williams and Whitley 2012), the pedestrian survey conducted by Brian Glenn of Pacific Western (Glenn 2012), and the testing program recently conducted by ASM, it

is recommended that the site is not a significant resource pursuant to the guidelines of the Local Register, the CRHR, and CEQA, nor is the site significant under County RPO. SDI-4788/20647 is recommended as not eligible for listing in the CRHR under Criterion 4, as it does not have additional substantial research potential. However, under the County of San Diego's Guidelines for Determining Significance (2007), SDI-4788/20647 is an important resource; but impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation of artifacts and monitoring of project-related ground disturbance.

SDI-5171

This site was first recorded in 1975 by the BLM as a possible rock shelter with associated cultural material. Hale et al. (2010) of ASM relocated the site and extended the boundary to include an additional 30 brownware sherds and eight volcanic flakes. The site encompasses an area of approximately eight acres (32,169 m^2). Glenn (2012) relocated the site and identified five features within the project area. Feature 1 consisted of the previously recorded rock shelter with associated midden soil, FAR, brownware sherds, a granite handstone fragment, and debitage. Feature 2 is a bedrock milling feature containing one milling slick. Features 3, 4, and 5 are concentrations of FAR. Additional artifacts noted on the surface included granite millingstone fragments, several handstones, brownware sherds, a volcanic hammer/scraper, and two fragments of burnt and worked animal bone.

Site Structure, Artifact Recovery, and Assemblage Composition

The portion of the site that intersects the current project area is on a slight slope with bedrock outcrops on the knoll to the east and a small drainage to the west (Figure 4.11). The current evaluation effort for the portion of SDI-5171 was conducted on July 6, 2012 as it was determined the site would not be avoided by project redesigns. The evaluation was conducted by Nick Hanten and Scott Bigny of ASM. They were accompanied by Gabe Kitchens, Native American monitor from Red Tail Monitoring and Research, Inc.

The evaluation effort began with an intensive pedestrian survey of the portion of the site that intersected the current project area. The artifacts encountered on the surface were recorded with a Trimble GPS unit and collected; these included one Desert side-notched projectile point, one core, 43 pieces of debitage, one hammer stone, one handstone, and 46 potsherds. The rock shelter and bedrock milling features were relocated and found to be in the same condition as previously reported. The hearth features recorded by Glenn appeared to be just small very sparse scatterings of FAR.

Figure 4.11 Photographic overview of SDI-5171, view to the east

Ten STPs and an STU were excavated across the portion of the site intersecting the current project area (Figure 4.12 Confidential Appendix B). STU-1 was excavated in the location of the Desert side-notched projectile point, which fell near Glenn's "Locus A" or lithic and ceramic concentration. STU-1 was only excavated to a depth of 10 cm. The unit terminated when extremely hard decomposing granite was encountered. The unit yielded four pieces of debitage and three ceramics. Only four of the STPs yielded subsurface artifacts: STPs 3, 7, 8, and 9. STPs 7, 8, and 9 were within or just outside of the concentration of artifacts designated as "Locus A" by Glenn, while STP-3 was located down slope just inside the project APE. The artifact count from the excavated units was low, yielding a total of just nine pieces of debitage and three potsherds. STP-6, excavated near the recorded rock shelter, was negative for subsurface materials and was only excavated to a depth of 16 cmbs, at which point decomposing granite was encountered.

The artifact assemblage recovered from SDI-5171 includes one Desert side-notched projectile point, one core, 52 pieces of debitage, one hammer stone, one handstone, and 49 potsherds (Table 4.3).

Discussion and Site Summary

This site was recorded by Glenn as including a rock shelter, bedrock milling, and associated blown-out hearth features, along with debitage and ceramic scatters. During the current investigation, the

reported features were identified and found to be in the same condition as previously recorded. The hearth features, however, appeared to be nothing more than a few sparse scatterings of FAR in no discernible concentration. A fair amount of debitage, ceramics, and a few tools were collected from the surface of the portion of the site that intersects the current Project area. However, the site lacked a substantial subsurface deposit of artifacts. The material recovered from the site suggests that the area was likely used as a brief seasonal stopover for lithic reduction, tool manufacture and maintenance, and the processing of local food resources. There does not appear to have been a long-term occupation, as no midden soils were encountered. The rock shelter is situated at the edge of the Project area, but is contained entirely within an avoidance area. Therefore, the rock shelter will not be impacted by the Project. This portion of the site that intersects the current Project area did not yield any significant information regarding the prehistory of the region; rather, the recovered assemblage is typical of other evaluated sites. The portion of SDI-5171 evaluated during the current investigation is thus recommended as not eligible for listing in the CRHR, The Local Register, or RPO designation and as not significant under CEQA. However, under the County of San Diego's Guidelines for Determining Significance (2007), SDI-5171, including the tested portion, is an important resource; but impacts to the importance of this portion of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation of artifacts and monitoring of project-related ground disturbance. The eastern half of the site has not been formally evaluated and is therefore treated as significant under County guidelines. Therefore, temporary fencing during project construction for the area outside of the current project area is recommended to protect that portion of the site from any construction-related impacts.

Table 4.3 Artifacts Recovered During the Evaluation of SDI-5171

			Class					
Recovery Type	**Unit**	**Level**	**Biface**	**Core**	**Debitage**	**Groundstone**	**Ceramic (Aboriginal)**	**Grand Total**
Surface			1	1	43	1	49	95
STP	8	20-30	-	-	1	-	-	1
	9	0-20	-	-	1	-	-	1
	3	0-20	-	-	1	-	-	1
	7	20-40	-	-	2	-	-	2
STU	1	0-10	-	-	4	-	-	4
Grand Total			**1**	**1**	**52**	**1**	**49**	**104**

SDI-10,359/20,059

Originally recorded by the BLM in 1979, SDI-10,359 reportedly consisted of flakes, ceramics, a handstone, and a bedrock outcrop containing two basins and a slick. ASM Affiliates relocated the site in 2010 during the survey for the Tule Wind Project and expanded the site boundary to encompass an area of 325 x 150 m (Hale et al. 2010). The survey resulted in the discovery of five additional milling elements, including one mortar and four slicks, 13 volcanic flakes, eight pieces of quartz debitage, and two potsherds. The largest distribution of artifacts was located on

top of a large hill with granitic outcrops overlooking Tule Creek and McCain Valley. Additionally, ASM located a small lithic scatter just west of SDI-10,359, measuring 11 x 9 m and consisting of three volcanic interior flakes and one quartz interior flake. The site was originally separated from SDI-10,359 because vegetation was extremely dense between the two resources, and thus the site was given a new trinomial of SDI-20,059 (Figure 4.13). Brian Glenn of Pacific West Archaeology subsequently combined the two sites during the Phase I survey for the currently proposed Project (Glenn and Victorino 2012). Glenn identified three additional milling features, each with a single milling slick, as well as a locus of historic refuse measuring 7 x 4 m and consisting predominantly of smashed single- and multi-serve cans, along with glass items, kitchen items, and machinery parts. The diagnostic historic artifacts date the deposit to around 1935. Prehistoric artifacts, including quartz and volcanic debitage, flaked tools, and a wonderstone core, were identified just outside of the historic locus. Only the western half of the site intersects the current Project area; thus, this was the only portion of the site evaluated.

Figure 4.13 Overview of SDI-10,359/20,059, view northeast.

Site Structure, Artifact Recovery, and Assemblage Composition

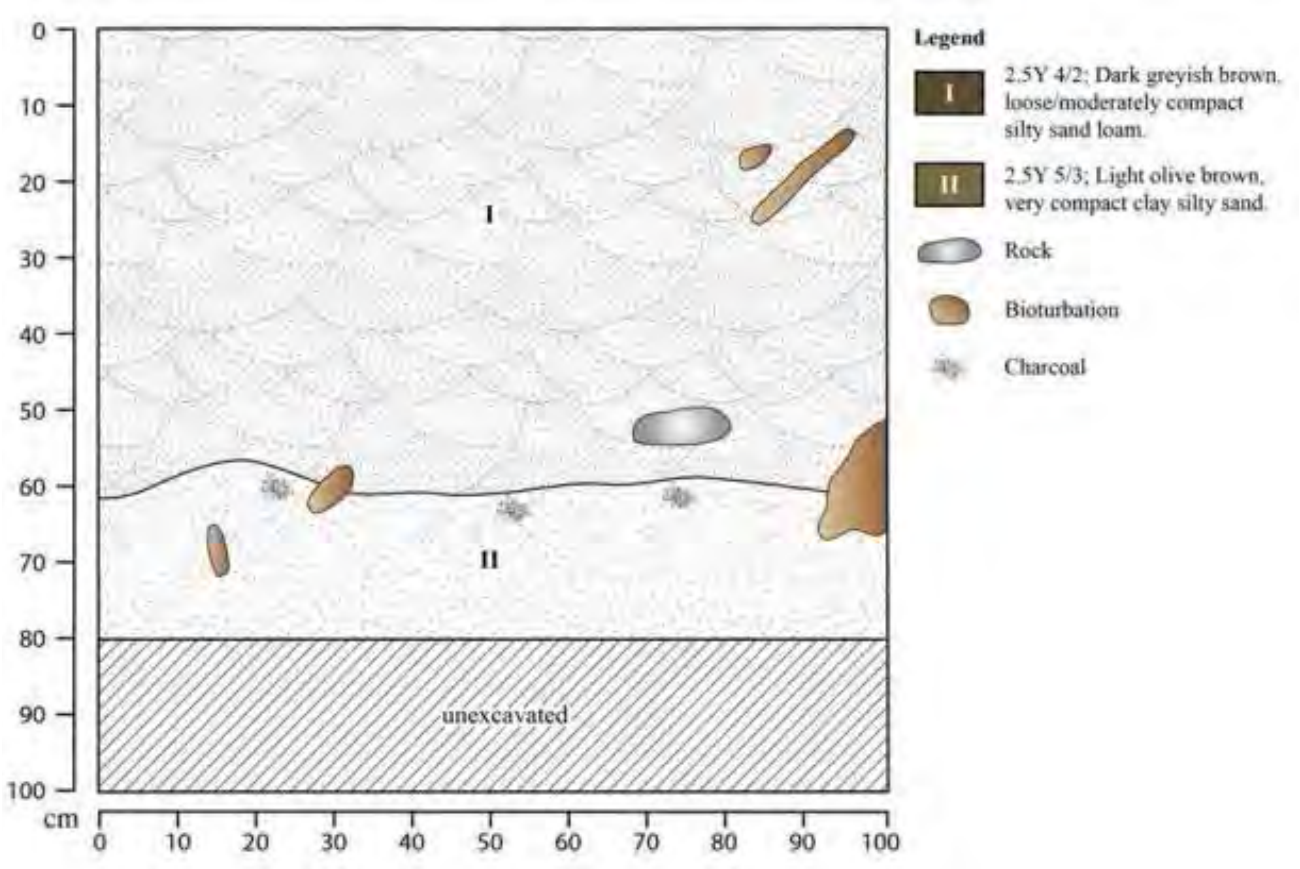
The current investigation began with an intensive pedestrian survey at 5-m intervals, covering the area within the previously defined site boundary as well as a 20-m buffer around it, but

excluding the portion of the site outside of the current study area. This resulted in the identification of 81 surface artifacts including one biface, four retouched flakes, one core, 81 pieces of debitage, one hammer stone, one piece of groundstone, one potsherd, and one historic tea kettle (Figure 4.14 Confidential Appendix B). Several of these artifacts expanded the western site boundary slightly, increasing the site size to include a total area of 12.4 acres (50,300 m^2).

A total of 35 STPs, six STUs, and one CU were excavated within the site boundary in the current study area. The excavations were placed at approximately 30 m intervals and ranged between 20 and 60 cm in depth. Of the 35 STPs, only eight proved positive for subsurface deposits and yielded a total of just 15 pieces of debitage. The STUs were placed judgmentally across the site based on the location of positive STPs and surface artifacts. The range of excavated depth was between 20 and 80 cmbs. STUs 1, 2, and 3 were the only positive excavation units of that type and yielded a total of four pieces of debitage. CU 1 was placed within a small and sparse scatter of debitage on the surface 7 m southwest of STP-22. Excavation of CU 1 produced artifacts from 0 to 80 cm below the surface, including 81 pieces of debitage and three pieces of groundstone. Two gradational strata were encountered during the excavation of CU 1 (Figure 4.15 and Figure 4.16). Stratum I, from 0-40 cmbs, consisted of brown loamy sand, and Stratum II, from 40-80 cmbs, consisted of pale brown very fine sand.

Figure 4.15 Photograph of east wall of CU-1 at SDI-10,359.

Figure 4.16 Profile illustration of the east wall of CU-1 at SDI-10,359



The subsurface investigations yielded a total of 100 pieces of debitage and three pieces of groundstone. The density of artifacts associated with SDI-10,359 is rather low. The western portion of the site tested during this investigation yielded a greater proportion of subsurface artifacts than the center of the site. This is likely due to the movement of sediments and artifacts down slope over time.

The total number of artifacts recovered from the evaluation efforts at SDI-10,359 was 195 and included one early/middle-stage biface and one late-stage biface, four retouched flakes, one multidirectional core, 181 pieces of debitage, one hammer stone, four pieces of groundstone (including one handstone and three millingstone fragments), one potsherd, and one historic-period tea kettle (Table 4.4). Debitage made up 93 percent of the artifact assemblage, of which 88 percent consisted of interior flakes, with the remaining 12 percent consisting equally of secondary flakes and shatter. The predominant raw lithic material types were volcanic, comprising 59 percent and quartz at 39 percent.

Table 4.4 Artifacts Recovered From the Evaluation of SDI-10,359

			Class								
Recovery Type	**Unit**	**Level**	**Biface**	**Retouched Flake**	**Core**	**Debitage**	**Percussing Tool**	**Groundstone**	**Ceramic (Aboriginal)**	**Historic Artifact**	**Grand Total**
Surface			1	4	1	81	1	1	1	1	**91**
STP	1	0-20	-	-	-	1	-	-	-	-	**1**
	2	0-20	-	-	-	1	-	-	-	-	**1**
	6	20-40	-	-	-	2	-	-	-	-	**2**
	10	0-20	-	-	-	1	-	-	-	-	**1**
	20	20-40	-	-	-	1	-	-	-	-	**1**
	22	20-40	-	-	-	2	-	-	-	-	**2**
		40-60	-	-	-	3	-	-	-	-	**3**
	25	0-20	-	-	-	2	-	-	-	-	**2**
	34	20-40	-	-	-	1	-	-	-	-	**1**
		40-60	-	-	-	1	-	-	-	-	**1**
STU	1	10-20	-	-	-	1	-	-	-	-	**1**
	2	10-20	-	-	-	1	-	-	-	-	**1**
	3	0-10	-	-	-	1	-	-	-	-	**1**
		60-70	-	-	-	1	-	-	-	-	**1**
Unit	1	0-10	-	-	-	9	-	-	-	-	**9**
		10-20	-	-	-	7	-	-	-	-	**7**
		30-40	1	-	-	7	-	-	-	-	**8**
		40-50	-	-	-	22	-	2	-	-	**24**
		50-60	-	-	-	17	-	-	-	-	**17**
		60-70	-	-	-	14	-	1	-	-	**15**
		70-80	-	-	-	5	-	-	-	-	**5**
Grand Total			**2**	**4**	**1**	**181**	**1**	**4**	**1**	**1**	**195**

Discussion and Site Summary

SDI-10,359 consists of bedrock milling features and a large, low-density lithic scatter. The presence of bedrock milling and several pieces of groundstone provides evidence for food processing and that the site was occupied for an extended period of time and possibly seasonally. The dominance of interior flakes in the artifact assemblage from SDI-10,359 and the presence of several lithic tools demonstrate the area was also used for lithic reduction and tool maintenance. While the one potsherd provides evidence the site is associated with a late prehistoric occupation, there is a lack of other subsurface in situ datable materials that would provide additional information regarding the length of and continuity of occupation. The low density of subsurface deposits and generally sparse nature of the surface distribution of artifacts in the area of the site tested do not provide substantial significant information regarding the prehistory of the region. Thus, the portion of the site evaluated during the current investigation is recommended as not significant pursuant to the guidelines of the Local Register, the CRHR, and CEQA, nor is the site significant under County RPO. The tested portion of the site is recommended as not eligible for listing in the CRHR under Criterion 4, as it does not have additional substantial research

potential. However, under the County of San Diego's Guidelines for Determining Significance (2007), SDI-10,359, including the tested portion, is an important resource; but impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation of artifacts and monitoring of project-related ground disturbance. The eastern portion of the site was not tested at this time and is therefore treated as significant under County Guidelines. Temporary fencing during project construction is recommended during construction to protect the eastern portion of the site from construction related impacts.

SDI-16,367

This prehistoric site was first recorded in 2001 by Philip de Barros as a sparse lithic and ceramic scatter measuring approximately 65 x 40 m. Artifacts noted included five quartz and volcanic secondary flakes as well as Tizon Brownware and Colorado Buffware ceramic rim sherds. During the Phase I survey, Brian Glenn attempted to re-locate the site at its previously plotted location in the northwest quarter of the northwest quarter of Section 21, but he was unable to do so. However, Glenn identified another site 55 m south southeast of the plotted location of SDI-16,367 that matched the description of SDI-16,367. Glenn recorded the site as a new resource and it was assigned a permanent trinomial, SDI-20,633. The site was within the previously defined 852-acre Project area surveyed by Glenn during the Phase I investigation, but it is now outside of the redefined and current 765-acre Project area.

Site Structure, Artifact Recovery, and Assemblage Composition

SDI-16,367 was not relocated in its previously plotted location. As a result, during the current investigation, no artifacts were collected, and no subsurface investigations were conducted

Discussion and Site Summary

During the current investigation, ASM was unable to re-locate SDI-16,367 and thus was unable to evaluate the site for significance. The site previously recorded as SDI-16,367 was likely inaccurately mapped at the SCIC due to UTM the lack of precision in the original site record location map. It is possible the site recorded as SDI-20,633 by Glenn is the same as SDI-16,367. However, SDI-20,633 is outside of the current project APE and was not evaluated for the current investigation. As no cultural material was identified at the mapped location of SDI-16,367, this site is not considered important under County guidelines. However, as cultural materials were previously reported at this location, grading monitoring is recommended in case subsurface cultural materials are present.

SDI-16,373/16,374

This site was originally recorded by Jeanie Jone and Joel Paulson of Professional Archaeological Services (DeBarros and Paulson 2003). The site reportedly consisted of a scatter of quartz and volcanic debitage, Tizon Brownware, and a handstone within a 100 x 40 m area next to a

bedrock outcrop. During the Phase I survey, Brian Glenn revisited the site, and only two pieces of debitage were identified.

Site Structure, Artifact Recovery, and Assemblage Composition

The current evaluation phase of SDI-16,373/16,374 began with a systematic survey of the site surface and immediate surrounding areas at 1-to-2 m intervals. Artifacts on the surface were marked with pin flags, and their locations were recorded with a Trimble GPS unit. The artifacts were then collected prior to excavation. The artifacts recovered from the surface include two millingstone fragments, four volcanic interior flakes, and one quartz secondary flake. A very sparse scatter of matchstick condensed milk cans was also noted across the site surface. Four of the pieces of debitage recovered from the surface expanded the northwestern site boundary by 35 meters.

Following the surface collection, six STPs were excavated at the site, terminating at a maximum depth of 60 cm. STPs 1-5 were spaced at regular 30-m intervals through the center of the site, and STP-6 was excavated near a groundstone artifact on the site surface (Figure 4.17 Confidential Appendix B). No cultural materials were recovered from any of the STPs. STPs 2 and 3 were terminated at a depth of 40 cm after two sterile levels. STP-6 was terminated at a 60 cm depth, after three sterile levels, due to its proximity to the surface artifacts. STPs 1, 4, and 5 were terminated due to bedrock, at depths of 13, 52, and 37 cm, respectively. Site soils were comprised primarily of loose to moderately compact brown sandy loam (Munsell: 10YR 4/3) with approximately 10 percent fine gravel content. A moderately compacted yellowish-brown sandy clay loam (Munsell: 10YR 5/4) was encountered throughout STP-1 and at depths of 25 cm and 48 cm in STPs 2 and 6, respectively.

The only artifacts recovered from the site were the five pieces of debitage and the two groundstone fragments found on the surface.

Discussion and Site Summary

The extremely sparse nature of artifacts associated with SDI-16,373/16,374 and the lack of subsurface deposits indicate the site does not possess any significant research potential. The current eastern boundary of the site is approximately 25 to 70 m from the western boundary of SDI-5171 but the sites are separated by a small drainage. It is probable the two sites are associated and represent the same prehistoric occupation. The site is similar to many other sites in the area, containing a few groundstone tools and pieces of debitage that are confined to the surface. This site is characteristic of a short-term stop, possibly related to expedient tool manufacture and limited hard seed milling. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Because the site lacks subsurface deposits and only consisted of a sparse distribution of surface artifacts that were collected, it is recommended as not eligible for listing in the CRHR or the Local Register, not eligible for protection under RPO guidelines, and is not significant under CEQA. The site is

considered important under County guidelines; but, impacts to the importance of the site can be reduced to less than significant through the recording and evaluation efforts described herein, as well as through curation of artifacts and monitoring of project-related ground disturbance.

SDI-19,872

Brian Williams of ASM originally recorded this prehistoric period site in 2009 as a small, high-grade crystal quartz scatter of 16 quartz flakes, covering an area of 31 x 20 m (Garcia-Herbst et al. 2009). The site was revisited in 2010 by Chad Willis of ASM and found to be in similar condition as originally recorded (Hale et al. 2010). Erosion and weathering have disturbed the site.

During the recent Phase I survey by Brian Glenn, the site was located within the Sunrise Powerlink Environmentally Sensitive Area (ESA). It was, therefore, not examined as part of the Phase I survey, given the recent nature of recording and the protection offered by the ESA. Glenn assumed the site had not changed significantly.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current evaluation conducted by ASM, the site surface was examined closely during an intensive pedestrian survey at 2-m intervals. One volcanic flake was identified, recorded, and collected from the surface of the site. The quartz visible on the surface was deemed to be naturally broken and thus non-cultural, in spite of previous identification as intentional lithic shatter, and it was not collected.

Five STPs were excavated at the corners and center of the previous site boundary (Figure 4.18 Confidential Appendix B). STP-5, in the center of the site, yielded two possible pieces of quartz shatter. These pieces of quartz were collected primarily due to the quality of the rock, bearing only questionable evidence of having been flaked. No other STP yielded any cultural materials. Soil was predominantly loosely to moderately compacted brown/dark brown (Munsell: 10YR 4/3-3/3) fine-grained sandy loam with roughly 10 percent fine gravel. Moderately compact yellowish-brown (Munsell: 10YR 5/4) sandy clay loam with 10-15 percent fine and medium gravel was encountered at a depth of 30 cm in STPs 2 and 5. STP-1 was terminated at a depth of 30 cm due to a significantly higher percentage of medium and large quartz gravel and contact with granite bedrock. STP-5 was terminated at a depth of 50 cm due to contact with granite bedrock. Remaining STPs were excavated to a depth of 40 cm and terminated due to an absence of cultural materials.

The assemblage contains one volcanic flake from the surface and two possible pieces of quartz shatter from STP-5.

Discussion and Site Summary

SDI-19,872 consists of only a few pieces of debitage that are confined to the surface. This site is characteristic of a short-term stop, possibly related to expedient tool manufacture. The lack of substantial subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other sites in the region. Thus, the site is recommended as not eligible for listing in the CRHR or the Local Register, not eligible for protection under RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-19,873

Brian Williams of ASM originally recorded this site. It was described as a small granite bedrock outcropping with two milling slicks and a low-density scatter of six "volcanic and felsites" debitage (Garcia-Herbst et al. 2009). The site is essentially bounded by the granite outcrop; an area measuring approximately 10 x 10 m. Nearby vegetation includes chemise, sagebrush, Mojave yucca, scrub oak, buckwheat, redshank, sugarbush, and cholla. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluviation, and aeolian action) and natural rodent and root actions have disturbed the site.

During the Phase I investigation by Brian Glenn, additional milling elements were identified for a total six milling slicks. The artifacts that were visible on the surface consisted of just two quartz flakes. The size of the site was expanded to approximately 30 x 15 m in size.

Site Structure, Artifact Recovery, and Assemblage Composition

Beginning with an intensive pedestrian survey, the current evaluation effort identified the six previously recorded resources, with no additional surface artifacts identified or collected at this site. However, further analysis in the laboratory determined that these items were non-cultural and were deassessioned. Three STPs were dug approximately 5 m away from the outcrop/site boundary, situated to the east, northwest, and southwest, with a fourth STP dug approximately 15 m to the northeast of the outcrop (Figure 4.19 Confidential Appendix B). The excavation of the four STPs did not yield any subsurface cultural materials. The soil associated with the site consists of loosely compact brown (Munsell: 10YR 4/3) fine-grained sandy loam with approximately 8 percent fine gravel. A second stratum, consisting of moderately compact dark yellowish-brown (Munsell: 10YR 4/4-4/6) fine-grained loamy sand with decomposing granite, was encountered at a depth of approximately 35 cm in STPs 1, 3, and 4. STPs 3 and 4 were terminated upon contact with granite bedrock at depths of 44 and 52 cm, respectively.

Discussion and Site Summary

This site is a small, short-term occupation site related to limited hard seed milling. While bedrock outcrops containing milling surfaces are present, the small number of milling surfaces, and the lack of subsurface cultural deposits or midden soils indicate that the site was occupied briefly for seasonal processing of local resources and that habitation of the area was limited in economic scope and intensity. Additionally, the lack of datable material makes it difficult to place this site in a chronology of regional prehistoric occupation. Further work at the site is not likely to yield substantially different or unique information that would contribute to the current understanding of the local prehistory. The site is thus recommended as not eligible for listing in the CRHR or the Local Register, not eligible for protection under RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as monitoring of project-related ground disturbing activities.

SDI-20,068

This site was initially recorded by ASM in 2010 during the Tule Wind Project as a dispersed lithic and ceramic scatter approximately 130 x 78 m in size (Hale et al. 2010). A total of 67 lithic flakes (volcanic, quartz, obsidian, and basalt), one brownware ceramic sherd, one handstone, one biface, and one percussor were recorded on the surface. SDI-20,068 spans both sides of a seasonal drainage and is dominated by sagebrush scrub and redshank chaparral vegetation.

During the Phase I investigation, Brian Glenn identified a previously unrecorded bedrock milling feature with two slicks. The artifacts visible on the surface were consistent with the previous site record. Evident disturbances to this area include the grading of a dirt road through the site, construction of an earth berm for retaining water, and general ranching activities.

Site Structure, Artifact Recovery, and Assemblage Composition

The evaluation effort at SDI-20,068 by ASM began with an intensive pedestrian survey of the site vicinity in 2-m transects. Observed surface artifacts were mapped using a high-precision GPS, assigned unique field identifiers, and collected (Figure 4.20 Confidential Appendix B). The artifacts recovered from the surface included two volcanic scrapers and 16 pieces of debitage. This reduction in recorded surface material, relative to the 2010 ASM site visit, was likely due to an increase in vegetation. The milling station recorded by Glenn was relocated, and its condition was as previously described.

A total of 20 STPs were excavated at 30-meter intervals across the site (see Figure 4.20 Confidential Appendix B). Of the 20 STPs excavated, four yielded subsurface cultural material: STPs 2, 12, 18, and 20. STP-2 was placed southeast of the previously recorded boundary for the site. A single obsidian flake was recovered from the 20-40-cm level. The obsidian flake was analyzed using a hand-held portable X-ray fluorescence (pXRF) instrument, and the material was

sourced to Obsidian Butte. (A detailed description of the analysis is presented in Appendix A). Bedrock was encountered at 60 cmbs. STP-12 yielded a secondary volcanic flake from 40-60 cmbs. One piece of quartz shatter was recovered from the 60-80-cm level in STP-18. STP-20, placed on the southern edge of the bedrock milling feature, provided a single interior volcanic flake from 0-20 cm and some detrital pieces of charcoal from 20-40 cm. Bedrock was encountered below this depth. Limited to moderate bioturbation was noted throughout the units excavated at this site.

The artifact assemblage recovered from the testing efforts at SDI-20,068 includes one volcanic scraper and 20 pieces of debitage, including 16 interior flakes, two secondary, and two pieces of shatter (Table 4.5). The raw material types of the recovered artifacts are chalcedony, quartz, volcanic, and obsidian. As a result of testing, the site was expanded to cover a 150 x 98 m area.

Table 4.5 Artifacts Recovered During the Evaluation of SDI-20,068

			Class		
Recovery Type	**Unit**	**Level**	**Retouched Flake**	**Debitage**	**Grand Total**
Surface			2	16	**18**
STP	2	20-40	-	1	**1**
	12	40-60	-	1	**1**
	18	60-80	-	1	**1**
	20	0-20	-	1	**1**
Grand Total			**2**	**20**	**22**

Discussion and Site Summary

Only a portion of the previously recorded surface material was relocated during the most recent survey. This was largely a result of thick vegetation that restricted surface visibility. When the artifact assemblage is considered, incorporating both current and previous project data, it indicates a moderate variety, though limited quantity, of artifacts. The artifacts recovered from the site are the product of general lithic reduction, tool manufacture and maintenance, and limited food processing. The low density of debitage and the minimal use wear associated with the bedrock milling slicks indicate that the site was occupied for a short time. The archaeological investigations by ASM have largely exhausted the site's data potential. Further archaeological work at the site is not likely to produce substantially different or unique data that would change these conclusions. SDI-20,068 is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,116

The site was originally recorded by Chad Willis of ASM Affiliates as a rock shelter containing four brownware sherds and 6 x 6 m in size (Hale et al. 2010). The roof of the shelter was recorded as blackened by soot, and the shelter likely contained a hearth, although no evidence of midden soil or buried deposits was identified. The site is situated in an exposed foothill setting with chaparral vegetation (Figure 4.21). Weathering and erosional processes (e.g., bedrock exfoliation, alluviation, and aeolian action), ranching, and machinery (road grading) have disturbed the site.

Figure 4.21 South facing overview of SDI-20,116

Glenn, during the Phase I investigation, noted that additional cultural materials were on the surface in adjacent areas, expanding the site boundary primarily to the south and east to encompass a 140 x 73 m area. He identified eight milling features with a total of 14 milling slicks and two hearth features. A piece of volcanic debitage, one potsherd, and a piece of FAR were noted just outside the rock shelter. Other artifacts noted on the surface between features included flaked stone tools and quartz and volcanic debitage.

Site Structure, Artifact Recovery, and Assemblage Composition

Evaluation of the site began with a survey of the site surface. Artifacts identified were flagged, their locations were recorded with a Trimble GPS, and they were collected. The artifacts recovered from the surface of the site included two retouched flakes, one modified cobble, 12

pieces of debitage, one millingstone (recovered from within the rock shelter), and five potsherds. The rock shelter and three of the bedrock milling features were relocated during the current investigation. However, the two hearths and the remaining milling features were not relocated.

Seven STPs and one STU were excavated across the site to test for subsurface deposits, with the maximum depth of the excavations being 80 cm (Figure 4.22 Confidential Appendix B). The STPs were placed adjacent to bedrock milling features and surface artifacts, and the STU was placed inside the rock shelter. The STU was excavated in 10-cm levels, with large amounts of charcoal in the soil from a depth of 5 cm until bedrock was reached at 40 cm. All levels of the STU contained cultural materials, including six pieces of debitage, one potsherd, and one small mammal bone. STPs 2 (outside of the rock shelter) and 3 were the only STPs positive for cultural materials, yielding two pieces of debitage, two potsherds, and two pieces of vertebrate remains (see analysis section, Vertebrate Faunal Remains). Soils consisted of multiple strata throughout the site. In and near the rock shelter, soil was composed of two strata: 1) loosely compact light brown/yellowish-brown (Munsell: 10YR 6/4) fine-grained silty sand with decomposing granite and 5-10 percent fine gravel to a depth of 10 cm; and 2) loosely compact very dark brown (Munsell: 10YR 3/2) fine-grained silty sand with charcoal and decomposing granite. STP-1, located downslope from the rock shelter, contained two strata: 1) loose to moderately compact brown (Munsell: 10YR 4/3) fine-grained silty loam with 10 percent fine gravel to a depth of 70 cm; 2) moderately compact brown/light yellowish-brown (Munsell: 10YR 5/4) silty loam with decomposing granite and 5-10 percent fine gravel. Remaining areas of the site show fairly consistent soils, also with two strata: 1) loose to moderately compact brown (Munsell: 10YR 5/3) fine-grained sandy silty loam with 5-10 percent fine-medium gravel to a depth of 40 cm; 2) moderately compact dark brown (Munsell: 10YR 3/3) fine-grained sandy silty loam with 10 percent fine gravel.

The artifacts recovered from the evaluation efforts at SDI-20,116 include two retouched flakes, one modified cobble, 20 pieces of debitage, one piece of groundstone, eight potsherds, and three pieces of vertebrate remains (Table 4.6). The debitage consists of 12 interior quartz flakes, four volcanic interior flakes, one quartz secondary flake, two volcanic secondary flakes, and one volcanic piece of shatter.

Discussion and Site Summary

The artifact assemblage and features associated with SDI-20,116 provide evidence of food processing, exploitation of local resources, and lithic tool manufacture and maintenance. The site reflects a multiuse habitation site providing shelter. Evidence of prepared fires and milling surfaces indicate that local resources may have been used for sustenance. Though no defined hearth was identified during the current investigation, several pieces of FAR were located near the rock shelter, along with a light deposit of charcoal noted in STU-1, indicating that at least small fires were made within the rock shelter. The charcoal consisted of extremely fine particles uniformly mixed with the soil matrix, none of which were large enough to collect for

radiocarbon analysis. Remaining materials are similar to many other sites in the area that are characteristic of short-term stops involving the grinding or processing of small, hard seeds and expedient manufacture or modification of lithics. The presence of a rock shelter likely extended the use or encouraged the more frequent reuse of this location relative to similar sites in the area. It is also possible that the rock shelter served as the habitation area for nearby processing sites. Although the entire site was evaluated at this time, the eastern portion of the site, including the rock shelter, is outside the MUP limits, and will therefore not be impacted by the Project. The lack of cultural deposits and the loose and probably mixed deposits of charcoal make it difficult to place this site in time or in association with other similar sites. The extremely low density of artifacts and scant subsurface deposits demonstrate the site is not likely to provide any additional significant information regarding the prehistory of the area. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

Table 4.6 Artifacts Recovered During the Evaluation of SDI-20,116

Sum of Count			Class						
Recovery Type	Unit	Level	Retouched Flake	Modified Cobble	Debitage	Groundstone	Ceramic (Aboriginal)	Vertebrate Remains	Grand Total
Surface			2	1	12	1	5	-	**21**
STP	2	0-20	-	-	-	-	2	-	**2**
		20-35	-	-	1	-	-	2	**3**
	3	20-40	-	-	1	-	-	-	**1**
STU	1	0-10	-	-	-	-	1	1	**2**
		10-20	-	-	4	-	-	-	**4**
		20-30	-	-	1	-	-	-	**1**
		30-40	-	-	1	-	-	-	**1**
Grand Total			**2**	**1**	**20**	**1**	**8**	**3**	**35**

SDI-20,118

The site consists of a historic-period ranching complex and large prehistoric habitation site measuring 170 x 120 m. The natural setting consists of a low, boulder-covered ridge and a slope facing east into the alluvial valley (Figure 4.23). Vegetation is dominated by mixed chaparral, alkali seep community plants, and nonnative pastureland.

SDI-20,118 was initially recorded by ASM as part of the Tule Wind Project in 2010 (Hale et al. 2010). Archaeologists observed five milling stations, 10 volcanic flakes, one brownware ceramic sherd, one millingstone fragment, and two handstones.

During the Phase I investigation, the site was revisited by Brian Glenn in March 2012. Visibility of the ground surface ranged from less than 20 percent in the grassy areas to nearly 50 percent along the ridge. The site was noted to be in the same general location and condition as previously recorded, though it was evident that disturbances have included ranching-related construction, historical episodes of flooding, and off-road activities. Glenn (2012) identified nine additional features, including six milling features and three historic structural features.

Figure 4.23 Southern facing overview of SDI-20,118

Site Structure, Artifact Recovery, and Assemblage Composition

ASM conducted intensive pedestrian survey of the site vicinity in 5-m transects during the current evaluation. Observed surface artifacts were mapped using a high-precision GPS, assigned unique field identifiers, and collected. The artifacts recovered from the surface included one chert biface; five pieces of debitage; three pieces of groundstone, including a handstone, a millingstone, and an indeterminate fragment; and three historic artifacts, including two wire nails and a horseshoe. A total of eight milling features were recorded, consisting of nine grinding slicks, one basin, and one mortar. Features 6 and 15, previously recorded by Glenn, were not relocated. The three historical features, including one steel-reinforced rock-and-concrete foundation and cement slab, one rectangular cistern, and one circular cistern, were relocated. The

corrugated tin cover, depicted in the 2010 DPR record by ASM, has been subsequently removed from the rectangular cistern. The site was extended 60 m to the east and 15 m to the north, in order to encompass a newly recorded milling slick and surface artifacts.

The subsurface cultural material associated with SDI-20,118 was observed to be very low in density. A total of 23 STPs, two STUs, and one CU were excavated in the site area (Figure 4.24 Confidential Appendix B). Of these, just two STPs and the two STUs yielded cultural material. STP-3, located down-slope from the rectangular cistern, at the southern base of the ridge, yielded three fragments of ferrous metal and one colorless glass shard. The unit was terminated at 23 cmbs due to encountering bedrock. STP-22, located just down-slope from a milling feature in the northern portion of the site, yielded two lithic flakes from 0-20 cm. The lower portions of the STP, 20-60 cm, contained no additional material. STU-1, situated within a cluster of oaks and exposed granitic boulders in the eastern portion of the site, was placed directly below the location of a bifacial handstone that was recovered from the surface. From the total depth of 55 cm, a single lithic flake was found in the 10-20-cm level. No additional material was recovered from this unit. Lastly, STU-2 was placed near the center of the site, just down-slope of three bedrock milling features. From 0 to 100 cmbs, a single interior volcanic flake and a lightly ground handstone were recovered from the 10-20-cm level. No other cultural material was observed. All units exhibited evidence of limited to moderate amounts of bioturbation.

The artifact assemblage recovered from SDI-20,118 includes one chert biface, 10 pieces of debitage, four pieces of groundstone, and seven historic artifacts (Table 4.7).

Table 4.7 Artifacts Recovered From the Evaluation of SDI-20,118

			Class				
Recovery Type	**Unit**	**Level**	**Biface**	**Debitage**	**Groundstone**	**Historic Artifact**	**Grand Total**
Surface			1	5	3	3	**12**
STP	2	0-20	-	1	-	-	**1**
	3	0-20	-	-	-	4	**4**
	15	0-20	-	1	-	-	**1**
	22	0-20	-	2	-	-	**2**
STU	1	10-20	-	1	-	-	**1**
	2	10-20	-	-	1	-	**1**
Grand Total			**1**	**10**	**4**	**7**	**22**

Discussion and Site Summary

The ranching features associated with SDI-20,118 are not shown on the 1956 USGS topographic map, but are represented on the 1959 series (NW ¼, of NW ¼, of Section 17, Live Oaks Springs 1959 Quadrangle; www.historicaerials.com; Appendix F). This suggests that the cistern features and the concrete foundation were constructed sometime between 1956 and 1959. Surface recordation of this site indicates evidence of prehistoric food preparation and some tool

manufacturing activities. However, subsurface testing reflects little more than the reduction of locally available lithic materials and use of local cobbles as expedient grinding instruments. Further archaeological work at the site is not likely to produce substantially different or unique data that would change these conclusions. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,386

The site was originally recorded by Tony Quach of ASM as a moderately dense artifact scatter on a generally flat alluvial terrace (Hale et al. 2010). Artifacts were recorded within a 100 x 100 m area and included two brownware ceramic sherds, 46 pieces of lithic debitage, one millingstone fragment, five handstone fragments, three cores, one scraper, one assayed cobble, and one retouched flake.

During the Phase I investigation by Brian Glenn, the site was expanded to encompass an area of 165 x 160 m, including portions of granite bedrock outcrops. The site was noted to be situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluviation, and aeolian action) and natural rodent and root actions have disturbed the site. Additional features were encountered, including a hearth exposed in a footpath intersecting the site and two bedrock milling features with one slick each. The artifacts noted during Glenn's survey included a variety of debitage and tool material types including quartz volcanic, Obsidian Butte obsidian, and chalcedony. The artifacts noted on the surface consisted of a Desert side-notched projectile point fragment, scrapers, cores, debitage, groundstone, and potsherds.

Site Structure, Artifact Recovery, and Assemblage Composition

The current investigation began with an intensive pedestrian survey of the site surface to re-locate previously identified artifacts and any that may have been previously overlooked. The site boundary was expanded by 6 m to the west, 45 m to the north, 4 m to the south, and 70 m to the east as a result of the identification of additional surface and subsurface cultural materials; however, given the irregular site boundary, the maximum site dimensions were not altered. The site appears to continue still further to the south as well, but that area falls outside of current Project area and was not evaluated. All surface artifacts were flagged, recorded with a Trimble GPS unit, and collected. The artifacts collected from the surface consist of two retouched flakes, one modified cobble, 47 pieces of debitage, and one piece of groundstone. Nineteen STPs, one STU, and one CU were excavated in a grid spanning the site and surrounding areas, to test the boundaries, depth, and density of cultural materials (Figure 4.25

Confidential Appendix B). Units were excavated to a maximum depth of 80 cm. Fourteen STPs yielded no cultural materials and were terminated at a depth of 40 or 60 cm, depending on soil conditions. STPs 1, 2, 8, 15, and 17 yielded subsurface debitage. The STU and CU yielded cultural materials to a depth of 30 cm. Soils encountered during excavations were composed of three strata, including a topsoil (5-15 cm maximum depth) of loose/moderately compact light gray brown (Munsell: 10YR 6/3) fine-grained silty sand with 5-10 percent fine gravel; a stratum of moderately compact dark brown (Munsell: 10YR 3/3) fine-grained sandy silty loam with less than 5 percent gravel; and at the base a stratum of very compact brown (Munsell: 10YR 5/3) fine-grained silty sandy loam with decomposed granite and 10 percent fine gravel. This lower stratum was encountered at varying depths of 35-50 cm in STPs 1-4, 8, 12, and 16-18. STPs 5 and 13 and CU-1 were terminated at a depth of from 7 to 40 cm, upon contact with granite bedrock.

The artifact assemblage recovered from SDI-20,386 includes two retouched flakes, one modified cobble, 64 pieces of debitage, four pieces of groundstone, two potsherds, one piece of non-human animal bone (for additional detail, see Vertebrate Faunal Remains analysis), and one bullet casing (Table 4.8).

Discussion and Site Summary

The depth and distribution of cultural materials encountered during subsurface testing reveal the majority of material was located on or near the surface, with minimal subsurface deposits. The site area is adjacent to an unnamed pond that appears to have been altered in historic times, though topography and soil characteristics strongly point to the area as having been seasonal wetlands before modification occurred. The current presence of pinyon pine on the site could further suggest the presence of prehistoric nut resources in proximity to the site. The site assemblage suggests the use of the area as a short-term habitation and processing site, with evidence of tool use and manufacture and of food processing and preparation. No evidence of expedient or formal structures was encountered, and only one hearth was noted. This suggests the use of the site as a seasonal camp during warmer months, likely concurrent with the high water level and productivity on the neighboring pond or wetland area. One projectile point was previously noted but not relocated during this evaluation. The limited evidence of faunal remains or tools relating to carcass processing indicates that hunting was not a major component of site activities. The described projectile point and potsherd place the site in the Late Prehistoric period. The limited depth and density of cultural deposits suggest that while additional cultural materials may remain at this site, in terms of research potential the site is not likely to provide any additional significant information regarding the prehistory of the area. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities

Table 4.8 Artifacts Recovered During the Evaluation of SDI-20,386

			Class							
Recovery Type	**Unit**	**Level**	**Retouched Flake**	**Modified Cobble**	**Debitage**	**Groundstone**	**Ceramic (Aboriginal)**	**Vertebrate Remains**	**Historic Artifact**	**Grand Total**
Surface			2	1	47	1	-	-	-	**51**
STP	1	20-40	-	-	1	-	-	-	-	**1**
	2	0-20	-	-	1	-	-	-	-	**1**
	8	40-60	-	-	2	-	-	-	-	**2**
	15	0-20	-	-	1	-	-	-	-	**1**
	17	20-40		-	1	-	-	-	-	**1**
STU	1	0-10	-	-	1	-	-	-	-	**1**
		20-30	-	-	1	-	-	-	-	**1**
Unit	1	0-10	-	-	7	-	1	-	-	**8**
		10-20	-	-	1	3	1	1	1	**7**
		20-30	-	-	1	-	-	-	-	**1**
Grand Total			**2**	**1**	**64**	**4**	**2**	**1**	**1**	**75**

SDI-20,618

This site was recorded during the Phase I survey by Brian Glenn as a prehistoric milling feature, historic-period earthen reservoir, and series of concrete irrigation gates, situated on pastureland within the McCain Valley. The site was noted to measure 220 x 35 m. Disturbances to the prehistoric component has included past ranching activity. Less than 10 percent of the ground surface was directly visible due to the thickness of low-lying grasses.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current evaluation, an intensive pedestrian survey of the site was conducted in 5-m intervals. A single aqua-color glass bottleneck was recovered from the surface. A concrete irrigation gate was newly recorded to the southwest of SDI-20,618, expanding the boundary 13 m. A total of 19 concrete irrigation gates were distributed for approximately 220 m, southwest to northeast. Aerial imagery exhibits a number of graded areas running perpendicular to these drains, approximately 10 m apart, indicating that the area may have been plowed in the past. A single rock-and-concrete drain with metal valve key was noted within the earth berm reservoir, along its southwestern side. The previously recorded bedrock milling, comprised of a boulder measuring 210 x 150 cm, was relocated along the hillside that completes the southeastern edge of the reservoir.

A total of five STPs were excavated throughout the site area (Figure 4.26 Confidential Appendix B). All units were excavated to a depth of 40 cmbs, with the exception of STP-3, which encountered bedrock at 25 cm. STP-1 yielded a single whiteware ceramic sherd from 0-20 cm. The 20-40 cm level was sterile. No additional subsurface cultural material was recorded.

Discussion and Site Summary

Based on the results of pedestrian survey conducted by Brian Glenn (2012) and the testing program recently conducted by ASM, it is recommended that the site is not a significant resource pursuant to the guidelines of the Local Register, the CRHR, and CEQA, nor is the site significant under County RPO. Further archaeological work at the site is not likely to produce substantially different or unique data that would change these conclusions. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,624

This site was recorded during the Phase I investigation by Brian Glenn and consist of three bedrock milling features with eight slicks and a rock shelter. Artifacts visible on the surface included a volcanic scraper, volcanic debitage, quartz debitage, a granite bifacial handstone, an early-stage chalcedony biface (possibly heat-treated), and FAR. The site covers an area of 49 x 39 m. It is situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., bedrock exfoliation, alluviation, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation, surface artifacts collected prior to excavation included just three pieces of debitage. The previously recorded tools were not relocated. Five STPs and one STU were excavated across the site to test for subsurface deposits (Figure 4.27 Confidential Appendix B). STPs were placed adjacent to bedrock milling features and surface artifacts. STP-1 was the only unit to yield a prehistoric artifact. One piece of debitage was recovered from the 0-20-cm level. One piece of unidentifiable metal was recovered from the 0-20-cm level of STP 4. Soil consisted of one stratum composed of loose to moderately compact brown (Munsell: 10YR 4/3) fine-grained silty loam with 5-10 percent fine gravel. The rock shelter was re-examined during the evaluation and was observed to be more of a simple windbreak than a shelter for habitation. The rock forming the feature is a large, vertical granite boulder which would have provided relief from the prevailing westerly wind and afternoon shade; however, the boulder would provide little to no shelter from precipitation.

Discussion and Site Summary

SDI-20,624 consists of multiple bedrock milling features with a sparse scatter of associated artifacts. The milling features are either heavily degraded by rock exfoliation or of generally poor quality. This site is characteristic of a short-term stop involving the grinding or processing of small, hard seeds and expedient manufacture or modification of lithics. The presence of a windbreak or rock shelter may have encouraged reuse of this location relative to similar sites in

the area. The windbreak is located in the western portion of the site which is outside of the MUP limits and will not be impacted by the Project. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. The lack of substantial subsurface deposits, general sparse nature of the artifact distribution, and the relatively poor quality of the bedrock milling features demonstrates that the site is not likely to provide any additional information that may contribute to the understanding of research themes. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,625

This site was first recorded during the Phase I investigation for the Rugged Solar Project by Brian Glenn. The site was described as a bedrock milling feature that contains eight milling elements (six milling slicks and two shallow mortars). Artifacts recorded on the surface included a few pieces of volcanic debitage. The site reportedly covered an area of 31 x 6 m. The site is situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., bedrock exfoliation, alluvial, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current testing phase, surface artifacts could not be relocated at this site, possibly due to an increase in vegetation growth. Four STPs were excavated to a maximum depth of 80 cm (Figure 4.28 Confidential Appendix B). STPs were placed adjacent to bedrock milling features and the site boundary. All STPs were negative for cultural materials. Soil consisted of one stratum composed of loose to moderately compact dark brown (Munsell: 10YR 4/3-3/3) fine-grained silty loam with 5-10 percent fine gravel.

Discussion and Site Summary

SDI-20,625 consists of one bedrock milling feature with multiple, moderately to intensively used milling elements. Most milling features in the area are lightly used milling slicks indicative of short-term activity. This site, however, includes well-developed slicks and elements that could be alternatively described as either small basins or shallow mortars, attesting to significant use and/or preparation prior to use. This may be due to the relatively higher quality of the granite surface, showing far better integrity than most outcrops in the area. The lack of surface and subsurface artifacts would suggest that this site was used almost entirely for plant-resource processing, with other habitation and subsistence activities being conducted at other locations. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. The site is not likely to yield additional significant information regarding the prehistory of the area. The site is thus recommended as not eligible for listing in the CRHR or

Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as monitoring of project-related ground disturbing activities.

SDI-20,628

SDI-20,628 was recorded during the Phase I investigation by Brian Glenn as a lithic and ceramic scatter with two loci. The site reportedly measured 48 x 75 m, with a total area of 1,355 m^2. Locus A reportedly contained a biface midsection and debitage made from obsidian, quartz, volcanic, and chalcedony sources. Locus B contained a scatter of brownware sherds and FAR.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation, the surface of the site was surveyed to re-locate all previously identified surface artifacts and to identify any new artifacts. The discrete loci previously identified during the Phase I survey are better described as concentrations. A total of 9 pieces of debitage, one groundstone, and 31 potsherds were recovered from the surface of the site.

Eight STPs were excavated across the site at approximately 20-m intervals to test the site for subsurface deposits (Figure 4.29 Confidential Appendix B). The only STP that yielded subsurface artifacts was STP-3, on the southwestern slope side of the knoll. One piece of debitage and three ceramic sherds were recovered from 0-20 cmbs. Two pieces of debitage and two sherds were recovered from 20-40 cm. Small fragments of charcoal were also recovered from 0 to 40 cmbs. The following level, from 40 to 60 cm, was sterile with respect to cultural material; accordingly, excavation was terminated. Two strata were noted during the excavation of STP-3. Stratum I, from 0 to 38 cm, consisted of a loosely compacted brown (Munsell: 10YR 5/3) loamy sand with approximately 30 percent small sized gravel. Stratum II, from 38 to 60 cm, consists of a loosely compacted brown (Munsell: 10YR 5/4) very fine silty sand. STPs 4, 5, 6, and 8 were terminated at relatively shallow depths due to decomposing granite. STPs 1, 2, and 7 contained a similar soil matrix to that encountered in STP-3 but did not yield any artifacts.

The artifact assemblage recovered from the site consists of 12 pieces of debitage, one groundstone, and 36 potsherds (Table 4.9). The raw materials that make up the debitage recovered from the site include volcanic, chalcedony, quartz, and quartzite. There are 10 interior flakes, one primary flake, and one secondary flake. The groundstone is a granite handstone, and the potsherds consist of 35 body sherds and one rim sherd.

Table 4.9 Artifacts Recovered During the Evaluation of SDI-20,628

			Class			
Recovery Type	**Unit**	**Level**	**Debitage**	**Groundstone**	**Ceramic (Aboriginal)**	**Grand Total**
Surface			9	1	31	**41**
STP	3	0-20	1	-	3	**4**
		20-40	2	-	2	**4**
Grand Total			**12**	**1**	**36**	**49**

Discussion and Site Summary

This site is a light lithic and ceramic scatter that is primarily confined to the surface. The one STP positive for subsurface material is on a slope side where sediments from higher elevations settle after eroding from above. The site likely represents a small temporary camp associated with lithic tool manufacture and retouch. The site is not likely to produce any additional information that would be significant to the overall understanding of the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,630

The site was recorded by Brian Glenn during the Phase I survey as consisting of two bedrock milling features with a total of five slicks and a low-density scatter of volcanic and quartz debitage. The site covers an area of approximately 63 x 32 m. Weathering and erosional processes (e.g., bedrock exfoliation, alluvial, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

The current evaluation effort began with an intensive surface survey. The previously recorded milling features were relocated. They appear to have been degraded by natural weathering or are of generally poor quality. Surface artifacts collected prior to excavation included four pieces of quartz and volcanic debitage. Five STPs were excavated to a maximum depth of 50 cm (Figure 4.30 Confidential Appendix B). All STPs were negative for cultural materials. Soil was composed of one stratum consisting of moderately compact brown (Munsell: 10YR 4/3) fine-grained sandy silty loam with 10 percent fine gravel and increasing amounts of clay and decomposing granite with depth as units approached the underlying bedrock.

The debitage recovered from the site include three interior quartz flakes and one interior volcanic flake.

Discussion and Site Summary

SDI-20,630 consists of multiple bedrock milling features with a sparse scatter of associated artifacts. The milling features are either heavily degraded by rock exfoliation or of generally poor quality. This site is characteristic of a short-term stop involving the grinding or processing of small, hard seeds and expedient manufacture or modification of lithics. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. The low density of artifacts associated with the site, the lack of substantial subsurface deposits, and the weathered nature of the bedrock milling provide little evidence for any further research potential. The site is not likely to provide additional information regarding the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,632

SDI-20,632 was recorded during the Phase I investigation by Brian Glenn as a concentration of brownware ceramic sherds and a single volcanic flake. The site covers a 9 x 8 m area situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluvial, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

Prior to excavation, the site was resurveyed and surface artifacts were recorded and collected. The surface assemblage consists of eight potsherds and a single interior volcanic flake. One STP and one CU were excavated at the site, both to a terminal depth of 20 cm (Figure 4.31 Confidential Appendix B). Site soils consist of loose to moderately compact silty sands with a high portion of decomposing granite gravel (approximately 30-40 percent), overlying granitic bedrock. STP-1 was excavated near the northern boundary of the site, near the volcanic flake collected from the surface; it contained no cultural material, and was terminated at a depth of 20 cm, upon encountering bedrock. CU-1 was excavated in the eastern end of the site, near a surface cluster of six brownware fragments. Four brownware body sherds were recovered from the first level of CU-1 (all from the first 5 cmbs); the second level of the CU was sterile and had increased gravel content relative to the first level. The total assemblage recovered from SDI-20,632 consists of 12 brownware body sherds and one interior volcanic flake.

Discussion and Site Summary

SDI-20,632 consists of a sparse scatter of prehistoric artifacts including brownware ceramic sherds and volcanic debitage, primarily limited to the site surface. This site is characteristic of a short-term stopover between longer-term occupation sites. Based on the site's absence of

subsurface deposits and low artifact density and variability, the site is not likely to provide any additional information that would contribute to the understanding of the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,634

During the Phase I investigation by Brian Glenn, this site was recorded as an earthen basin/reservoir (Feature 1) with two associated historic refuse deposits (Concentrations A and B) dating to the early twentieth century, in addition to a feature of unknown age, an "X" chiseled into a rock (Feature 2). The site is situated in an exposed foothill setting with chaparral vegetation. A graded dirt road runs through the southern portion of the site, and a new cleared grade runs along the western edge of Feature 1.

The current study relocated the earthen reservoir and historic refuse scatters but was unable to re-locate the rock designated as Feature 2. The current work also recorded an additional prehistoric component to the site, consisting of debitage, a core, a ceramic fragment, and a bedrock milling feature. Erosional processes (e.g. alluvial and aeolian action) and machinery (e.g., road grading) have disturbed the site, particularly along the western edge of the earthen basin feature where the road/path had been graded somewhat recently. Additional disturbance to the site includes a cleared area and a modern refuse pile approximately 30 m north of the basin/reservoir feature. In total, the site covers a 175 x 80 m area.

Site Structure, Artifact Recovery, and Assemblage Composition

The historic component of the site consists of a large earthen basin/reservoir, measuring approximately 50 m in diameter, with two associated historic refuse deposits approximately 40 m to the southwest. The first concentration of historic refuse, referred to by Glenn as Concentration A, contains a variety of domestic refuse materials, including cans, ceramic, and glass. An inventory of Locus A includes 15 crushed P38-opened sanitary cans, 13 knife-punched hole-in-top cans, four internal-friction coffee cans (including two lids), 39 transfer ware/whiteware ceramic fragments (some with a floral print), nine solarized amethyst glass fragments (including a crown bottle fragment with neck and finish), six aqua glass fragments, 21 green glass fragments (including a neck fragment and a lip fragment), 15 brown/amber glass fragments, 54 clear glass fragments (including two lip fragments and one neck fragment), a fragment of bailing wire, an aluminum button, five tire fragments, and a 1-ft. section of green rubber hose. Diagnostic artifacts recorded in Locus A include two fragments of a clear bottle base embossed "KE…ASS MFG CO/ PAT/ AUG 31 1915/ SAND SPRINGS OKLA", another clear glass bottle base embossed "SMFCCO KOS/RU63 915" with a Latchford Glass Company maker's mark

dating to 1925-1938, a Kerr mason jar lid embossed “A-1 8-31-16”, and a Royal Baking Powder can fragment embossed “WEIGHT/8oz/ROYAL BA…/PO…/UNITED”. The second refuse concentration, referred to by Glenn as Concentration B, contained approximately 12 crushed cans, six earthenware/crockery fragments, about 20 glass fragments (amber, clear, aqua, and solarized amethyst), and about 30 white ware ceramic fragments. An additional colorless bottle base with a Maywood Glass Company maker’s mark (dating from 1930-1959) was recorded approximately 20 m east-northeast of Concentration B and may be have been deposited after the main concentrations of historic refuse. While surface collection was conducted for the historic component of the site, only diagnostic artifacts and a representative sample of the refuse deposits were collected. In total, 28 historic artifacts were collected. Table 4.10 presents the historic artifacts recorded on the surface of the site.

Table 4.10 Historic Artifacts Noted On the Surface During the Evaluation of SDI-20,634

		Form/Type/Production								
Class	**Specific Function**	**Hole in Top**	**Plate**	**Sanitary**	**Indeter-minate**	**Auto Machine**	**Pressed Glass**	**Applied Finish**	**Key-Strip / External Friction**	**Grand Total**
Building Material	Bailing Wire	-	-	-	1	-	-	-	-	**1**
Tin Can	Coffee	-	-	-	-	-	-	-	6	**6**
	Fruit/vegetable	-	-	15	-	-	-	-	-	**15**
	Milk	13	-	-	-	-	-	-	-	**13**
	Other/Unknown	-	-	-	12	-	-	-	-	**12**
	Oil	-	-	1	-	-	-	-	-	**1**
Unsorted Glass	Other/ Unknown	-	-	-	74	-	-	-	-	**74**
Ceramic Tableware	Other/Unknown	-	2	-	69	-	-	-	-	**71**
Glass Jar Lid	Fruit/vegetable	-	-	-	1	-	-	-	-	**1**
Ceramic Utilityware	Crockery	-	-	-	6	-	-	-	-	**6**
Bottle Glass	Beverage	-	-	-	-	2	-	1	-	**3**
	Other/Unknown	-	-	-	43	-	-	-	-	**43**
	Indeterminate	-	-	-	-	3	-	-	-	**3**
	Bleach	-	-	-	-	1	-	-	-	**1**
Decorative Glass	Decorative/Non -functional	-	-	-	-	-	1	-	-	**1**
Automotive Glass	Tail Light	-	-	-	-	-	1	-	-	**1**
	Headlight	-	-	-	-	-	1	-	-	**1**
Hose	Other/Unknown	-	-	-	1	-	-	-	-	**1**
Tire	Other/Unknown	-	-	-	5	-	-	-	-	**5**
Button	Button	-	-	-	1	-	-	-	-	**1**
Grand Total		**13**	**2**	**16**	**213**	**6**	**3**	**1**	**6**	**260**

The prehistoric surface component of the site consists of a modified cobble scraper, six pieces of debitage, one potsherd, and a small bedrock milling station. Most of the prehistoric artifacts were concentrated in the southwestern portion of the site, with the exception of the scraper, which was recovered from the graded disturbance on the western edge of the basin feature. The entire prehistoric component was collected, with the exception of the bedrock milling.

Ten STPs were excavated across the site, to a maximum depth of 80 cm (Figure 4.32 Confidential Appendix B). STP-1 was excavated to a depth of 40 cm just outside of the northern edge of Feature 1. STP-2 was excavated at the eastern edge of the site, approximately 30 m east of Feature 1, and was terminated at a depth of 30 cm, upon contact with decomposing granite bedrock. STPs 3, 4, and 5 were all excavated to a depth of 40 cm at 25-m east-west intervals across the center of Feature 1. STPs 6 and 8 were excavated to the south of Feature 1, approximately 10 m from the edge of the basin/reservoir, to a depth of 60 cm and 35 cm respectively. STP-7 was excavated in the southwestern portion of the site, near the surface debitage, to a depth of 80 cm. STP-9 was excavated at Locus B and was terminated after encountering bedrock at a depth of 55 cm in the northern half of the unit and 70 cm in the southern half. STP-10 was excavated at Locus A, to a depth of 40 cm below the surface.

STP-9 contained seven clear glass fragments, 10 ferrous metal fragments, and one whiteware fragment recovered from a maximum depth of 60 cm. (Rodent disturbances noted in the unit were likely responsible for the depths at which some of the artifacts were recovered.) No other STPs contained cultural material.

Soils are varied across the site, with three distinct soils present in different areas and depths of the site, all of which overlie decomposing granite bedrock. The most common soil at the site consists of loose to moderately compact brown sandy loam (Munsell: 10YR 4/3) with 5-30 percent decomposing granite gravel content, depending on depth and location. This soil makes up the entirety of STPs 2, 7, 9, and 10, the first 20 cm of STP-6, and the first 25 cm of STP-8. A moderately compact yellowish-brown clay loam (Munsell: 10YR 5/4) is present in the entirety of STP-1, and at depths of 20-60 cm in STP-6 and 25-35 cm in STP-8. The final soil present at the site consists of moderately compact red-brown sandy clay (Munsell: 10YR 3/6), sometimes with mottled dense clay pockets; this soil makes up the all of the soils from STPs 3, 4, and 5.

Discussion and Site Summary

SDI-20,634 is a multicomponent site consisting of a possibly historic earthen berm forming a basin/reservoir, historic refuse deposits, a bedrock milling feature, and a small lithic scatter. There is no evidence that these components represent contemporaneous usage; they are likely separate temporal phases that overlap spatially. The earthen berm forming the basin/reservoir is most likely agricultural in nature, and was likely constructed for water storage related to ranching. While the exact age of the feature cannot determined, Glenn (2012) noted that the 1959 and 1979 USGS quadrangle maps show contour lines matching the feature's topography,

although the feature is not illustrated as a reservoir per se, indicating that the feature likely dates to the historic period. The refuse deposits recorded are possibly associated with the earthen feature as well. The historic artifacts associated with the site suggest that the trash was deposited sometime between 1925 and 1959, based on the artifact types and maker's marks present.

The prehistoric component of the site is limited to the surface and is low in density; it is characteristic of a short-term stopover between longer-term occupation sites, including the grinding or processing of small, hard seeds. Neither component of the site is likely to contribute any additional information significant to the history or prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,635

This site was recorded during the Phase I investigation by Brian Glenn as a single bedrock milling feature consisting of one slick. The boulder with the feature is approximately 6 m in diameter. No associated artifacts were recorded on the surface within 30 m of the feature. The site is situated in an exposed foothill setting with chaparral vegetation. Weathering processes (e.g., exfoliation of the bedrock) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

Consistent with the survey data collected by Glenn, no surface artifacts were identified in association with the bedrock milling feature. Two STPs were excavated approximately 5 m to the north-northeast and south-southwest of the boulder with the milling feature (Figure 4.33 Confidential Appendix B). No cultural materials were recovered from the surface or subsurface of this site. STPs were terminated at a depth of 40 cm due to absence of artifacts. Only one stratum was noted, consisting of loosely compact brown (Munsell: 10YR 5/3) fine-grained sandy silty loam with approximately 10 percent fine gravel.

Discussion and Site Summary

SDI-20,635 consists of an isolated bedrock milling feature with no associated artifacts. This site is characteristic of a short-term stop involving the grinding or processing of small, hard seeds. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Due to the lack of subsurface deposits and the absence of artifacts other than a bedrock milling slick, the site is not likely to yield additional information regarding the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however,

impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as monitoring of project-related ground disturbing activities.

SDI-20,636

During the Phase I survey by Glenn, this site was recorded as a single bedrock milling feature consisting of one slick and quartz debitage on the surface in association with the feature. The site covers an area of 95 x 25 m. The site is situated in an exposed foothill setting with chaparral vegetation, located approximately 135 m east of McCain Valley road. Weathering processes (e.g., exfoliation of the bedrock) and machinery (e.g., road grading) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

The current evaluation effort by ASM began with an intensive pedestrian survey of the site surface. The artifacts were flagged; their locations recorded with a Trimble GPS unit; and they were collected prior to excavation. The bedrock milling slick was relocated and found in the same condition as previously reported. Artifacts recovered from the surface included one quartz biface fragment, four pieces of quartz debitage, one quartz hammer stone, and one fragment of calcined large mammal bone.

Seven STPs were excavated to a maximum depth of 40 cm (Figure 4.34 Confidential Appendix B) and were placed along the perimeter of the site boundary. STP-1 was placed next to the biface identified on the surface. STP-6 was the only STP to yield subsurface artifacts. One small bird bone fragment was recovered from 20-40 cmbs. The site boundary was expanded by 1-2 m on all sides to include additional surface material and the positive STP. Soil included two strata: 1) loose/moderately compact light brown (Munsell: 10YR 6/4) fine grained loamy sand with 10 percent gravel; and 2) compact brown (Munsell: 10YR 5/3) fine-grained sandy silty loam with 15 percent gravel.

Discussion and Site Summary

SDI-20,636 consists of an isolated bedrock milling feature with a sparse scatter of associated artifacts limited to the surface. This site is characteristic of a short-term stop involving the grinding or processing of small, hard seeds and expedient manufacture or modification of lithic tools. The non-human bone fragment is burned but was not found in association with any burned rocks or other clearly cultural materials (for additional detail, see Vertebrate Faunal Analysis section). The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites in the region. The low density of artifacts and lack of subsurface deposits suggest a low potential to provide any additional information regarding the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to

less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,637

Brian Glenn recorded the site during the Phase I inventory as a bedrock milling feature with a single slick and two historical features, including a foundation and a possible privy. Artifacts visible on the surface included quartz and volcanic debitage and flaked stone artifacts, groundstone (both handstones and millingstones), and a concentration of historic refuse with a mix of consumer goods, automotive remains, and shop debris. A drainage along the eastern edge of the site boundary appears to have been modified for control over surface water. Review of historic maps indicates that a structure was present in 1942 in the general vicinity of the finds, though the map scale makes exact spatial referencing difficult. The site covers an area of 177 x 172 m. The site is situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluvial, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current evaluation effort, the features identified by Glenn were relocated. The historic foundation was examined and found to consist of a low stacked rock/cobble surface covering an area of 10 x 15 ft. with low walls above the foundation, composed of a mixture of concrete and locally quarried quartz cobbles. An intensive pedestrian survey was conducted over the site surface. Surface artifacts collected prior to excavation include one volcanic biface, one modified cobble scraper, 14 pieces of debitage, and three pieces of groundstone. A number of historic items were also identified. Historic materials collected (n=10) include automotive or machine parts, and clear and glass fragments. Glass fragments include pieces of possibly solarized amber and clear glass, a medicine bottle, and bottle bases. Several maker's marks were identified at the site. The oldest visible maker's mark is the Illinois Pacific Glass Co. Symbol (ca. 1902-1925) (Toulouse 1971). Table 4.11 provides a tabulation of the historic artifacts identified on the surface.

Table 4.11 Maker's Marks Identified During the Evaluation of SDI-20,637 and their Associated Dates

Date Range	Label/Makers M./Manfactur.	Class/Specific Function				Grand Total
		Glass Bottle		Glass Tableware	Stove Pipe	
		Beverage	Medicine	Tumbler	Wood Burning Stove Pipe	
1936	4 <Owens Illinois Glass Co. Symbol> 6	1	-	-	-	**1**
1902-1925	<Illinois Pacific Glass Co Symbol>, IPGCO in Diamond	-	-	1	-	**1**
1916-1931	<Southern Glass Co Symbol>, S in Star	1	-	-	-	**1**
1923-1964	<Hazel Atlas Symbol>	1	-	-	-	**1***

Date Range	Label/Makers M./Manfactur.	Class/Specific Function				
		Glass Bottle		Glass Tableware	Stove Pipe	Grand Total
		Beverage	Medicine	Tumbler	Wood Burning Stove Pipe	
1925-1932	<Illinois Pacific Glass Co Symbol> IPG in Triangle	1	-	-	-	**1**
1932-1952	20 <Owens Illinois Glass Co> 2	-	1	-	-	**1**
1933-1967	<Glass Containers, Inc Symbol>	1	-	-	-	**1**
Post 1928	<Dominion Glass Co Symbol>, D in Diamond	1	-	-	-	**1**
(blank)	(blank)	-	-	-	3	**3**
Grand Total		**6**	**1**	**1**	**3**	**11**

*Not collected

Thirteen STPs were excavated to a maximum depth of 60 cm, yielding one retouched volcanic flake and one piece of quartz debitage (Figure 4.35 Confidential Appendix B). STPs were located along the site boundary in or near noted features, artifact concentrations, and lobes in the site boundary. Two STPs located inside the possible privy area and adjacent to historic materials on the surface provided no evidence for subsurface deposits. Eight of 13 STPs were terminated at depths of 12 to 38 cm, due to contact with bedrock, decomposing granite, or highly compacted clay soil. STPs 7 and 12 were the only STPs that yielded subsurface artifacts. STP-7 yielded one retouched flake, and STP-12 yielded one piece of debitage. Most units had only one soil stratum, composed of loose/moderately compact brown (Munsell: 10YR 4/3) fine-grained sandy loam with approximately 15 percent fine gravel. Some units encountered a second stratum composed of moderately to highly compact light brown (Munsell: 10YR 6/4-5/4) fine-grained sandy clay loam with 15-30 percent fine gravel. Fieldwork at this time expanded the site to cover a 215 x 190 m area.

The artifact assemblage collected from the site consists of one biface, one retouched flake, one modified cobble, 15 pieces of debitage, three pieces of groundstone, and a representative sample of 10 historic artifacts providing datable information (Table 4.12).

Discussion and Site Summary

SDI-20,637 is a multicomponent site, including a historic trash scatter with no significant depth, two historic features consisting of a quartz and concrete foundation and possible privy area, and a bedrock milling feature with a single slick with an associated prehistoric artifact scatter. Based on the historic artifacts identified at the site, the historic component of the site can be placed between 1902 and 1967. The drainage along the edge boundary of the site appears to have been modified in historic times, though the timing and extent of this modification cannot be determined at this time. The foundation and walls consist of a single construction phase of stacked or arranged quartz cobbles gathered or quarried locally and joined with concrete. Low walls were built in the same fashion, using concrete rather than mortar to cement the cobbles on

top of (and joined with) the foundation. The possible privy area was identified; however, an STP excavated in proximity showed very little depth and yielded no cultural materials. It is therefore probable that the original resource was a shed or other small aboveground storage structure. Deposits of historic refuse are limited to the surface and do not consist of significant numbers, nor is there depth to the deposit to support intensive or extended residential use of the site. Consequently, it is inferred that the structure was either never completed or served a temporary or other nonresidential purpose.

Table 4.12 Artifacts Recovered During the Evaluation of SDI-20,637

			Class						
Recovery Type	**Unit**	**Level**	**Biface**	**Retouched Flake**	**Modified Cobble**	**Debitage**	**Groundstone**	**Historic Artifact**	**Grand Total**
Surface			1	-	1	14	3	10	**29**
STP	7	0-20	-	1	-	-	-	-	**1**
	12	20-40	-	-	-	1	-	-	**1**
Total			**1**	**1**	**1**	**15**	**3**	**10**	**31**

The milling slick was not intensively used but is adjacent to a small seasonal watercourse. Prehistoric artifacts include grounds tone, flaked stone tools, and debitage. The combination of water source, evidence of milling, and lithic tool manufacture or maintenance possibly suggest the extended use or repeated seasonal use of the area for habitation or resource processing. The low density and dispersed nature of the lithic assemblage suggest that the site area was not used for significant lengths of time.

The lack of significant cultural deposits and datable material makes it difficult to place the prehistoric component of this site in time or in association with other similar sites. The historic component is consistent with a limited usage, likely during the 1920s-1930s. Neither component of the site is likely to provide any additional information regarding the historic or prehistoric occupation of the area; therefore, the site is recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,642

Recorded during the Phase I inventory by Brian Glenn, SDI-20,642 is a single bedrock milling feature consisting of one slick. The boulder with the feature is approximately 2 x 3 m. No associated artifacts were recorded on the surface within 30 m of the feature. The site is situated in an exposed foothill setting with California cismontane chaparral vegetation, Weathering and

erosional processes (e.g., exfoliation of the bedrock, alluvial, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current evaluation, no surface artifacts were identified in association with the bedrock milling feature. Two STPs were excavated approximately 13 m to the east-northeast and west-southwest of the boulder with the milling feature (Figure 4.36 Confidential Appendix B). No cultural materials were recorded or collected in either the surface or subsurface evaluation of this site. STP-1, excavated to the southwest of the milling feature, was terminated at 30 cm depth after a distinct transition in the strata. STP-2, excavated to the northeast of the milling feature, was terminated after two sterile levels. Site soils consist primarily of loosely compact dark brown (Munsell: 10YR 4/2) fine-grained sandy silt with approximately 50 percent fine decomposing granite gravel. STP-1 contained a soil transition at 20 cm below surface from the dark brown strata to a heavily compacted red-brown (Munsell: 10YR 3/6) sandy clay.

Discussion and Site Summary

SDI-20,642 consists of an isolated bedrock milling feature with no associated artifacts. This site is characteristic of a short-term stop involving the grinding or processing of small, hard seeds. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Because the bedrock milling feature has no associated artifacts on the surface or the subsurface, there is no potential for the site to provide any additional significant information regarding the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as monitoring of project-related ground disturbing activities.

SDI-20,643

During the Phase I inventory, Brian Glenn recorded this site as consisting of two features: a bedrock milling feature with a single slick and a possible *tinaja* (natural bedrock water catchment basin), as well as several possible pieces of quartz debitage and granite manuports, in an area of approximately 28 x 23 m, spanning the two features in a rough triangle. Weathering processes (e.g., exfoliation of the bedrock) and natural rodent and root actions have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

Beginning with an intensive pedestrian survey, the current evaluation effort identified one piece of quartz debitage on the surface, and eight granite cobbles (manuports) were found in association with the *tinaja* (seven inside, one adjacent). The piece of quartz debitage was recorded and collected prior to subsurface testing. Granite manuports were noted but not

collected. Four STPs were excavated approximately 9 m to the northwest (STP-5), northeast (STP-4), southwest (STP-1), and southeast (STP-3) of the bedrock milling feature, with a fifth excavated adjacent to the possible *tinaja* feature (STP-2) (Figure 4.37 Confidential Appendix B). STPs 2 and 5 each contained one piece of possible quartz debitage. STPs 1 and 2 were terminated at depths of 35 cm and 20 cm, respectively, upon contact with bedrock. The remaining STPs were excavated to a depth of 40 cm without evidence of significant soil change. A gradual shift was observed from surface soil consisting of pale-brown/light-grayish-brown (Munsell: 10YR 6/2-6/3) fine- to moderate-grained sand, to subsurface soil consisting of loose to moderately compact brown (Munsell: 10YR 5/3) fine-grained sandy silty loam with approximately 10 percent fine gravel.

The only materials recovered from the site were three pieces of quartz debitage bearing no evidence of retouch or significant use. The debitage recovered is shatter with no clear flake morphology or intentional shaping. As a result of testing, the site was expanded to cover a 35 x 30 m area.

Discussion and Site Summary

SDI-20,643 was previously recorded as consisting of a bedrock milling feature and possible water storage feature. The size of the possible *tinaja* indicates a storage capacity of a maximum of several gallons of water, an amount not large enough to sustain extended use of the site for habitation or milling activities. The original conclusion was likely influenced by the presence of a small amount of standing water at the time of the survey. The sparse lithic assemblage indicates a short-term use of the site for the formation and use of unrefined, expedient tools. Given the size and arrangement of the granite manuports and associated milling feature, it is possible that the feature was used to elevate storage basket(s), but this assumption cannot be confirmed. The lack of significant cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. No additional significant information would likely be obtained by any further work at the site. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,644

This site consists of an historic refuse pile and two prehistoric features: a bedrock milling feature with one visible slick, and a circular arrangement of cobbles on bedrock. The site as recorded by Brian Glenn during the Phase I inventory covers an area approximately 100 x 35 m, spanning the area between a large granite outcrop and the southern portion of the old landing strip on Rough Acres Ranch, situated in an exposed foothill setting with chaparral vegetation. Additional

artifacts noted on the surface include quartz and metavolcanic debitage. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluviation, and aeolian action) and natural rodent and root actions have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current evaluation effort, an intensive pedestrian survey was conducted over the site surface. Three pieces of volcanic debitage and one piece of groundstone were identified, recorded, and collected from the surface along with 20 historic artifacts. A total of 86 historic artifacts were noted across the surface of the site, but only a representative sample of 20 artifacts was collected. Table 4.13 provides a list of the types of historic artifacts noted on the site surface, and Table 4.14 provides a list of the maker's marks identified on some of the artifacts associated with the site and their corresponding date ranges. The quartz debitage previously noted during the Phase I survey was identified. No additional surface artifacts were located outside of the previously established site boundary. The 310 x 265 cm circular rock alignment recorded by Glenn was relocated and found to consist of approximately 20 granite cobbles, located 13 m northwest of the milling feature.

Table 4.13 Historic Artifacts Noted on the Surface During the Evaluation of SDI-20,644

		Form/Type/Production									
Class	**Specific Function**	**Pail**	**Sanitary**	**Indeterminate**	**Milled Wood**	**Auto Machine**	**Key-Strip / External Friction**	**Glass Jar**	**Paint Can**	**Aerosol Can**	**Grand Total**
Building Material	Other/Unknown	-	-	-	25	-	-	-	-	-	**25**
	Chicken Wire	-	-	1	-	-	-	-	-	-	**1**
	Cable	-	-	2	-	-	-	-	-	-	**2**
Glass Jar	Fruit/vegetable	-	-	-	-	2	-	-	-	-	**2**
	Other/Unknown	-	-	-	-	1	-	-	-	-	**1**
	Fruit	-	-	-	-	1	-	-	-	-	**1**
Tin Can	Beverage	-	21	-	-	-	-	-	-	-	**21**
	Coffee		-	-	-	-	1	-	-	-	**1**
	Car Wax	-	1	-	-	-	-	-	-	-	**1**
	Paint Can	-	-	-	-	-	-	-	4	-	**4**
	Aerosol	-	-	-	-	-	-	-	-	2	**2**
	Oil Can	-	8	-	-	-	-	-	-	-	**8**
	Pail	1	-	-	-	-	-	-	-	-	**1**
Bottle Glass	Other/Unknown	-	-	-	-	8	-	-	-	-	**8**
Stove Pipe	Stove Pipe	-	-	2	-	-	-	-	-	-	**2**
Axe Head	Axe with Claw	-	-	1	-	-	-	-	-	-	**1**
Jar Glass	Fruit/vegetable	-	-	-	-	-	-	4	-	-	**4**

Ranching Item	Barbed Wire	-	-	1	-	-	-	-	-	-	**1**
Grand Total		**1**	**30**	**7**	**25**	**12**	**1**	**4**	**4**	**2**	**86**

Table 4.14 Maker's Marks Identified During the Evaluation of SDI-20,644 and their Associated Dates

Class	Form/Type/Production	Label/Makers M./Manfactur.	Date Range	Total
Glass Jar	Auto Machine	<Hazel Atlas Symbol>, Plant F	1933-1967	**1**
		20 <Owens Illinois Glass Co> 0, Duraglas	1940-1950	**1**
Tin Can	Sanitary	"BERGERMEISTER / A TRULY FINE / PALE BEER"	Post 1950s	**1**
		"JOHSON'S CARNU"	Post 1950	**1**
Grand Total				**4**

Five STPs were excavated at the site, including one (STP-1) inside the historic trash scatter, one (STP-5) in proximity to the rock alignment, and one (STP-4) in proximity to the bedrock milling feature (Figure 4.38 Confidential Appendix B). The remaining STPs were dispersed within the site boundary to establish depth and density of cultural materials. STP-1 was excavated through a noted soil change and was continued to a depth of 50 cm to look for further strata. This was the only STP to yield artifacts. Thirty-five pieces of historic glass and metal were recovered from the 0-20 cm level. Only two strata were noted, consisting of loose to moderately compact brown (Munsell: 10YR 4/3) fine-grained sandy loam with less than 5 percent fine gravel, and moderately compact yellowish brown (Munsell: 10YR 5/6) fine-grained sandy clay loam with less than 5 percent fine gravel. A clay-bearing stratum was encountered in portions of the site (STPs 1, 2, and 4) at a depth of 20-35 cm. STP-3 showed no soil change and was terminated at a depth of 28 cm due to contact with bedrock. STP-5 was located within a small drainage with slightly different soil characteristics, consisting of loosely compact dark yellowish-brown (Munsell: 10YR 3/6-4/6) fine-grained loamy sand. A lens of light brown gravel (Munsell: 10YR 6/3) was encountered at a depth of 25 cm, with no other soil changes noted.

The assemblage of prehistoric materials recovered from the site consists of three pieces of volcanic debitage (two interior flakes and one secondary flake) and one groundstone. The entire assemblage for the historic component of the site includes more than 40 fragments of predominantly clear glass representing food containers, with one label saying "Chula Vista," and small amounts of brown glass. Metal debris consisted of more than 40 can fragments, including oil, paint, and chemical containers, parts of a stove, a hammer head, barbed wire, chicken wire, nails, and cables. More than 25 pieces of milled wood were also present. The only subsurface cultural materials identified were part of the historic refuse pile. These materials were not seen below a depth of 20 cm, consistent with a surface trash scatter. In total, 55 historic artifacts were collected, including 43 glass items, nine metal items, and three pieces of wood.

Discussion and Site Summary

SDI-20,644 is a multicomponent site including a historic trash scatter with no significant depth and a prehistoric lithic scatter and bedrock milling features with just three pieces of debitage. A circular rock alignment was also identified in association with the site. The level of preservation of all materials and the presence of aerosol spray cans suggest that the trash scatter is contemporaneous with other nearby deposits dating predominantly to the 1950s, with the possibility of more recent additions. Prehistoric materials indicate a relatively short-term use of the site. The milling slick is not intensively used but is adjacent to a small seasonal watercourse. The rock alignment is similar to features used to elevate storage basket(s). In spite of the combination of possible food storage, water source, and evidence of milling, the low density and dispersed nature of the lithic assemblage suggest that the site area was not used for significant lengths of time. The lack of significant cultural deposits and datable material makes it difficult to place the prehistoric component of this site in time or in association with other similar sites. Neither component of the site is likely to yield significant information regarding the history or prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,645

This site was recorded during the Rugged Solar Phase I investigation by Brian Glenn as consisting of two bedrock milling features, each with one slick, and two concentrations of surface artifacts. The granite outcrop containing the bedrock milling features creates a knoll on the valley floor, with the two concentrations of surface artifacts located on the western and southeastern slopes. Concentration A (southeast) contained 19 ceramic sherds and two pieces of volcanic debitage. Concentration B (west) contained 11 pieces of quartz and volcanic debitage and four ceramic sherds. The site covers an area of 89 x 50 m, including portions of a granite bedrock outcrop, and is situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluviation, and aeolian action) and natural rodent and root actions have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

The current evaluation effort began with an intensive pedestrian survey of the site surface. Not all of the artifacts identified during the Phase I survey could be relocated, likely due to natural processes including changes in vegetation cover and shifting sediments. A total of 14 potsherds and 14 pieces of volcanic debitage were identified and collected prior to excavation. Quartz pieces identified on the surface were deemed natural and were not collected.

Six STPs were excavated across the site, including four STPs within the previously established site boundary and two STPs to the west and south of the known boundary to test for possible expansion (Figure 4.39 Confidential Appendix B). STP-5 yielded one piece of volcanic debitage and seven brownware ceramic sherds from the top 20-cm level, with the majority of cultural materials being recovered from the top 5-10 cm. No other STP yielded cultural materials. Soil was composed of two strata, including a loose to moderately compact dark brown (Munsell: 10YR 3/3) fine-grained sandy loam with 5-10 percent fine gravel overlying a stratum of moderately compact brown (Munsell: 10YR 5/3) fine-grained sandy clay loam with decomposed granite and 10 percent fine gravel. This second stratum was encountered at a depth of 20-25 cm in STPs 1, 4, 5, and 6. STP-2, downslope from Locus B, but outside of the established site boundary, was composed entirely of moderately compact dark yellowish-brown (Munsell: 10YR 4/4) fine-grained sandy loam with 20 percent fine gravel. STPs 3, 4, 5, and 6 were terminated at a depth of 25-40 cm upon contact with granite bedrock.

The artifact assemblage associated with SDI-20,645 consists of just 36 artifacts. A total of 15 pieces of debitage and 21 potsherds make up the entire assemblage. The majority of artifacts were recovered from the surface.

Discussion and Site Summary

SDI-20,645 contains two bedrock milling features, each with one slick, and two small concentrations of volcanic debitage and potsherds that are confined to the surface. This site is characteristic of a short-term stop possibly related to expedient tool manufacture and limited hard seed milling. The sparseness of surface deposits and lack of subsurface cultural deposits or datable material makes it difficult to place this site in time or in association with other similar sites. Based on the current findings, it is unlikely the site will yield any additional information that would contribute significant advances in the understanding in the prehistory of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,646

Brian Glenn first identified this historic resource during the Phase I inventory. The site reportedly consisted of a historic refuse deposit and a down-slope smear of historic materials, including a variety of single- and multi-serve cans, sardine cans, a tobacco tin, and various pieces of glass and enameled cookware. The site covers an area of 45 x 15 m. Erosional processes (e.g., alluviation and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation by ASM, the site was first subjected to an intensive pedestrian survey. The historic items identified on the surface were recorded in detail, and a small representative sample of artifacts was collected. The site assemblage includes more than 45 cans, including a variety of single- and multi-serve cans (hole-in-top), sardine/fish cans, a tobacco tin, and a paint can. Other materials present include flat pane glass, amethyst bottle glass, and a variety of enameled cookware (e.g., bowl, ladle).

Two STPs were excavated approximately 5 m to the east and south of the refuse concentration, to a depth of 40 cm (Figure 4.40 Confidential Appendix B). Neither of the STPs yielded subsurface cultural materials. Soil was composed of loosely compacted brown (Munsell: 10YR 5/3) fine-grained sandy silt with greater than 50 percent fine decomposing granite gravel. In STP-2, south of the refuse concentration, soil compaction increased at a depth of 35 cm, with indications of a hard substratum of granite underneath.

Four artifacts were collected from the site included a metal shaving cream can, a metal button with the words “the boos/union made”, one piece of solarized amethyst glass, and a bottle base.

Discussion and Site Summary

SDI-20,646 consists of an historic refuse deposit and a down-slope smear of historic materials. The can types indicate that the deposit likely dates from prior to World War II, and the presence of amethyst glass indicates the possibility of an earlier (pre-World War I) date for the site. No significant depth was found at the site, limiting the resource to a surface deposit. Given the nature of the resources and sparseness of surface materials, the site is not likely to provide further information significant to the history of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

SDI-20,683

This small historic resource was recorded by Brian Glenn during the Phase I evaluation as consisting of a rock alignment feature. The rock alignment consists of granitic boulders in a diamond shape, with quartz boulders at one end. The feature covers an area of 70 x 35 m. Quartz cobbles used include high-quality crystal quartz. Within the diamond is another alignment in the shape of a “C” composed entirely of quartz cobbles. This second alignment is adjacent to a BLM quarter-section survey marker and windsock pole. An “X”-shaped alignment of quartz cobbles is located to the north of the “C” alignment. No artifacts were

visible on the surface. The area within and immediately surrounding the feature has been largely cleared of vegetation in historic times.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation, no artifacts were identified or collected from the surface prior to excavation. Two STPs were excavated to a maximum depth of 40 cm in the northern and southern corners of the main feature (Figure 4.41 Confidential Appendix B). Neither STP yielded cultural materials. Soil was composed of loose/moderately compact brown (Munsell: 10YR 4/3) sandy silty loam with 20 percent fine gravel.

Discussion and Site Summary

This site comprises a historic rock alignment feature. The location near the old landing strip on Rough Acres Ranch and historic clearance of large vegetation suggests that the feature was predominantly built for aerial visibility and navigation. The location of a BLM quarter-section survey marker could also suggest that this feature predates the landing strip and was built to be visible from surrounding hill and mountain peaks, but was later elaborated for use in conjunction with aviation. Given the nature of the resource and lack of associated cultural materials, the site is recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as monitoring of project-related ground disturbing activities.

P-37-031676

This historic / modern refuse dump was recorded by Chad Willis (Hale et al. 2010). The site, previously visible on the surface, is now located adjacent to the existing earthen airstrip, and largely covered by up to 3 meters of soil. P-37-031676 is approximated to currently measure 40 x 20 meters. Vegetation in and around the site consists of creosote bush scrub, saltbush, and native grasses. Natural disturbances are uncertain, due to the extensive recent impacts from heavy machinery. The site area is along what is now an airstrip, and main road, in the construction yard and has heavy machinery tracks visible.

Site Structure, Artifact Recovery, and Assemblage Composition

The site appears to represent a relatively recent refuse dump used by the ranch. The assemblage at the site includes cans, metal, glass, building materials, and wood. Material includes refuse primarily from the 1950s, with continuing additions through modern times. Following the initial identification and recording of the deposit in 2010, ranch workers were observed filling the hole and covering the site. The most recent study conducted by ASM observed that the refuse deposit seemed to have been moved/ graded to the side of the existing road, and buried by a large amount of dirt. Some remaining historic and modern material was noted to have been imbedded

within, and scattered below, the downward-sloping road edge. Ninety-five artifacts were recorded on the surface. As data potential for these artifacts was exhausted through the process of recordation, and provenience was largely compromised by past disturbances, these items were not collected. Two STPs were excavated along the northern edge of the site boundary, near the eastern and western site boundary (Figure 4.42 Confidential Appendix B). Excavated units were placed within the up-hill portion of the site with the intent of locating and evaluating any remnants of the original deposit. The STPs were terminated at depths of 40 and 50 cm, following verification of previously noted materials. Only one stratum was noted, likely comprising fill from the road above, consisting of loosely compact brown (Munsell: 10YR 5/3) fine-grained loamy sand with approximately 10 percent fine gravel. A total of 1107 items were recovered from the two STPs. Of these, 818 are unidentifiable metal fragments, weighing 523.42 g, and 120 unidentifiable glass fragments, weighing 72.11 g. Of the remaining 169 items, diagnostic items include 22 solarized glass fragments (1880-1920), five pull tab beer cans (1962-circa 1974), 1 beer can pull tab (1962-circa 1974). Identifiable but non-diagnostic recovered items include bullet casings, light bulb glass fragments, wire nails, galvanized nails, two unglazed whiteware fragments, three animal bones, crews, bolts, concrete, asphalt, and wood.

Discussion and Site Summary

P-37-031676 is an excavated and re-deposited trash deposit filled with refuse dating from the 1950s through the 1970s. Some glass vessel fragments dating to the 1930s and 1940s were noted. However, based on the substantially higher frequencies of material dating to more recent periods, these were interpreted as having been re-deposited through a later dumping event. Bottles, cans, ferrous metal fragments, building materials, and wood from various recent periods were observed both on the surface and subsurface to a depth of at least 50 cm. Noted maker's marks and observed modern artifacts seem to indicated multiple dumping events since the 1950s. While a large number of artifacts were recovered from this site through subsurface testing, the bulk portion of this material was comprised of historic/modern ferrous metal fragments, non-diagnostic bottle glass shards, and building material. Given the recorded assortment of constituents, the loss of vertical and horizontal integrity, and evidence of modern dumping, the site will not provide any additional information regarding the history of the region. The site is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

P-37-031680

P-37-031680 is a multicomponent historic-period homestead and prehistoric habitation site measuring 185 x 70 m. The structure is situated on pastureland, dominated by alkali seep

community plants. The sparse scatter of historical refuse and prehistoric lithic debitage, lithic tools, groundstone, ceramic sherds, and bedrock milling is dispersed to the south along a narrow, north/south-trending ridge that is dominated by large granitic boulders and moderately dense chaparral vegetation. Visibility of the ground surface ranged from less than 20 percent in the grassy area surrounding the structure to nearly 50 percent in the areas of exposed decomposing granite along the ridge. The site was noted to be in the same general location and condition as previously recorded, though it is evident that disturbances have included partial destruction of the home site, graffiti, general ranching, and off-road activities.

Chad Willis of ASM first recorded the site in 2010 for the Tule Wind Project (Hale et al. 2010). ASM noted several horseshoes, sanitary cans, and clear and brown glass, as well as modern plastic and a historic petroglyph that reads “JD 1933”. The prehistoric component consisted of a milling station, one handstone fragment, one handstone used as fill in a concrete footer, and one green volcanic flake. It was interpreted to be one of the original homes on the Rough Acres Ranch property (Figure 4.43). Further evaluation was never conducted, as direct impacts to this property were avoided in subsequent Project planning revisions.

Figure 4.43 Photograph of historic structure associated with P-37-031680

During the Phase I investigation, Brian Glenn revisited the site in 2012 (Glenn 2012), generally confirming the previous recordation by ASM. Glenn identified an additional concrete slab southeast of the structure and a newly recorded rock foundation to the north. A feature interpreted to be two possible "proto-mortars" was also identified.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation, an intensive pedestrian survey of the site was conducted in 5-m transect intervals. The historic structure, historic petroglyph, and prehistoric milling station were relocated and noted to correspond with previous recordation. Two additional historic-period features were also noted, including a 2 in. diameter drilled hole in the surface of the bedrock located on the crest of the hill, and a 3 x 3 ft. concrete slab situated at the eastern extent of the site (Figure 4.44 Confidential Appendix B). One historic concentration of glass, ceramic sherds, tin cans, and miscellaneous metal machine parts was recorded upon the ridge, near the center of the site. A representative sample of diagnostic historic items was collected from this primary concentration. Historic items that were recorded outside of the refuse concentration, though not collected, were noted to include two solarized amethyst glass fragments (including one brandy finish bottle fragment), one crushed coffee can, three undifferentiated crushed sanitary cans, and four solder-dot milk cans. The dimensions of the milk cans, $4^{4}/_{16}$ x $2^{15}/_{16}$ in., provide a likely manufacturing date between 1917 and 1929 (IMACS 2001). Three different maker's marks were identified on some of the artifacts associated with the site; these place the site occupation between 1930 and 1959 (Table 4.15).

Table 4.15 Maker's Marks Identified During the Evaluation of P-37-031680 and their Associated Dates

Class	Form/Type/Production	Label/Makers M./Manfactur.	Date Range	Total
Glass Bottle	Indeterminate	"Design Patented/ <Hazel-Atlas Glass Co. Symbol>	1930-1940	**1**
	Auto Machine	<Maywood Glass Co>, Italicized "MG"	1930-1959	**1**
Fastener	Rivet	Raised "LS & Co. SF"	Early 1900s	**2**
Grand Total				**4**

The historic refuse concentration was noted to include approximately 250 glass bottle fragments. Colors of glass were noted to include solarized amethyst (n = 3; 1895-1915), aqua (n = 9; 1880-1920), milk glass (n = 1), and colorless (n = 200). Bottle types include liquor, canning jars, and tumbler fragment. Maker's marks include Hazel-Atlas Glass Company, "H over an A" (1923-1964), with a valve mark (ca. 1930-1940); an unidentified "B"; an unidentified "I in a triangle"; and Maywood Glass, "Italicized MG" (1930-1959) (Toulouse 1971). Historic ceramics recorded within this concentration included approximately 60 sherds of stoneware pottery. Decorative elements were noted to consist of floral pattern, hand-painted blue-on-white-and-pink flowers, opaque solid blue, and clear glaze. Corrugated earthenware was also recorded. Additional items included one sanitary can lid, one spice can, one crushed

hole-in-cap can, 50 unidentified ferrous metal fragments, one canning jar lid with a milk glass insert, two small metal gears, one metal snap with "ARR FAST CO.", two copper Levi Strauss rivets with raised "LS & CO SF" (dating to the early 1900s), and a small 3-x-$^{5}/_{16}$-in. pipe with a filter or screen attachment (IMACS 2001). Table 4.16 provides a list of historic items noted on the surface of the site, including details on the types of domestic and utilitarian products associated with the historic occupation of the site.

Table 4.16 Historic Artifacts Noted on the Surface during the Evaluation of P-37-031680

		Form/Type/Production												
Class	**Specific Function**	**Auto Machine**	**Brass Shell**	**Button**	**Hole-In-Cap**	**Indeterminate**	**Jar Lid**	**Key-Strip**	**Metal Gear**	**Metal Valve/ Filter**	**Plate**	**Rivet**	**Sanitary**	**Grand Total**
Bullet Casing	Bullet	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Ceramic Tableware	Decorative/ Non-functional	-	-	-	-	1	-	-	-	-	-	-	-	**1**
	Other/ Unknown	-	-	-	-	60	-	-	-	-	-	-	-	**60**
	Plate	-	-	-	-	-	-	-	-	-	3	-	-	**3**
Ceramic Utilityware	Utility	-	-	-	-	3	-	-	-	-	-	-	-	**3**
Ferrous Metal	Other/ Unknown	-	-	-	-	50	-		-	-	-	-	-	**50**
Fastener	Clothing Fastener	-	-	1	-	-	-	-	-	-	-	-	-	**1**
	Levi Strauss Rivet	-	-	-	-	-	-	-	-	-	-	2	-	**2**
Glass Bottle	Beverage	5	-	-	-	-	-	-	-	-	-	-	-	**5**
	Other/ Unknown	2	-	-	-	5	-	-	-	-	-	-	-	**7**
Glass Jar	Menthol	1	-	-	-	-	-	-	-	-	-	-	-	**1**
Glass Jar Lid	Fruit/ vegetable	-	-	-	-	-	1	-	-	-	-	-	-	**1**
Glass Plate	Other/ Unknown	-	-	-	-	-	-	-	-	-	1	-	-	**1**
Glass Stopper	Other/ Unknown	-	-		-	1	-	-	-	-	-	-	-	**1**
Machine Part	Machine Part	-	-	-	-	-	-	-	2	1	-	-	-	**3**
Tin Can	Coffee		-	-	-	-	-	1	-	-	-	-	-	**1**
	Indeterminate	-	-	-	1	-	-	-	-	-	-	-	-	**1**
	Meat Can	-	-	-	-	-	-	-	-	-	-	-	1	**1**
	Spice Can	-	-	-	-	1	-	-	-	-	-	-	-	**1**
Unsorted Bottle Glass	Other/ Unknown	-	-	-	-	212	-	-	-	-	-	-	-	**212**
Grand Total		**8**	**1**	**1**	**1**	**333**	**1**	**1**	**2**	**1**	**4**	**2**	**1**	**356**

The prehistoric artifacts identified and collected during the intensive pedestrian survey included one utilized flaked, one core, 12 pieces of debitage, five pieces of groundstone (one handstone and four millingstones), and 29 potsherds. A single bedrock milling feature was also recorded. The milling feature consists of a single granitic boulder measuring 8.4 x 5.4 x 0.34 m, with a single ground area. The grinding is characterized by a 90 x 90 cm grouping of amorphous and continuous slick surfaces no more than 1 cm in depth. The slick has been highly exfoliated, generally separated into a number of discrete remnants.

A total of 19 STPs and two STUs were excavated within P-37-031680 (see Figure 4.44 Confidential Appendix B). Subsurface cultural material was recovered from 10 STPs and both of the STUs. The primary scatter of prehistoric cultural material was recorded in the vicinity of the milling station, located within the southern portion of the site. STPs 17 and 18 and STU-1 were the only excavation units that yielded prehistoric subsurface artifacts (Table 4.17). One granitic millingstone fragment was recovered from the upper 20 cm of STP-17. STP-18 yielded one interior volcanic flake and four interior obsidian flakes. STU-2 yielded one interior obsidian flake and one secondary volcanic flake. The obsidian flakes were all sourced using hand-held pXRF technology and found to have originated from Obsidian Butte (see Appendix A).

Table 4.17 Prehistoric Artifacts Recovered During the Evaluation of P-37-031680

			Class						
Recovery Type	**Unit**	**Level**	**Retouched Flake**	**Utilized Flake**	**Core**	**Debitage**	**Groundstone**	**Ceramic (Aboriginal)**	**Grand Total**
Surface			-	1	1	12	5	29	**48**
STP	17	0-20	-	-	-		1	-	**1**
	18	0-20	-	-	-	4	-	-	**4**
		20-40	-	-	-	1	-	-	**1**
STU	1	0-10	-	-	-	1	-	-	**1**
		20-30	1	-	-	1	-	-	**2**
Grand Total			**1**	**1**	**1**	**19**	**6**	**29**	**57**

Historic artifacts were recovered from STPs 4, 7, 9, 10, 11, 12, 14, and 15, and from STU-1. The majority of material was recovered from the upper 20 cm. Artifacts recovered included pieces of whiteware ceramics, bottle glass, different types of metal fragments and a few pieces of modern debris (Table 4.18). During a field visit with County personnel, an additional earthenware bottle stopper, shaped as a seated knight with black glaze, was identified approximately 3 meters north of the historic structure. The item was collected at this time, however, it was subsequently returned to the location after determining that the area would be avoided by project impacts.

Forty-seven pieces of vertebrate remains were also recovered from the site, some of which exhibits signs of butchering. These are most likely associated with the ranching-period occupation of the site. During a field visit with County personnel, Adam Giacinto of Dudek identified four pieces of calcined animal bone approximately 8 meters to the southwest of the

structure. No elements of these bone fragments could be used to make a formal identification beyond large mammal (see analysis section, Vertebrate Faunal Remains). Due to the ubiquity of burned bone (broken and saw cut) at the site, and its proximity to heat-modified historic refuse (primarily bottle glass), this material most likely derives from historical consumption of cow or other medium and large-bodied domesticated animals.

Table 4.18 Historic Artifacts Collected During the Evaluation of P-37-031680

			Class/Subclass						
Recovery Type	**Unit**	**Level**	**Ceramics**	**Glass**	**Metal - Munitions**	**Metal - Other**	**Other**	**Plastic/Bakelite**	**Total**
Surface			6	12	1	6	-	-	**25**
STP	4	0-20	2	14	-	17	1	-	**34**
		20-40	-	1	-	-	-	-	**1**
	7	0-20	-	1	-	-	-	-	**1**
	9	0-20	-	5	-	1	-	-	**6**
	10	0-10	1	-	-	-	-	-	**1**
		0-20	2	10	1	43	1	-	**57**
	11	0-20	3	26	-	11	-	-	**40**
		20-40	-	4	-	-	-	-	**4**
	12	0-20	1	-	-	2	1	-	**4**
	14	0-20	-	2	-	3	-	2	**7**
		20-40	-	-	-	2	-	-	**2**
		40-60	-	-	-	-	-	1	**1**
	15	0-20	-	1	-	1	-	-	**2**
STU	1	0-10	-	3	1	12		-	**16**
		10-20	-	-	-	1	-	-	**1**
Grand Total			**15**	**79**	**3**	**99**	**3**	**3**	**202**

Historical Research on the Ranch House at P-37-031680

The original ranch house associated with the parcel (APN 611-090-02-00), located within a northern portion of P-37-031680 that is planned for avoidance by the present project, was associated with Horace G. McCain from 1891 until 1905. Horace was one of the sons of George Washington McCain and Martha McCain. The McCains first settled in McCain Valley on August 18, 1869 and built their first house, comprised of tules and willow poles. Shortly after settlement, they started ranching and became one of the prominent ranching families in Campo Country. In the nineteenth and early twentieth centuries, the extended McCain family owned property in Campo Country from Potrero to McCain Valley (Alexander 1910; Bureau of Land Management 2012).

Horace G. McCain patented the Project area, which included 160 acres in Township 17 South, Range 7 East, as part of a homestead entry claim on March 2, 1897. Horace's homestead included the E½ of the NW¼ of Section 17, Township 17 South, Range 7 East (containing P-37-031680) and the E½ of the SW¼ of Section 8, Township 17 South, Range 7 East, which is north of P-37-031680. The McCain property consisted of a board house 10 x 12 ft. with an addition of

12 x 14 ft. It appears that the 10-x-12-ft. house was constructed in April 1891, and the addition was constructed by 1896. Thirty acres were fenced for the house, corral, and barn. By 1896, Horace McCain had cleared 6 acres and successfully farmed 3 acres of land. Although he had cultivated those 3 acres, the land was best suited for cattle grazing (General Land Office 1897; San Diego County 1897). While Horace retained the property until 1905, he was absent from it at least between 1900 and 1903. Although the reason is unclear, Horace was determined to be insane and was admitted to the California State Commission in Lunacy in Patton, California during August 1900. He was released in September 1903. During his absence, several family members and friends oversaw his financial affairs. He returned to the Boulevard area and may have lived on the property from 1903 to 1905 (San Diego Directory Company 1915).

In April 1905, Jane Cameron acquired the property from Horace G. McCain (Kieley 2012). Jane was the daughter of Thomas R. and Mary Catherine Lee Cameron. Thomas, a Scotch highlander, and Mary Catherine, a French Canadian, arrived in the area in 1868, the same year as the McCain family. Thomas first worked as a trader, and then the family joined the cattle ranching business, though Thomas also operated a stagecoach station in the backcountry (McCain 1955:61-62; San Diego History Center n.d.; United States Census Bureau 1870, 1900). Jane Cameron was a stock raiser and retained APN 611-090-02-00 until October 1926, when her younger brother, George William Cameron, became the new owner (Kieley 2012). He was also a cattle rancher, and it is possible that he worked Jane's property before he owned it. Cameron was listed on a 1910 plat as living on his sister's property as well as on 240 acres east of the property (Alexander 1910; San Diego County Directory 1905, 1910, 1936; United States Census Bureau 1930). The house footprint during this period is visible in 1928 aerial imagery (see Sketch Map for P-37-031680, Confidential Appendix C).

George Cameron owned the property for 14 years before he sold it to James C. Fuquay in May 1940 (Kieley 2012). James may have been the son of Thomas Word Fuquay who settled in the Potrero Valley area in 1881. Thomas worked many trades, including blacksmith, teamster, carpenter, and postmaster, until sometime in the 1900s, when the family moved to Covina (McCain 1955:31). James moved to Imperial County by the 1910s and then resettled in the greater Campo area by the 1920s, where he worked as a dairyman (San Diego County Directory 1923, 1924; United States 1918).

James Fuquay owned the property for 32 years and sold it to Stanley Williams in March 1972. Stanley Williams sold it to the Real Estate Partnership No.2 in April 1982, which in turn sold it to Vista Oaks Business Park L.P. in March 2005 (Kieley 2012). Based on a search of the biographical files at the San Diego Historical Center and McCain (1955), Stanley Williams was not a person of local historical significance. The Mountain Empire Historical Society primarily retains records on people active during the nineteenth and early twentieth centuries and would not have information on people on the property in the 1940s and later. A residence with the same orientation as the extant building existed by 1928, and a building has remained in that same location over time (Tax Factor 1928; United States Geological Survey 1939, 1959).

McCain Family Properties

As previously mentioned, the McCain family owned property from Potrero to McCain Valley in the nineteenth and early twentieth centuries (Alexander 1910; Bureau of Land Management 2012). According to a 1980 study, “most of the original structures built in the [McCain] valley by the McCains have been moved or destroyed” (Cook and Fulmer 1980:272). One of the remaining McCain properties is the nearby Tule Ranch in the lower end of McCain Valley. It was first homesteaded by Laurence McCain in 1868 and was later owned by James L. McCain, grandson of George Washington McCain and son of Henry McCain. Laurence left the homestead and moved to Julian (McCain 1955:83). The James L. McCain ranch included portions of Sections 15 and 16 of Township 17 South, Range 7 East. The 422.94 acres of the ranch are situated on the southwestern slopes of the Laguna Mountains in the McCain Valley at 2550 McCain Road (P-37-031931).

In 2011, ASM evaluated P-37-031931 and recommended that it was eligible for listing in the NRHP and the CRHR under Criterion A/1 for its association with homesteading and ranching in the San Diego backcountry and under Criterion B/2 for its association with the McCain family, an influential pioneering cattle ranching family that first settled in this area in the 1860s (Ní Ghabhláin et al. 2011:120-121).

Architectural Description:

The Horace G. McCain Ranch was constructed between 1891 and 1896 in the vernacular style. The ranch is comprised of a one-story single-family dwelling with a one-story addition that was interconnected to make one extended building. The dimensions given in the original land patent indicate that the building on the eastern side of the property was the original building from 1891 and the larger, hipped-roof section on the western side was the addition of 1896. The orientation and porch location of the overall building today indicates that the 1896 addition became the main dwelling.

Today the building is vacant and in disrepair. It is located approximately 2 mi. north of Old Highway 80 and Interstate 8. The 1896 building has a wood frame and a nearly rectangular floor plan with a semi-rock and concrete foundation. The exterior is clad in wood clapboard siding. The roof is a low-pitched hipped roof with overhanging eaves and clad in corrugated metal sheets. On the west elevation, there is a full-width recessed porch. Wooden posts support the porch roof. The primary entrances are located within the porch and consist of two doors, which have been removed, and the openings are now covered with plywood boards. The windows have also been removed, and the openings are now covered in plywood board siding. Many of the facades of the building have are also covered in plywood boards where the exterior wall has been removed as a result of disrepair. Makeshift wood posts that are placed underneath the eaves support the building. There is one chimney on the north elevation, and it

consists of roughly hewn masonry stone. There is also a side-gable one-story addition on the east section of the building.

The roof of the 1891 building has a narrow side gable with flat roof extensions on either eave side. The building appears to have had board-and-batten siding, which can still be seen underneath the south gable. Similar to the 1896 building, the original also has plywood board coverings on door and window openings, as well as exposed studs. Modifications to the building include the deterioration of the exterior wall materials and the removal of windows and doors. Another modification is the removal of part of the 1891 building on the south elevation. Landscape features include a concrete slab patio on the southeast end of the building, along with mature trees and overgrown grass surrounding the property. The overall building is in poor condition.

Discussion and Site Summary

P-37-031680 consists of a historic-period ranching structure and refuse scatter, as well as a small prehistoric habitation site. The prehistoric component of the site is primarily limited to the surface and consists of bedrock milling feature with an exfoliated milling slick and a sparse lithic and ceramic scatter. Four pieces of obsidian were recovered from the site and sourced using ASM's hand-held pXRF instrument (Appendix A). The obsidian was found to have originated from Obsidian Butte in Imperial County.

Based on the findings from the current evaluation, the prehistoric component of the site likely represents a limited-use seasonal occupation site used for processing local food resources, lithic reduction, and tool modification and maintenance. The research potential of the prehistoric component of the site has largely been exhausted. The site is not likely to yield any additional information significant to the understanding of the prehistory of the region. This component is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. This component is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities.

The historic component of the site is comprised of the historic-period ranching structure and associated refuse. The homestead was historically used for ranching up until its vacancy and will not be directly impacted by planned project activities. Although the structure is associated with the historic contexts of early settlement, farming, and agriculture in the McCain Valley, events that made a significant contribution to the history of the backcountry of San Diego County, this homestead building at the Horace G. McCain Homestead is not an outstanding illustration of those historic contexts, nor does it possess enough of the physical features necessary to convey that aspect of local agricultural history.

McCain was a member of the McCain family, who were an important agricultural and homesteading family in this area of San Diego County. The McCain Valley and McCain Road are named after this family. Siblings Jane and George Cameron of Cameron Corners and Cameron Valley owned the property for 35 years and operated it as a ranch. Archival research did not reveal that any of the other successive owners of the Horace G. McCain homestead, following the Camerons, were historically significant individuals in this area of the McCain Valley and nearby Boulevard. While the Camerons were backcountry ranchers, the McCain family had a large ranching franchise that was well documented in the region. Although Horace G. McCain was a member of the family, he only lived on this farm for a relatively short time. Additionally, this building does not sufficiently represent a particular property type, period, or method of construction, nor does it represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction.

The Horace G. McCain building also does not meet any of the definitions set forth by the RPO. The building is not formally determined eligible or listed in the NRHP; has not been given an H designator; and is not a one-of-a-kind, locally unique, or regionally unique cultural resource that contains a significant volume and range of data or materials.

Based on the findings of the historical research, the historic component of the site is not recommended eligible for listing in the CRHR or the Local Register, is not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, impacts to the site can be reduced to less than significant through recordation and evaluation efforts described herein, as well as curation of artifacts and monitoring of project-related ground disturbing activities. Furthermore, temporary fencing is recommended for the portion of the site that is located within the avoidance area of the project to prevent impacts to the site during project construction and grading.

4.2.3 Field Results from Sites within Avoidance Areas

Four sites are present within the project limits, however will be avoided through project design.

SDI-20,626

This site was recorded during the Phase I investigation by Brian Glenn as a multicomponent site consisting of an earthen basin reservoir, two bedrock milling features with a total of two mortars and one slick, and surface artifacts including a bifacial granite handstone, a quartz biface fragment, and debitage. The site covers an area of 110 x 63 m. Weathering and erosional processes (e.g., bedrock exfoliation, alluviation, and aeolian action), ranching, and modern construction have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

The earthen basin reservoir is approximately 180 x 40 ft. in size, extending west of the knoll. Other earth modifications may also be present in the northern section of the site, or they could indicate disturbances. Bedrock milling features are moderately well-developed mortars, with depths of up to 10 cm, and at least one slick, though the surface of the boulders is exfoliating, hindering the identification of other potential elements.

The granite handstone could not be relocated during the current evaluation effort. Surface artifacts collected prior to excavation include one early-stage quartz biface fragment, one piece of metavolvanic debitage, and 39 potsherds.

Ten STPs and one 2-x-1-m CU were excavated across the site (Figure 4.45 Confidential Appendix B). STPs were concentrated on the southern and eastern portions of the site, focusing on the knoll with the milling features, to test for additional cultural deposits. No surface materials were noted in the northwestern portion of the site. STPs 2, 3, 4, 6, and 7 were terminated before a depth of 40 cm (most before 20 cm), due to bedrock contact. The CU was excavated down to the bedrock with varying depths from approximately 10 to 30 cmbs. Cultural materials from the CU included five potsherds, two fragments of faunal bone, and seven pieces of historic glass mixed within the deposit, demonstrating some historic disturbance associated with the sediments at the site. Charcoal was present but not collected.

STPs 4 and 7 were the only STPs that were positive for cultural materials. STP-4 contained two potsherds in the top 15 cm of soil. STP-7 yielded cultural materials included 70 potsherds and two metal fragments in the 0-20-cm level. Eleven potsherds were recovered from the 20-40-cm level; charcoal was also noted but not collected.

Soil was consistent throughout the excavated areas and composed of loose to moderately compact grayish brown (Munsell: 10YR 5/2) fine-grained silty sand with decomposing granite. In units that approached or encountered bedrock, a second stratum of moderately compact mottled brown or yellowish brown (Munsell: 10YR 5/4) fine-medium grained sandy clay loam with decomposing granite was noted as a gradual transition rather than a sharp soil change.

Discussion and Site Summary

SDI-20,626 consists of two bedrock milling features, a ceramic scatter, one biface, and one piece of debitage, as well as some historic debris and an earthen basin. The bedrock milling features include elements that are well-developed and show more intensive and repeated use than many similar features in the area. There are a relatively large number of potsherds associated with the site as well. This suggests the site was used primarily for processing food procured locally during seasonal rounds. However, the limited depth of cultural deposits and lack of variability in the artifact assemblage suggest the site is not likely to provide additional significant information regarding the prehistory of the region. The site is thus recommended as not eligible for listing in

the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, the site is located within an avoidance area and will not be impacted by the project. Temporary fencing is recommended to prevent impacts to the site during project construction and grading.

SDI-20,629

The site was recorded by Brian Glenn, consisting of a single bedrock milling feature containing at least six elements (two basins and four slicks). No artifacts were visible on the surface, though heavy vegetation was noted. The site is limited to the boulder itself, covering an area of 3 x 2 m. It is situated in an exposed foothill setting with chaparral vegetation. Weathering and erosional processes (e.g., bedrock exfoliation, alluviation, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current investigation, no surface materials were identified in association with the bedrock milling feature. Four STPs were excavated to a maximum depth of 62 cm around the feature to test for subsurface deposits (Figure 4.46 Confidential Appendix B). All STPs were negative for cultural material. Soil was composed of a single stratum of moderately compact dark brown (Munsell: 10YR 3/3) fine-grained silty loam with 5 percent fine gravel.

Discussion and Site Summary

SDI-20,629 is similar to many other sites in the area, consisting of a single bedrock milling feature with multiple elements. The milling features are slightly degraded by rock exfoliation. This site is characteristic of a short-term stop involving the grinding or processing of plants. The lack of subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Based on the results of the current evaluation, the site is not likely to yield any additional information regarding the prehistory of the region and is thus recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, the site is located within an avoidance area and will not be impacted by the project Temporary fencing is recommended to prevent impacts to the site during project construction and grading.

SDI-20,639

During the Phase I inventory, Brian Glenn recorded this site as a concentration of brownware ceramic sherds. Artifacts reported as visible on the surface included ceramics, quartz, and chalcedony debitage. The site covers an area of 20 x 6 m. Weathering and erosional processes (e.g., exfoliation of the bedrock, alluviation, and aeolian action) and machinery (e.g., road grading) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

During the current evaluation effort, just three artifacts were noted on the surface of the site as opposed to the concentration described by Glenn. Surface artifacts were collected prior to excavation and included one potsherd, one piece of quartz debitage, and one red cryptocrystalline silica primary flake. Three STPs were excavated to a maximum depth of 10 cm in the eastern and western sections of the site as well as outside of the site boundary (Figure 4.47 Confidential Appendix B). STPs showed soil composed almost entirely of compacted decomposing granite, yielding no cultural materials. No evidence of subsurface deposits was identified.

Discussion and Site Summary

This site is comprised of just three artifacts recovered from the surface. The site exhibits no evidence for subsurface deposits and is closer to an isolate find than a site. The lack of subsurface cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Because the site has low data potential and is not likely to yield any additional information regarding the prehistory of the region, it is recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, the site is located within an avoidance area and will not be impacted by the project. Temporary fencing is recommended to prevent impacts to the site during project construction and grading.

SDI-20,641

This site was recorded during the Phase I survey by Brian Glenn as a consisting of two bedrock milling features with a total of four slicks. He reported artifacts visible on the surface to include volcanic and quartz debitage in an area of 29 x 11 m. Weathering and erosional processes (e.g., bedrock exfoliation, alluviation, and aeolian action) have disturbed the site.

Site Structure, Artifact Recovery, and Assemblage Composition

The current evaluation effort began with an intensive surface survey to locate the previously recorded artifacts. Not all of the previously recorded resources were identified during the current evaluation. One piece of debitage was identified and collected but later deemed non-cultural and deaccessioned. Three STPs were excavated to a maximum depth of 60 cm near the surface artifact along the site boundary (Figure 4.48 Confidential Appendix B). STP-3 yielded one piece of volcanic debitage from the top level (0-20 cm). Neither of the other STPs yielded cultural materials. Soil composition included one stratum consisting of loose to moderately compact brown (Munsell: 10YR 4/3) fine-grained sandy silty loam with 10 percent fine gravel.

Discussion and Site Summary

SDI-20,641 consists of two bedrock milling features with a total of four slicks and an extremely low-density lithic scatter. This site is characteristic of a short-term stop involving the grinding or processing of small, hard seeds and possibly some expedient manufacture or modification of lithics. The lack of cultural deposits and datable material makes it difficult to place this site in time or in association with other similar sites. Because the site has a very low artifact density and does not possess a substantial subsurface deposit, it is recommended as not eligible for listing in the CRHR or Local Register, not eligible for protection under County RPO guidelines, and not significant under CEQA. The site is considered important under County Guidelines; however, the site is located within an avoidance area and will not be impacted by the project. Temporary fencing is recommended to prevent impacts to the site during project construction and grading.

5.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

5.1 Resource Importance and Management Concerns

The current investigation's area of study contains 32 archaeological sites and 30 isolates evaluated under CEQA guidelines, and San Diego County guidelines pertaining to cultural resources, including the County's Resource Protection Ordinance (RPO). The primary goals of this study were to identify cultural resources that have the potential to be significantly impacted by future development plans within the APE, and to provide an evaluation of the resources to identify their historical significance under CEQA.

The current testing program was conducted to satisfy the requirements of CEQA. Important in such an endeavor is the development of an understanding of each identified resource in such a way that its historical significance can be assessed. CEQA mandates the consideration of the historical significance of a resource in an effort to gauge whether it has the potential to be listed on the CRHR. Criteria 1 through 4 of the CRHR 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 1and 2). Site significance and eligibility under CEQA and County guidelines was considered in Chapter 4 for individual sites; please refer to each site description for detailed evaluation statements.

The following eligibility recommendations were based principally on Criterion 4 of CEQA for archaeological sites, since the data collected during the current testing program is used to determine whether any of the resources has yielded or is likely to yield information important to the prehistory or history of the local area, California, or the nation. To date, no information has been generated through Native American consultation that could tie the aboriginal archaeological sites to particular place names or identify them as sacred sites. The cultural resources were assessed for eligibility based on the data potential represented by their general archaeological characteristics—i.e., assemblage integrity, size, diversity, defined chronology, and the potential for buried deposits.

ASM evaluated all 32 identified sites within the study area, and based on the results of the evaluation program, none of the evaluated archaeological sites meet the criteria to be considered eligible for listing in the CRHR or the Local Register (Tables 5.1 and 5.2; Figure 5.1 Confidential Appendix B). No human remains were identified, and none of the sites are likely to be associated with human remains. No intensive occupation activity is indicated by the material yielded through the current investigation. While hearth features have been recorded within SDI-5171 and SDI-20386, the portions of these sites that fall within the project APE do not contain these thermal features. The previously recorded rock shelters that fall within the current project area (SDI-5171, SDI-20116 and SDI-20624), likewise, provided very limited volume and range of cultural material, and exhibited distinct disturbances to data integrity. These features do not

represent one-of-a-kind, locally unique, or regionally unique cultural resources. However, all three of these rock shelters are outside the MUP areas and will not be impacted by project construction. As a result of the evaluation efforts, none of the sites are recommended eligible for protection under the County RPO. One site was not relocated (SDI-16,367), and was not included in the testing program.

At least some portion of 32 sites intersect the current MUP limits. Of these, 28 will be directly impacted by planned project activities. Four of the evaluated sites within the MUP limits are now located in areas of avoidance (SDI-20,626, -20,629, -20,639, and -20,641).

Table 5.1 Eligibility of Cultural Resources within the Rugged Acres Study Area

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
SDI-4788/20,647	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP15. Habitation debris; AH4. Trash scatter	Yes	270	Yes	33	80 cm	39	4	252	0	0	Lithic tools, debitage, percussing tools, groundstone, ceramics, faunal remains, historic refuse.	Impacts reduced through excavation, reporting, curation of artifacts, and grading monitoring.
SDI-5171	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP11. Hearths; AP14. Rock shelter; AP15. Habitation debris	No	95	Yes	0	0 cm	5	0	4	0	0	Lithic tools, debitage, groundstone, ceramics.	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring for portion of report within Project area. Temporary fencing and monitoring is recommended during project construction for portion of site outside Project area.
SDI-10,359	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter	Yes	91	Yes	35	80 cm	15	6	4	1	85	Lithic tools, debitage, percussing tools, ceramics, groundstone, faunal remains,	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring for

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
													historic refuse.	portion of site within Project area. Temporary fencing and monitoring is recommended during project construction for portion of site outside Project area.
SDI-16,367	This site was not relocated during current investigation. Currently plotted site location is recommended not eligible for CRHR or Local Register listing or significant under County RPO or CEQA. It is considered not important under County Guidelines	AP2. Lithic scatter; AP3. Ceramic scatter	No	0	No	0	0 cm	0	0	0	0	0	Not relocated	No impacts from currently proposed project. Grading monitoiring reccmmended.
SDI-16,373/16,374	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AH4. Trash scatter	Yes	7	Yes	6	60 cm	0	0	0	0	0	Lithic debitage, groundstone, historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-19,872	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under	AP2. Lithic scatter	Yes	1	Yes	5	50 cm	2	0	0	0	0	Lithic debitage	Impacts reduced through evaluations, recordation, curation of artifacts, and

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
	County RPO or CEQA.													grading monitoring.
SDI-19,873	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP4. Bedrock milling	No	0	Yes	4	52 cm	0	0	0	0	0	No artifacts observed at site	Impacts reduced through evaluation, recordation and grading monitoring.
SDI-20,068	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter;	Yes	18	Yes	20	90 cm	4	0	0	0	0	Lithic tools, debitage	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
P-37-031676	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AH4. Trash dump	Yes	95	Yes	2	40 cm	1107	0	0	0	0	Historic/modern refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,116	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP14. Rock shelter	Yes	21	Yes	7	80 cm	6	1	8	0	0	Lithic tools, debitage, groundstone, ceramics, faunal remains, modified cobble	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,118	Important resource under County guidelines. Not eligible for CRHR or Local	AP2. Lithic scatter; AP4. Bedrock milling; AH2.	Yes	12	Yes	23	100 cm	8	2	2	1	0	Lithic tools, debitage, groundstone, historic refuse	Impacts reduced through evaluation, recordation,

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
	Register listing. Not significant under County RPO or CEQA.	Foundations/structure pads; AH4. Trash scatter												curation of artifacts and grading monitoring.
P-37-031680	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic Scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash dump	Yes	404	Yes	19	74 cm	213	2	21	0	0	Lithic tools, debitage, groundstone, ceramics, faunal remains, historic refuse, modern refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring. Temporary fencing and monitoring is recommended during project construction for portion of site in the avoidance area.
SDI-20,386	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP11. Hearth; AH4 Trash scatter	Yes	51	Yes	19	80 cm	6	1	2	1	16	Lithic tools, debitage, groundstone, ceramics, faunal remains, modified cobble, historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,618	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP4. Bedrock milling; AH4. Trash scatter; AH6. Water conveyance system	Yes	1	Yes	5	40 cm	1	0	0	0	0	Historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
SDI-20,624	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4 Bedrock milling; AP14. Rock shelter	Yes	3	Yes	5	80 cm	2	1	0	0	0	Lithic debitage, historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,625	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP4. Bedrock milling	No	0	Yes	4	80 cm	0	0	0	0	0	No artifacts observed at site	Impacts reduced through evaluation, recordation and grading monitoring.
SDI-20,626	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter; AH8. Dam/earthen berm	Yes	41	Yes	10	50 cm	85	0	0	1	14	Lithic tools, debitage, ceramics, faunal remains, historic refuse	No impacts from currently proposed project. Temporary fencing and monitoring is recommended during project construction to prevent impacts to the site. * Recordation and Curation required.
SDI-20,628	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter	Yes	41	Yes	8	60 cm	8	0	0	0	0	Lithic debitage, groundstone, ceramics	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
SDI-20,629	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP4. Bedrock milling	No	0	Yes	4	62 cm	0	0	0	0	0	No artifacts observed at site	No impacts from currently proposed project. Temporary fencing and monitoring is recommended during project construction to prevent impacts to the site. * Recordation required.
SDI-20,630	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4. Bedrock milling	Yes	4	Yes	5	50 cm	0	0	0	0	0	Lithic debitage	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,632	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter	Yes	9	Yes	1	40 cm	0	0	0	1	4	Lithic debitage, ceramics	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,634	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter; AH8. Dam/earthen berm	Yes	268	Yes	10	80 cm	18	0	0	0	0	Lithic debitage, ceramics, modified cobble, historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
SDI-20,635	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP4. Bedrock milling	No	0	Yes	2	40 cm	0	0	0	0	0	No artifacts observed at site	Impacts reduced through evaluation, recordation and grading monitoring.
SDI-20,636	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4. Bedrock milling	Yes	7	Yes	7	40 cm	1	0	0	0	0	Lithic tools, debitage, faunal remains, percussing tool	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,637	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	Yes	29	Yes	13	60 cm	2	0	0	0	0	Lithic tools, debitage, groundstone, modified cobble, historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,641	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4. Bedrock milling	No	0	Yes	3	60 cm	1	0	0	0	0	Lithic debitage	No impacts from currently proposed project. Temporary fencing and monitoring is recommended during project construction to prevent impacts to the site.* Recordation and Curation required,

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
SDI-20,642	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP4. Bedrock milling	No	0	Yes	2	40 cm	0	0	0	0	0	No artifacts observed at site	Impacts reduced through evaluation, recordation and grading monitoring.
SDI-20,643	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4 Bedrock milling	Yes	1	Yes	5	40 cm	2	0	0	0	0	Lithic debitage	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,644	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP4. Bedrock milling; AP8. Rock feature; AH4. Trash scatter	Yes	90	Yes	5	50 cm	35	0	0	0	0	Lithic debitage, groundstone, historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,645	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling	Yes	28	Yes	6	40 cm	8	0	0	0	0	Lithic debitage, ceramics	Impacts reduced through evaluation, recordation, curation of artifacts and grading monitoring.
SDI-20,646	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under	AH4. Trash scatter	Yes	>50	Yes	2	40 cm	0	0	0	0	0	Historic refuse	Impacts reduced through evaluation, recordation, curation of artifacts and

Site Designation	Significance Recommendations	Site Type	Surface Collection	# of Surface Artifacts	Tested	# of STPs	Max Depth	# of STP Artifacts	# of STUs	# of STU Artifacts	# of Units	# of Unit Artifacts	Artifact Types	Mitigation
	County RPO or CEQA.													grading monitoring.
SDI-20,683	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AH16. Possible aerial landmark	No	0	Yes	2	40 cm	0	0	0	0	0	No artifacts observed at site	Impacts reduced through evaluation, recordation, and grading monitoring.
SDI-20,639	Important resource under County guidelines. Not eligible for CRHR or Local Register listing. Not significant under County RPO or CEQA.	AP2. Lithic scatter; AP3. Ceramic scatter;	Yes	3	Yes	3	10 cm	0	0	0	0	0	Lithic debitage, ceramics, historic refuse	No impacts from currently proposed project. Temporary fencing and monitoring is recommended during project construction to prevent impacts to the site*. Recordation and Curation required.

- Not Determined

*Site was evaluated, but will be avoided by project design. Any recovered cultural materials will be curated with the entire project collection.

Eligibility recommendations are provided for the 32 sites that intersect the currentMUP, on-site access roads, collection corridors, and off-site access roads. These resources were evaluated as part of a Phase II testing program (see Tables 5.1 and 5.2; Appendix E). The County considers all cultural resources as significant and eligible for CRHR listing under CEQA and County guidelines unless formal evaluation determines otherwise. Evaluation typically includes some combination of surface collection, excavation, mapping, and special analyses that are designed to provide an understanding of site formation and human use of that resource in a regional context. For resources that have not been evaluated for significance and that are placed in open space or avoided by project impacts at this time, in lieu of significance testing, significance is assumed (County of San Diego 2007b).

County cultural resource significance criteria 1-3 are defined within the San Diego Resource Protection Ordinance (Section 86.601. (O), 2007b). None of the cultural resources recorded within the currently proposed project area have been formally determined, or recommended, as eligible for listing in National, State, or Local Registers. Evaluation efforts conducted at each of these sites have not yielded a significant volume and range of data and materials that might be associated with a one-of-a-kind, locally unique, or regionally unique resource under the County RPO or Criterion D of CEQA. The NAHC Sacred Lands File did indicate the presence of at least one Native American cultural resource within the seven USGS Section areas that are included the project area. However, to date, no comments relating to RPO criterion 3 have been provided by Native American monitors on-site or by County personnel through tribal representative response letters. No past or current sacred religious or ceremonial observances have been provided regarding known burials, rock art, celestial observatory sites, sacred shrines, or other recognized sites of sacred, ritual, ceremonial or cultural value.

Based on these factors, all 32 evaluated cultural resources are recommended as not significant and not eligible for listing in the CRHR or Local Register under CEQA and County guidelines. Additionally, none of these sites have elements that would be considered significant and eligible for protection under County RPO. However, all of the evaluated cultural resource sites are considered “important” under County guidelines.

Thirty isolates were also previously identified within the current study area. However, cultural resource isolates are not considered eligible for listing in the CRHR or the Local Register, are not considered important under County Guidelines, and are not significant under CEQA or the County RPO.

5.1.1 Integrity of Tested Sites

An assessment of site integrity is partly dependent on the analysis of collected materials in relation to provenience. However, the reader is referred back to individual site descriptions for discussions of depositional integrity based on fieldwork. Historical aerial photography indicates evidence for periodic flooding events or large-scale water movement that likely inundated low-lying parts of the valley. The number of water control features constructed historically and in

modern times further speaks to the important action of water. Prehistoric resources could have been moved by water or buried to depths beyond which evaluation occurred. Generally, most sites retained some integrity, given the continued association of artifacts within horizontal and vertical limits to the extent that they can be identified as archaeological sites. However, historic and modern activities throughout the project area have impacted the evaluated sites to greater or lesser degrees. Some grading activities were so extensive that the graded limits are still visible in aerial images. It is also generally true that archaeological deposits near milling features retain more spatial integrity than those in open areas that were subject to grading and other ranching activities. Overall, prehistoric archaeological sites were typically characterized by fair integrity, but also by low diversity and small assemblages.

The general nature of all of the deposits within the current Project study area is that they are limited to the surface or near surface (Table 5.1). None of the evaluated sites encountered substantial subsurface deposits. This was true for sites with prehistoric as well as historic components. Because most of the deposits are limited to the surface, they have been subject to displacement by natural process such as erosion and weathering which can degrade the surfaces of bedrock milling features and displace smaller discrete artifacts. Most of the sites exhibit some degree of weathering and artifact displacement.

5.1.2 Chronological Placement of Tested Sites

Some general trends can be identified regarding the chronological placement of the tested sites. For historical archaeological sites and the single standing structure, there is clear evidence of historical land use dating back to the early 1900s, based on can types, bottle glass, and other indicators. There is also evidence of historical occupation extending through the period from the 1920s to the 1960s, with artifacts dating to the latter part of that range being quite common (e.g., bimetal pull-tab beverage cans). This is not surprising, given the continued occupation and use of the area by local occupants. This age range is also consistent with the historic research conducted for the home site at P-37-031680. This house was built between 1891 and 1896 and was maintained well into the 1960s by several subsequent owners.

For prehistoric sites, chronological assessments are less certain. Very few diagnostic artifacts were recovered (see Table 5.2). The rare projectile point forms are consistent with those that date to the Late Prehistoric and Ethnohistoric Periods, such as the two Desert side-notched and Cottonwood triangular arrow points identified at SDI-5171 and SDI-20,386 (the latter was not relocated during evaluation) (see Hale and Quach 2011). The Sierra subtype of the Desert side-notched arrow point has been dated to approximately the last 500 years (Baumhoff and Byrne 1959; Delacorte 2008). Aboriginal ceramics also came into widespread use during the last 1,000 years in eastern San Diego County; particularly Tizon brownware and Salton brownware (Griset 1996). The majority of ceramics from prehistoric deposits in the current project area consists of Salton brownware. Tizon brownware is also present within the assemblage at about 18 percent, and the occasional Salton buff sherd was also found. Indeed, ceramic sherds were

commonly found in low frequencies at many prehistoric Project sites. The alignment of both late projectile point forms and ceramics seems to indicate that the vast majority of occupation at project sites occurred within the last 1,000 years, give or take a few centuries. However, the terminus of the use of arrow points and ceramics in the San Diego region, and especially in McCain Valley and the Laguna Mountains, extends well into the Spanish period, after A.D. 1769. There are accounts of Native Americans continuing to use traditional tools and practice traditional subsistence well into the early 1800s (see Chapter 2; and Hale 2009). Thus, it may be that some or most of the evaluated prehistoric sites are ethnohistoric in age, representing Native American occupation during the historic era. Unfortunately, deciphering the exact age of prehistoric sites is not possible, given the general lack of organic material recovered during this evaluation that could be radiocarbon dated. In fact, no samples suitable for radiocarbon analysis were recovered. Organic residues could be recovered from groundstone artifacts for chronological analysis, but is not a planned as part of current evaluation efforts. The problem is made more difficult by the lack of clear ethnohistoric aboriginal artifacts, such as trade beads or modified historic items. Regardless, it is doubtful that without full chronological analysis for all project sites, more clarity that all prehistoric sites appear to date to the last 1,000 years than what is offered here is possible.

5.1.3 Site Function of Tested Sites

Some generalizations about site function are possible based on the analytical results of the evaluation. For historical sites, site function relates to general ranching activities, such as building earthen water retention basins, fence lines, leveling areas for agricultural purposes, and residential occupation. For most sites with features attesting to such activities (i.e., P-37-031680), the function is obvious, given the existence of a residential structure, or an earthen berm. For other historical archaeological sites, such as refuse deposits, the function must be inferred from assemblage composition. In all cases, refuse deposits consisted of items, or fragments, of common household consumables, such as food and beverage cans and bottles, fuel containers, building materials, and other such goods. The apparent isolation of refuse deposits does not necessarily indicate that some random historical occupation occurred in the area. To the contrary, it was common practice during historic times to dump household refuse at some distance away from the residence, a practice made easier and more prevalent with the introduction of the automobile (see Hale et al. 2010). Given the relatively small size of the project area, and that it comprises a significant part of McCain Valley, it is likely that refuse deposits within the project area relate to overall historical occupation of the valley, rather than relating directly to residents who once lived in the immediate area. The long span of occupation of the residence at P-37-031676—from at least the early 1900s into the 1960s—complicates the association of any single refuse deposit with one another or any particular occupant of this home site.

Table 5.2 Overview of Site Cultural Attributes

Primary No. P-37-	Trinomial CA-SDI-	Age	Site Type	Diagnostic Artifacts	Lithic Tools	Debitage	Ground stone	Ceramics	Bedrock Milling	Other Features	Midden	Integrity	Significant Buried Deposits	Discrete Dump Points	Modern Dumping	Structures/ Structural Remains	Management Recommendations*
4788/20647	4788/20647	Both	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP15. Habitation debris	+	+	+	+	+	+	-	+	Fair	-	-	-	-	1
5171	5171	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP11. Hearths; AP14. Rock shelter; AP15. Habitation debris	+	+	+	+	+	+	+	-	Fair	-	-	-	-	1
10359	10359	Both	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter	+	+	+	+	+	+	-	-	Fair	-	+	-	-	1
24670	16367	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter	-	-	+	-	+	-	-	-	Fair	-	-	-	-	2
24694/24695	16373/16374	Both	AP2. Lithic scatter; AH4. Trash scatter	-	-	+	+	-	-	-	-	Fair	-	-	-	-	1
31305	19872	Prehistoric	AP2. Lithic scatter	-	-	+	-	-	-	-	-	Fair	-	-	-	-	1
31306	19873	Prehistoric	AP4. Bedrock milling	-	-	-	-	-	+	-	-	Fair	-	-	-	-	1
31625	20068	Prehistoric	AP2. Lithic scatter	-	+	+	-	+	+	-	-	Fair	-	-	-	-	1
31677	20116	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP14. Rock shelter	+	+	+	+	+	+	+	-	Fair	-	-	-	-	1
31679	20118	Both	AP2. Lithic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	-	-	+	+	-	+	-	-	Fair	-	+	-	+	1
32184	20386	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP11. Hearth; AH4. Trash scatter	+	+	+	+	+	+	+	-	Fair	-	-	-	-	1
32495	20618	Both	AP4. Bedrock milling; AH4. Trash scatter; AH6. Water conveyance system	+	-	-	-	-	+	+	-	Fair	-	-	-	-	1
32501	20624	Prehistoric	AP2. Lithic scatter; AP4 Bedrock milling; AP14. Rock shelter	-	-	+	-	-	+	+	-	Fair	-	-	-	-	1
32502	20625	Prehistoric	AP4. Bedrock milling	-	-	-	-	-	+	-	-	Fair	-	-	-	-	1
32503	20626	Both	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter; AH8. Dam/Earthen Berm	+	+	+	-	+	+	+	-	Poor	-	-	-	-	3
32505	20628	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter	-	-	+	+	+	-	-	-	Fair	-	-	-	-	1
32506	20629	Prehistoric	AP4. Bedrock milling	-	-	-	-	-	+	-	-	Fair	-	-	-	-	3
32507	20630	Prehistoric	AP2. Lithic scatter; AP4. Bedrock milling	-	-	+	-	-	+	-	-	Fair	-	-	-	-	1
32509	20632	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter	-	-	+	-	+	-	-	-	Fair	-	-	-	-	1
32511	20634	Both	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter; AH8. Dam/earthen berm	+	+	+	-	+	+	+	-	Fair	-	+	+	-	1
32512	20635	Prehistoric	AP4. Bedrock milling	-	-	-	-	-	+	-	-	Fair	-	-	-	-	1
32513	20636	Prehistoric	AP2. Lithic scatter; AP4. Bedrock milling	-	+	+	-	-	+	-	-	Fair	-	-	-	-	1
32514	20637	Both	AP2. Lithic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	+	+	+	+	-	+	-	-	Poor	-	+	-	+	1
32516	20639	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter	-	-	+	-	+	-	-	-	Fair	-	-	-	-	3
32518	20641	Prehistoric	AP2. Lithic scatter; AP4. Bedrock milling	-	-	+	-	-	+	-	-	Fair	-	-	-	-	3
32519	20642	Prehistoric	AP4. Bedrock milling	-	-	-	-	-	+	-	-	Fair	-	-	-	-	1
32520	20643	Prehistoric	AP2. Lithic scatter; AP4 Bedrock milling	-	-	+	-	-	+	-	-	Fair	-	-	-	-	1
32521	20644	Both	AP2. Lithic scatter; AP4. Bedrock milling; AP8. Rock feature; AH4. Trash scatter	+	-	+	-	-	+	+	-	Fair	-	+	-	-	1
32522	20645	Prehistoric	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling	-	-	+	-	+	+	-	-	Fair	-	-	-	-	1
32523	20646	Historic	AH4. Trash scatter	+	-	-	-	-	-	-	-	Fair	-	+	-	-	1
32630	20683	Historic	AH16. Possible aerial landmark	-	-	-	-	-	-	+	-	Fair	-	-	-	-	1

Primary No. P-37-	Trinomial CA-SDI-	Age	Site Type	Diagnostic Artifacts	Lithic Tools	Debitage	Ground stone	Ceramics	Bedrock Milling	Other Features	Midden	Integrity	Significant Buried Deposits	Discrete Dump Points	Modern Dumping	Structures/ Structural Remains	Management Recommendations*
31680	N/A	Both	AP2. Lithic Scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	+	+	+	+	+	+	+	-	Fair	-	-	-	+	1
31676	N/A	Historic	AH4. Trash dump	+	-	-	-	-	-	-	-	Poor	-	+	+	-	1

***Note** 1: CEQA: Not Significant: CRHR: Not Eligible; County: Not Significant per RPO; Important per County Guidelines; importance mitigated through evaluation, recordation, grading monitoring, and curation (if artifacts were collected)

2: Not Relocated

3. CEQA: Not Significant: CRHR: Not Eligible; County: Not Significant per RPO; Important per County guidelines; avoided

As with chronology, prehistoric site function is a generalized concept that must be inferred from artifact types and other residues and is thus more dependent on the result of artifact analyses. Regardless, all prehistoric sites have similar assemblage composition or components of a generalized assemblage common to project sites. Common artifact types include lithic debitage, grinding stones (including bedrock milling stations), and aboriginal ceramics. The basic economic functions inferred from these artifacts are lithic tool production or rejuvenation, food processing, and food cooking/storage. The rarity of projectile points implies limited hunting, although the common use of throwing sticks (which are generally not preserved) is an often-invisible method of hunting and the lack of such finds does not preclude widespread hunting of small animals. Projectile points can function without stone points and hunting can also be done with traps, nets, clubs, etc., providing alternate avenues that would not produce stone projectile points. Faunal remains do not provide evidence for significant hunting of small mammals. Residue analysis studies have indicated the processing of rabbits and other small mammals by grinding in other parts of San Diego County, but such analyses were not performed in this evaluation. Thus, there is no evidence for significant hunting within the current set of evaluated sites. The prevalence of grinding stones, including bedrock milling stations, speaks to the relative economic importance of food processing. However, that most surfaces are lightly used milling slicks, rather than formally manufactured mortars, implies that processing was more situational and occurred on an as-needed basis, or that mortars, basins, and slicks served different functions, the preponderance of slicks indicating a focus on meadow seed and nuts resources (see Hale 2010). The overall lack of features at project sites, including storage features, caches, fire pits, and the like, indicates that aboriginal occupation at project sites consisted of one or a few families for a few days or weeks, rather than multiple families for several months. Such a pattern is more likely represented at sites outside of the project area 1 mi. to the north that consist of widespread, dense midden, and residential features (e.g., SDI-4010 or SDI-19001/19003—See Hale et al. 2010). The sites within the project area could thus be interpreted as subsidiary stations relating to larger settlement sites. Each individual site indicates a short-term occupation of a transitory nature, fitting with an overall theme that McCain Valley was a common stopover for people traveling between the coast and desert (see Hale et al. 2010). The refined and portable nature of the toolkit recovered from a select few sites would further support this; however, as noted, there may be two phases of prehistoric occupation, or two groups utilizing the area differently. Overall, prehistoric sites evaluated for this project seem to reflect seasonal occupations that were focused on harvesting meadow seed and nut resources as they came available, with a subset of sites indicating a more mobile or transient occupation, leaving a small, exhausted assemblage with higher formality and represented by more diverse raw materials, eclipsed by a more robust assemblage of lightly used tools manufactured from locally available stone.

5.1.4 Cultural Landscape

The National Parks Service (NPS) allows individual archaeological sites on federally administered lands to be considered for historical significance as a district, or a group of sites (NPS 1997). Non-federal jurisdictions often refer to districts as landscapes, but the two are distinct. Districts are inherently a tool for managing the important elements of historic properties while landscapes are the contexts within which the districts are considered for evaluation of significance. Thus, archaeological sites can be managed as a district, if warranted, to better weigh the significance of impacts if much is known about the cultural landscape. The following discussion topically considers the current set of evaluated prehistoric sites within a larger dataset generated during the Tule Wind, LLC project to better integrate themes related to aboriginal occupation of McCain Valley (see Hale et al. 2010; Hale and Quach 2011). Historic sites, and the historic landscape, are not considered further here. The historic built environment is discussed separately in this document, and overall themes of historic landscapes enveloping the project area and the historical archaeological sites evaluated for this project have been presented in other documents (see Hale and Quach 2011).

While this project is proposed on lands under the jurisdiction of San Diego County, guidance for defining and evaluating archaeological districts is best understood and detailed by the NPS. Given the similarity of Section 106 of the NHPA, CEQA, and San Diego County guidelines for cultural resources, the regulatory underpinnings are assumed to carry over to County guidelines for the purposes of this project.

Archaeological districts are defined as groups of individual sites (termed elements) within a geographically circumscribed area that "are linked historically by function, theme, or physical development…" (NPS 1997). Moreover, most archaeological districts are considered discontinuous because sites are each spatially discrete and not physically linked, if the space between sites does not have significance. The importance of a district is considered over multiple sites/elements such that the district becomes the property under consideration for historical significance, and the level at which the significance of impacts is measured. Historical significance of a district typically draws on a broader (i.e., regional) cultural context to better understand the cultural themes that give the district its importance.

Numerous archaeological studies have been completed in the region. The Tule Wind project is one such project with a 26,000-acre ROW that partially overlapped the Rugged Solar project area (see Table 5.1, Table 5.2, Figure 5.1; see Confidential Appendix B). A strong cultural context was developed for the Tule Wind project, and also led the Bureau of Land Management (BLM) to request the development of a more inclusive cultural overview to aid in deciphering prehistoric cultural patterns over a much larger area (Noah 2012). These documents are extensive and will not be recited here. However, the main components of the Tule Wind cultural context were integrated into the current document, including the research design (see chapters 1 and 3). As outlined in the research design, the basic theme that has the

potential to unite a group of sites under a district is that of aboriginal settlement and subsistence during the late Prehistoric period (A.D. 500-1,500) since McCain Valley may have been a convenient stopover for groups traveling to the coast or a seasonal habitation area for groups residing in eastern deserts for much of the year. The general lack of strong chronological control limits further delineation of the cultural context and thereby, diminishes the relative importance of any district that can be defined.

A total of 7,649 acres of the Tule Wind ROW was intensively surveyed, resulting in the documentation of 220 archaeological sites, 171 of which are prehistoric in age (Table 5.2; see Appendix E). Portions of one site, SDI-4788/20647 were evaluated to assess the potential for significant deposits that could be eligible for NRHP listing; none were found and those portions of the site were recommended not eligible (Hale 2011). Overall, the Tule Wind dataset is a strong foundation for understanding the kinds of individual prehistoric archaeological sites in McCain Valley, including large and small habitation sites, processing sites (bedrock milling), lithic scatters, and ceramic scatters. Large and small habitation sites are defined by higher assemblage diversity and the presence of midden soils, but some also contain rock shelters (see Hale and Quach 2011). Processing sites, lithic scatters, and ceramic scatters are substantially less diverse than habitation sites and tend to include a single artifact class (i.e., debitage at lithic scatters, ceramic sherds at ceramic scatters) (see Table 5.2 and Appendix E). Hale and Quach (2011) surmise that several of the large habitation sites (SDI-4010, 7151, -19001/19003, and -20071) probably represent serial occupation by multiple families during the spring (based on surface observations); that is, these are probably seasonal villages. In contrast, processing sites, lithic scatters, and ceramic scatters are substantially smaller on average than habitation sites and they have much less cultural material, suggesting transient occupation by one or a few individuals to take advantage of immediately available foods (Hale et al. 2010; Hale and Quach 2011). The disparity in size and assemblage content between habitation sites and other limited activity locales may also suggest that the small sites are satellites to the habitations, representing task-specific forays away from the main camp.

The Tule Wind sample of prehistoric archaeological sites does not have strong chronological information, other than general late Prehistoric time markers (i.e., Cottonwood and Desert Side-Notch arrow points and ceramics—each artifact class were common during the last 1,000 years). One reason for the lack of chronological control is that a single site was excavated to evaluate its significance (SDI-4788/20647); the rest were documented during an inventory. Nevertheless, the generally low assemblage diversity and common tool profiles across most non-village sites suggests that McCain Valley was occupied for similar subsistence pursuits over different time periods. This possibility indicates that many of the sites identified in the Tule Wind project area have moderate to high data potential when considered collectively, warranting the BLM to require an NRHP archaeological district evaluation as a mitigation measure for implementation of the Tule Wind project (see BLM 2011—HPTP). The BLM archaeological district study was not initiated at the time the current Rugged Solar report was drafted. However, given the limited

assemblages and lack of subsurface deposits at many of the Tule Wind project sites, it is anticipated that formal evaluation of individual sites would exhaust their data potential. Sites exhausted through formal evaluation would not be considered contributing elements to the significance of the district. Nevertheless, management of all prehistoric sites as a district forces consideration of landscape-level themes.

For the Rugged Solar archaeological evaluation, a total of 32 sites were tested for significance, including 19 sites with only prehistoric deposits, 4 sites with only historic deposits/features, and 9 sites that had both prehistoric and historic deposits (historic materials are not considered here). Of these 32 sites, all are located within the current Rugged Solar Project boundary (see Table 5.2; Appendix H). The prehistoric deposits consisted of light density artifact scatters, bedrock milling features, and at some sites, a limited amount of midden soil. Site-specific details can be found in chapters 4 and 5 and will not be repeated here. None of the sites is unique from a regional perspective; all consist of elements that are common to sites in McCain Valley, as defined by the Tule Wind project. In fact, assemblages from all of the sites evaluated for the Rugged Solar project do not encapsulate the variability found at some individual sites on the Tule Wind project, such as SDI-19001/19003 (see Table 5.2 and Appendix E). Rather, evaluated Rugged Solar sites are mostly light manifestations of singular activities common to Tule Wind sites, such as lithic tool production, incipient vegetal processing, or a pot-drop. If the evaluated Rugged Solar sites are part of a larger archaeological district that includes Tule Wind sites, Rugged Solar sites represent either task-specific forays away from the large habitations less than a mile to the north (e.g., SDI-4010), or low-intensity transient occupation of a seasonal nature.

For the current district consideration, the potential significance of a larger district is based primarily on Criterion D of the NRHP (or Criterion 4 of CEQA) wherein the contribution of a site is based on its assemblage composition and density. In this view, the data potential of Rugged Solar sites has been exhausted because evaluation fieldwork resulted in near complete surface collection, extensive feature recordation, and the determination that no significant subsurface deposits are present, or remain. Thus, none of the evaluated Rugged Solar sites are considered contributing elements to a larger district combined with Tule Wind prehistoric archaeological sites. Additional research into the current set of evaluated sites can still occur with the curation of collected assemblages.

5.1.5 Native American Heritage Values of Tested Sites

There are no indications that any of the tested sites now functions as a Traditional Cultural Property with regard to current religious or other community practices. However, the BLM treated a large rock some 2-mi. to the north of the current project area as a TCP, even though it did not meet the requirements of a TCP and was not formally recorded as such (see Hale and Quach 2011). This treatment was in response to tribal comments suggesting that the whole of McCain Valley is a traditional cultural landscape. No such comments have been formally communicated to ASM, Dudek, or the County for the current Rugged Solar project.

5.1.6 Resource Importance and Evaluation of Tested Sites

San Diego County is the lead review agency for the Rugged Solar project; therefore the sites have been evaluated for eligibility to the CRHR and the Local Register under CEQA Guidelines, as well as being evaluated for importance under the County Guidelines and RPO guidelines. While sites may be recommended as eligible or not eligible for listing on the CRHR or Local Register based on Criterion 4, data potential, under the County Guidelines, all sites are considered "important." Although all sites are considered important under the County Guidelines, the "importance" of sites recommended can be exhausted through a combination of testing, recordation, curation, and construction monitoring.

5.2 Impact Identification

The project proposes the development of portions of the current study area for an 80-MW CPV farm (see Figure 1.3). Based on the current project design, 28 archaeological sites fall within the project construction APE and will be directly impacted including P-37-031676, and P-37-031680 (McCain Ranch House); SDI-4788/20647, -5171, -10,359/20059, -16,373/16,374, -19,872, -19,873, -20,068, -20,116, -20,118, -20,386, -20,618, -20,624, -20,625, -20,628, -20,630, -20,632, -20,634, -20,635, -20,636, -20,637, -20,642, -20,643, -20,644, -20,645, -20,646, and -20,683 (see Figure 5.1 Confidential Appendix B). All 28 evaluated sites are recommended as not eligible for listing in the CRHR or the Local Register, and as not significant under CEQA and the County RPO (refer to individual site descriptions in Chapter 4 for evaluation statements). The resources are, however, considered important under County Guidelines, but impacts can be mitigated through the evaluation and documentation in this report, curation of recovered materials, and monitoring during project construction and grading. While extensive research resulted in the recommendation that the standing structure and associated foundations at P-37-031680 are not historically significant and are not eligible under criteria 1-4 under CEQA, the homesite will be avoided as is will be left in the avoidance area.

Based on the current project designs, four sites within the MUP limits (SDI-20,626, -20,629, -20,639, and -20,641) will be left in the avoidance area. These sites were evaluated and are recommended as not significant and not eligible for listing in the CRHR or Local Register, and not significant under County RPO. SDI-16,367 was not relocated during either the Phase I or II cultural study. Monitoring is recommended at SDI-16,367 in case cultural materials are exposed in this area.

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6.0 MANAGEMENT CONSIDERATION – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

6.1 Unavoidable Impacts

6.1.1 Mitigation Measures and Design Considerations

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

6.1.2 Off Site

One off-site access road connecting the easternmost portion of the project area to the central portion was assessed during the current investigation. One site, SDI-20,386, was evaluated and is recommended as not significant under CEQA or for County RPO, and not eligible for listing in the CRHR or Local Register. If future additional off-site improvements are needed, it is possible that important resources may be located within the APE for those improvements. A Phase I archaeological inventory and, if necessary, a Phase II archaeological evaluation must be undertaken for any additional off-site improvements not covered by the current inventory and evaluation.

6.2 Mitigable Impacts

6.2.1 Mitigation Measures and Design Considerations

All 32 sites evaluated during the current investigation are proposed as less than significant for listing in the CRHR and the Local Register, and as less than significant under CEQA and the County RPO (County of San Diego 2007a). Impacts may be partially mitigated through application of measures that include the recordation of sites, curation of all collected artifacts and the installation of temporary fencing around unimpacted portions of SDI-5171 and SDI-10,359. In addition, temporary fencing shall be installed around SDI-20,626, SDI-20,629, SDI-20,639, and SDI-20,641 to prevent direct and indirect impacts during project activities. Temporary fencing is also required along MUP limits where sites are outside the project boundary, including SDI-20,086, SDI-20,627, SDI-20,631, SDI-20,638, and SDI-20,648. Furthermore, cultural monitoring of all grading activities is required. The artifacts collected during the current testing program will be curated at the San Diego Archaeological Center or a culturally appropriate Tribal curation facility, or alternatively may be repatriated to a culturally affiliated Tribe. All archaeological deposits evaluated for this project are recommended not significant for listing on the CRHR or local registers, and not significant under CEQA and the County RPO.

Site SDI-16,367 is not considered important or significant under County guidelines, as it was not relocated. Grading monitoring is recommended at this time in case cultural materials are discovered during project grading and construction.

Mitigation Measures

Temporary Fencing

PRE-CONSTRUCTION MEETING: *(Prior to Preconstruction Conference, and prior to any clearing, grubbing, trenching, grading, or any land disturbances.)*

CULT#X–TEMPORARY FENCING [PDS, FEE]

INTENT: In order to prevent inadvertent disturbance to CA-SDI-20086, CA-20626, CA-SDI-20627, CA-SDI-20629, CA-SDI-20631, CA-SDI-20638, CA-SDI-20639, CA-SDI-20641, and CA-SDI-20648, and the inadvertent disturbance to the unimpacted portions of CA-SDI-5171 and CA-SDI-10359/20059, temporary construction fencing shall be installed. **DESCRIPTION OF REQUIREMENT:** Prior to the commencement of any grading and or clearing in association with this grading plan, temporary orange construction fencing shall be placed to protect CA-SDI-20086, CA-20626, CA-SDI-20627, CA-SDI-20629, CA-SDI-20631, CA-SDI-20638, CA-SDI-20639, CA-SDI-20641, and CA-SDI-20648 from inadvertent disturbance during all earth disturbing activities. Temporary fencing shall include but is not limited to the following:

1. Temporary fencing is required in all locations of the project where proposed grading or clearing is within 100 feet of CA-SDI-20086, CA-20626, CA-SDI-20627, CA-SDI-20629, CA-SDI-20631, CA-SDI-20638, CA-SDI-20639, CA-SDI-20641, and CA-SDI-20648.

2. The placement of such fencing shall be approved by the PDS, Permit Compliance Section. Upon approval, the fencing shall remain in place until the conclusion of grading activities after which the fencing shall be removed.

DOCUMENTATION: The applicant shall have a California licensed surveyor install and certify the installation of the temporary fencing in consultation with the Project Archaeologist. The applicant shall submit photos of the fencing along with the certification letter to the [*PDS, PCC*] for approval. **TIMING:** Prior to the Preconstruction Meeting, and prior to any clearing, grubbing, trenching, grading, or any land disturbances the temporary fencing shall be installed, and shall remain for the duration of the grading and clearing. **MONITORING:** The [*PDS, PCC*] shall either attend the preconstruction meeting and approve the installation of the temporary fencing, or review the certification and pictures provided by the applicant's surveyor.

Grading Monitoring

ANY PERMIT: *(Prior to the approval of any plan, issuance of any permit, and prior to occupancy or use of the premises in reliance of this permit).*

CULT#___ ARCHAEOLOGICAL GRADING MONITORING [PDS, FEE X 2]

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

a. The Project Archaeologist shall perform the monitoring duties before, during and after construction pursuant to the most current version of the County of San Diego Guidelines for Determining Significance and Report Format and Requirements for Cultural Resources, and this permit. The contract or letter of acceptance provided to the County shall include an agreement that the grading monitoring will be completed, and a Memorandum of Understanding (MOU) between the Project Archaeologist and the County of San Diego shall be executed. The contract or letter acceptance shall include a cost estimate for the monitoring work and reporting.

b. The Project Archeologist shall provide evidence that a Native American has been contracted to perform Native American Grading Monitoring for the project.

c. The cost of the monitoring shall be added to the grading bonds or bonded separately.

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

OCCUPANCY: *(Prior to any occupancy, final grading release, or use of the premises in reliance of this permit).*

CULT#___ CULTURAL RESOURCES REPORT [PDS, FEE X2]

INTENT: In order to ensure that the Grading Monitoring occurred during the grading phase of the project, a final report shall be prepared. **DESCRIPTION OF REQUIREMENT:** A final Grading Monitoring and Data Recovery Report that documents the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program shall be prepared. The report shall include the following items:

a. DPR Primary and Archaeological Site forms.

b. Daily Monitoring Logs

c. Evidence that all cultural materials have been curated that includes but is not limited to the following:

(1) The applicant shall provide evidence that all prehistoric archaeological materials collected during the survey, testing, and grading monitoring program have been submitted to a San Diego curation facility or a culturally affiliated Native American Tribal curation facility that meets federal standards per 36 CFR Part 79, and, therefore, would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records, including title, shall be transferred to the San Diego curation facility or culturally affiliated Native American Tribal curation facility and shall be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility stating that the prehistoric archaeological materials have been received and that all fees have been paid.

or

Evidence that all prehistoric materials collected during the survey, testing, demolition monitoring and controlled excavations, and grading monitoring program have been repatriated to a Native American group of appropriate tribal affinity. Evidence shall be in the form of a letter from the Native American tribe to whom the cultural resources have been repatriated identifying that the archaeological materials have been received.

(2) Historic materials shall be curated at a San Diego curation facility and shall not be repatriated. The collections and associated records, including title, shall be transferred to the San Diego curation facility and shall be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility stating that the historic materials have been received and that all fees have been paid.

d. If no cultural resources are discovered, a Negative Monitoring Report must be submitted stating that the grading monitoring activities have been completed. Grading Monitoring Logs must be submitted with the negative monitoring report.

DOCUMENTATION: The applicant's archaeologist shall prepare the final report and submit it to the *[PDS, PCC]* for approval. Once approved, a final copy of the report shall be submitted to the South Coastal Information Center (SCIC). **TIMING:** Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be prepared. **MONITORING:** The *[PDS, PCC]* shall review the final report for compliance this condition and the report format guidelines. Upon acceptance of the report, *[PDS, PCC]* shall inform *[PDS, LDR]* and *[DPW, PDCI]*, that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then *[PDS, PCC]* shall inform *[PDS or DPW FISCAL]* to release the bond back to the applicant.

Draft Grading Plan Notes:

PRE-CONSTRUCTION MEETING: *(Prior to Preconstruction Meeting, and prior to any clearing, grubbing, trenching, grading, or any land disturbances.)*

CULT#GR-X ARCHAELOGICAL MONITORING [PDS, FEE X2]

INTENT: In order to comply with the County of San Diego Guidelines for Significance – Cultural Resources, a Cultural Resource Grading Monitoring Program shall be implemented. **DESCRIPTION OF REQUIREMENT:** The County approved Project Archaeologist, Native American Monitor, and [PDS, PCC], shall attend the pre-construction meeting with the contractors to explain and coordinate the requirements of the grading monitoring program. The Project Archaeologist and Native American Monitor shall monitor original cutting of previously undisturbed deposits in all areas identified for development including off-site improvements. The grading monitoring program shall comply with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Cultural Resources. **DOCUMENTATION:** The applicant shall have the contracted Project Archeologist and Native American attend the preconstruction meeting to explain the monitoring requirements. **TIMING:** Prior to the Pre-construction Meeting, and prior to any clearing, grubbing, trenching, grading, or any land disturbances this condition shall be completed. **MONITORING:** The *[DPW, PDCI]* shall invite the *[PDS, PCC]* to the preconstruction conference to coordinate the Cultural Resource Monitoring requirements of this condition. The *[PDS, PCC]* shall attend the preconstruction conference and confirm the attendance of the approved Project Archaeologist.

DURING CONTRUCTION: *(The following actions shall occur throughout the duration of the grading construction).*

CULT#GR-X ARCHAEOLOGICAL MONITORING [PDS, FEE X2]

INTENT: In order to comply with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Cultural Resources, a Cultural Resource Grading Monitoring Program shall be implemented. **DESCRIPTION OF REQUIREMENT:** The Project Archaeologist and Native American Monitor shall monitor original cutting of previously undisturbed deposits in all areas identified for development including off-site improvements. The grading monitoring program shall comply with the following requirements during earth-disturbing activities:

a. During the original cutting of previously undisturbed deposits, the Project Archaeologist and Native American Monitor shall be onsite as determined necessary by the Project Archaeologist. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and location of inspections will be determined by the Project Archaeologist in consultation with the Native American Monitor. Monitoring of cutting of previously disturbed deposits will be determined by the Project.

b. In the event that previously unidentified potentially significant cultural resources are discovered, the Project Archaeologist, in consultation with the Native American monitor, shall have the authority to divert or temporarily halt ground disturbance operations in the area of discovery to allow evaluation of potentially significant cultural resources. At the time of discovery, the Project Archaeologist shall contact the PDS Staff Archaeologist. The Project Archaeologist, in consultation with the PDS Staff Archaeologist and the Native American monitor, shall determine the significance of the discovered resources. Construction activities will be allowed to resume in the affected area only after the PDS Staff Archaeologist has concurred with the evaluation. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the Project Archaeologist and approved by the Staff Archaeologist, then carried out using professional archaeological methods. The Research Design and Data Recovery Program shall include (1) reasonable efforts to preserve (avoidance) “unique” cultural resources pursuant to CEQA §21083.2(g) or for Sacred Sites as the preferred option (2) the capping of identified Sacred Sites or unique cultural resources and placement of development over the cap, if avoidance is infeasible, and (3) data recovery for non-unique cultural resources.

c. If any human remains are discovered, the property owner or their representative shall contact the County Coroner and the PDS Staff Archaeologist. Upon identification of human remains, no further disturbance shall occur in the area of the find until the County Coroner has made the necessary findings as to origin. If the remains are determined to be of Native American origin, the Most Likely Descendant (MLD), as identified by the

Native American Heritage Commission, 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.

DOCUMENTATION: The applicant shall implement the grading monitoring program pursuant to this condition. **TIMING:** The following actions shall occur throughout the duration of the grading construction. **MONITORING:** The *[DPW, PDCI]* shall make sure that the Project Archeologist is on-site performing the Monitoring duties of this condition. The *[DPW, PDCI]* shall contact the *[PDS, PCC]* if the Project Archeologist or applicant fails to comply with this condition.

ROUGH GRADING: *(Prior to rough grading approval and issuance of any building permit).*

CULT#GR-X ARCHAEOLOGICAL MONITORING [PDS, FEE]

INTENT: In order to comply with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Cultural Resources, a Grading Monitoring Program shall be implemented. **DESCRIPTION OF REQUIREMENT:** The Project Archaeologist shall prepare one of the following reports upon completion of the grading activities that require monitoring:

a. If no archaeological resources are encountered during grading, then submit a final Negative Monitoring Report substantiating that grading activities are completed and no cultural resources were encountered. Grading monitoring logs showing the date and time that the monitor was on site must be included in the Negative Monitoring Report.

b. If archaeological resources were encountered during grading, the Project Archaeologist shall provide a Grading Monitoring Report stating that the field grading monitoring activities have been completed, and that resources have been encountered. The report shall detail all cultural artifacts and deposits discovered during monitoring and the anticipated time schedule for completion of the curation phase of the monitoring.

DOCUMENTATION: The applicant shall submit the Grading Monitoring Report to the *[PDS, PCC]* for review and approval. Once approved, a final copy of the report shall be submitted to the South Coastal Information Center. **TIMING:** Upon completion of all grading activities, and prior to Rough Grading final Inspection (Grading Ordinance SEC 87.421.a.2), the report shall be completed. **MONITORING:** The *[PDS, PCC]* shall review

the report or field monitoring memo for compliance with the project MMRP, and inform *[DPW, PDCI]* that the requirement is completed.

FINAL GRADING RELEASE: *(Prior to any occupancy, final grading release, or use of the premises in reliance of this permit).*

CULT#GR-X ARCHAEOLOGICAL MONITORING [PDS, FEE]

INTENT: In order to comply with the County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements for Cultural Resources, a Grading Monitoring Program shall be implemented. **DESCRIPTION OF REQUIREMENT:** The Project Archaeologist shall prepare a final report that documents the results, analysis, and conclusions of all phases of the Grading Monitoring Program if cultural resources were encountered during grading. The report shall include the following, if applicable:

a. Department of Parks and Recreation Primary and Archaeological Site forms.

b. Daily Monitoring Logs

c. Evidence that all cultural materials have been curated that includes but is not limited to the following:

(1) Evidence that all prehistoric archaeological materials collected during the survey, testing, demolition monitoring and controlled excavations, and grading monitoring program have been submitted to a San Diego curation facility or a culturally affiliated Native American Tribal curation facility that meets federal standards per 36 CFR Part 79, and, therefore, would be professionally curated and made available to other archaeologists/researchers for further study. The collections and associated records, including title, shall be transferred to the San Diego curation facility or culturally affiliated Native American Tribal curation facility and shall be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility stating that the prehistoric archaeological materials have been received and that all fees have been paid.

or

Evidence that all prehistoric materials collected during the survey, testing, demolition monitoring and controlled excavations, and grading monitoring program have been repatriated to a Native American group of appropriate tribal affinity. Evidence shall be in the form of a letter from the Native American tribe to whom the cultural resources have been repatriated identifying that the archaeological materials have been received.

(2) Historic materials shall be curated at a San Diego curation facility and shall not be repatriated. The collections and associated records, including title, shall be transferred to the San Diego curation facility and shall be accompanied by payment of the fees necessary for permanent curation. Evidence shall be in the form of a letter from the curation facility stating that the historic materials have been received and that all fees have been paid.

d. If no cultural resources are discovered, a Negative Monitoring Report must be submitted stating that the grading monitoring activities have been completed. Grading Monitoring Logs must be submitted with the negative monitoring report.

DOCUMENTATION: The applicant's archaeologist shall prepare the final report and submit it to the *[PDS, PCC]* for approval. Once approved, a final copy of the report shall be submitted to the South Coastal Information Center (SCIC). **TIMING:** Prior to any occupancy, final grading release, or use of the premises in reliance of this permit, the final report shall be prepared. **MONITORING:** The *[PDS, PCC]* shall review the final report for compliance this condition and the report format guidelines. Upon acceptance of the report, *[PDS, PCC]* shall inform *[PDS, LDR]* and *[DPW, PDCI]*, that the requirement is complete and the bond amount can be relinquished. If the monitoring was bonded separately, then *[PDS, PCC]* shall inform *[PDS or DPW FISCAL]* to release the bond back to the applicant.

6.3 Effects Found Not to be Significant

The 30 isolates previously identified within the current study area are not important resources under the County of San Diego guidelines for determining significance (County of San Diego 2007a), nor are they eligible for listing in the CRHR or the Local Register, and none are significant under CEQA or the County RPO. The proposed project design will not result in significant effects in impacting these cultural resources. The single isolate that was recorded during testing activities (P-37-032729) has been collected and will be curated. The remaining previously recorded isolates will not be collected.

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8.0 LIST OF PREPARERS AND PERSON AND ORGANIZATIONS CONTACTED

Micah Hale (Dudek; ASM Affiliates): Acted as Project Manager and Co-Principal Investigator and co-authored the technical report.

Adam Giacinto (Dudek; ASM Affiliates): Co-authored the technical report and served as the Field Director.

Brad Comeau (Dudek; ASM Affiliates): Co-authored the technical report.

Ian Scharlotta (ASM Affiliates): Co-authored the technical report and performed the detailed lab analysis.

James T. Daniels, Jr. (ASM Affiliates): Acted as Co-Principal Investigator and co-authored the technical report.

Sarah Stinger-Boshwer (ASM Affiliates): Acted as Project Historian

Jennifer Krintz (ASM Affiliates): Contributed to the evaluation of the historic structure associated with P-37-031680.

Jerry Schaefer (ASM Affiliates): Conducted the analysis of the prehistoric ceramics.

Scott Bigney (ASM Affiliates): Conducted the XRF obsidian source study found in Appendix A.

Nick Hanten (ASM Affiliates): Conducted the evaluation of SDI-5171.

Don Laylander (ASM Affiliates): Edited the report.

Nick Doose (SCIC): Conducted the CHRIS records search

David Singleton (NAHC): Conducted Sacred Lands record search.

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9.0 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

A grading monitoring plan including a Native American and an archaeological monitor should be established for those evaluated sites within the currently proposed APE to deal with the event of unanticipated discoveries. In addition, development impacts should be monitored throughout the project APE, rather than restricted to areas surrounding recorded cultural resources. Temporary fencing should be established for those sites in the avoidance areas while construction is under way. If the seven sites outside of the current MUP limits remain outside of the APE, no further work is recommended at those sites for the current project. However, the monitoring plan should include information regarding the sites so that avoidance is maintained.

Table 9.1 Recommended Mitigation Measures

Site Designation	Site Attributes	Mitigation Measure
SDI-4788/20,647	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP15. Habitation debris; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-5171	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP11. Hearths; AP14. Rock shelter; AP15. Habitation debris	Evaluation, recordation, grading monitoring and curation of archaeological collections for tested portion of the site and temporary fencing for the boundary of the site outside of the project area to prevent indirect impacts to the unevaluated portion of the site.
SDI-10,359/20,059	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections for the tested portion of the site and temporary fencing along the boundary of the avoidance area to prevent indirect impacts to the unevaluated portion of the site.
SDI-16,367	AP2. Lithic scatter; AP3. Ceramic scatter	Grading monitoring (Site was not relocated)
SDI-16,373/ 16,374	AP2. Lithic scatter; AH4. Trash scatter; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-19,872	AP2. Lithic scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-19,873	AP4. Bedrock milling	Evaluation, recordation, and grading monitoring
SDI-20,068	AP2. Lithic scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
P-37-031676	AH4. Trash dump	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,116	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP14. Rock shelter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,118	AP2. Lithic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
P-37-031680	AP2. Lithic Scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections. Temporary fencing and monitoring is recommended during project construction for portion of site in the avoidance area.

Site Designation	Site Attributes	Mitigation Measure
SDI-20,386	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AP11. Hearth; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,618	AP4. Bedrock milling; AH4. Trash scatter; AH6. Water conveyance system	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,624	AP2. Lithic scatter; AP4 Bedrock milling; AP14. Rock shelter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,625	AP4. Bedrock milling	Evaluation, recordation, and grading monitoring
SDI-20,626	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter; AH8. Dam/earthen berm	Evaluation, recordation, curation, temporary fencing, and project avoidance*
SDI-20,628	AP2. Lithic scatter; AP3. Ceramic scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,629	AP4. Bedrock milling	Evaluation, recordation, temporary fencing, and project avoidance*
SDI-20,630	AP2. Lithic scatter; AP4. Bedrock milling	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,632	AP2. Lithic scatter; AP3. Ceramic scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,634	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling; AH4. Trash scatter; AH8. Dam/earthen berm	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,635	AP4. Bedrock milling	Evaluation, recordation, and grading monitoring
SDI-20,636	AP2. Lithic scatter; AP4. Bedrock milling	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,637	AP2. Lithic scatter; AP4. Bedrock milling; AH2. Foundations/structure pads; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,639	AP2. Lithic scatter; AP3. Ceramic scatter; AH4. Trash scatter	Evaluation, recordation, curation, temporary fencing, and project avoidance*
SDI-20,641	AP2. Lithic scatter; AP4. Bedrock milling	Evaluation, recordation, curation, temporary fencing, and project avoidance*
SDI-20,642	AP4. Bedrock milling	Evaluation, recordation, and grading monitoring
SDI-20,643	AP2. Lithic scatter; AP4 Bedrock milling	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,644	AP2. Lithic scatter; AP4. Bedrock milling; AP8. Rock feature; AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,645	AP2. Lithic scatter; AP3. Ceramic scatter; AP4. Bedrock milling	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,646	AH4. Trash scatter	Evaluation, recordation, grading monitoring and curation of archaeological collections
SDI-20,683	AH16. Possible aerial landmark	Evaluation, recordation, and grading monitoring

*These sites were tested, but are located either within avoidance areas in the MUP limits, or are outside the MUP limits

[#] These sites are outside the MUP limits and were not tested

APPENDICES

Appendix A

XRF Obsidian Sourcing Study by Scott Bigny of ASM Affiliates, Inc.

Rugged Solar Obsidian X-Ray Fluorescence Analysis

by Scott Bigny

Non-destructive X-ray Fluorescence (XRF) spectrometer is one of the well established and extensively used methods to chemically characterize obsidian source material and provenience obsidian artifacts (Shackley, 2010: 7 – 44). With the advent of the portable X-ray fluorescence (pXRF) spectrometer, archaeologists are now able to reliably conduct non-destructive microartifact analyses in-situ as well as in the laboratory (Bigney et al., 2010; Potts 2008). The application of the provenience postulate is that variations within any given source area are less than variations between any two or more source areas. Since this is a study of interregional obsidian chemical provenience, the probability of successfully assigning probable source areas to the analyzed artifacts is high (Cobean et. al., 1991: 87, Neff, 1998: 324). The necessity and capability to provenience obsidian artifacts are, respectively, its assistance in elucidating possible exchange systems due to obsidians' utilitarian aspects and the fact that there are limited sources (Braswell 2003: 131; Glascock, 1992: 113 – 115).

The following report documents the results of the submitted rhyolitic volcanic glass (obsidian) artifact samples (n=7) from three sites tested for the Rugged Solar project, SDI- 20068 (n=1), SDI-20619 (n=1), and 37-01680 (n=5). The analysis was performed in the ASM Affiliates Carlsbad branch lab using the Bruker AXS Tracer III-V hand-held X-ray fluorescence (pXRF) spectrometer. Artifacts and source materials were exposed to three minutes of X-ray emissions using 40 kV (voltage) 21 micro amps (current) using an obsidian filter (aluminum/copper/titanium). Elemental concentrations were generated using a calibration based on a variety of analyzed obsidians from around the world. Elemental concentrations were transferred to an Excel spreadsheet (Table 1). Elements measured by this procedure include Mn, Fe, Zn, Ga, Th, Rb, Sr, Y, Zr, and Nb. Concentrations were converted into a log10 GAUSS data set in order to inspect bivariate scatter plots. The bivariate plots assist in determining the number of source groups and their identity (Glascock et. al. 1992: 118-119).

Obsidian geological samples used for elemental characterization and comparison to the four artifacts came from three source areas within California including: Obsidian Butte (Imperial County), Coso Range (Inyo County), and Casa Diablo (Mono County). A total of 15 geological samples were analyzed, six from the Obsidian Butte source area, four from the Coso Range source area, and five from the Casa Diablo source area. The inspection of the bivariate plots revealed true multi-source structures within the geological samples predominantly using Rb, Zr, Y, and Nb (Figures 1 and 2). The elemental comparative characteristics between the three geological obsidian source areas are as follows: Obsidian Butte obsidian contains low concentrations of Rb with high concentrations of Y and Zr; Coso Range obsidian is contains high concentrations of Rb and Nb with low amounts of Zr; Casa Diablo obsidian contains low concentrations of Y and Nb.

As noted, the elements Rb, Y, Zr, and Nb show multi-source structure in the data, this allowed for 100% pXRF source assignment to the analyzed artifacts. Based on the elemental suite distinguishing the geological samples, all seven analyzed interior obsidian flakes coincide with the Obsidian Butte source area. The Coso Range and Casa Diablo source areas were eliminated as potential source areas based off the elemental concentrations (Figure 1 and 2).

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1998 Archaeological Investigations of Trade and Exchange. *Reviews in Anthropology.* 27 (3) 317 – 335

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2008 *Portable X-Ray Fluorescence Spectrometry Capabilities for In Situ Analysis*. Royal Society of Chemistry, Cambridge

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2010 X-Ray Fluorescence Spectrometry (XRF). *Geoarchaeology*. Springer, New York

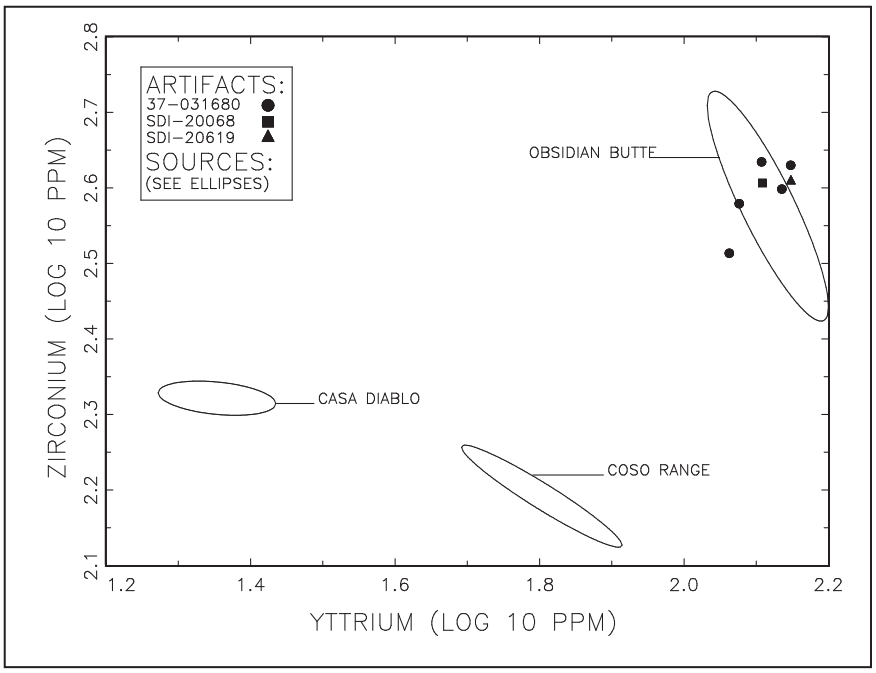


Figure 1: Yttrium- Zirconium bivarate plot illustrating the probable source (ellipses) of the artifacts (symbols). The ellipses have a 90% confidence interval.

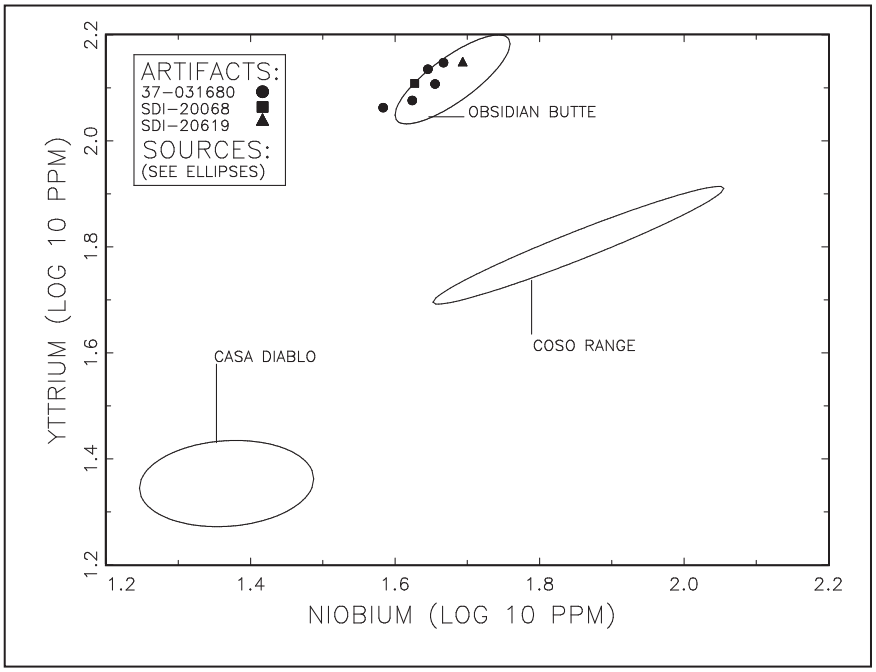


Figure 2: Niobium-Yttrium bivarate plot illustrating the probable source (ellipses) of the artifacts (symbols). The ellipses have a 90% confidence interval.

ANID	ASM ID	CHEMICAL SOURCE	MnKa 1	FeKa1	ZnKa 1	GaKa 1	ThLa 1	RbKa 1	SrKa 1	Y Ka1	ZrKa 1	NbKa 1
RS001	SDI-20619-15	OBSIDIAN BUTTE	721.0	19952.4	119.3	29.1	30.6	166.9	-97.0	140.5	406.9	49.4
RS002	SDI-20068-22	OBSIDIAN BUTTE	630.2	19272.1	125.8	26.0	31.2	152.4	-90.1	128.4	403.9	42.4
RS003	37-031680-117	OBSIDIAN BUTTE	602.3	19650.3	102.0	27.9	27.9	154.9	-91.2	128.0	430.8	45.2
RS004	37-031680-115	OBSIDIAN BUTTE	600.0	21500.0	134.2	34.3	30.6	180.4	-100.3	140.5	426.6	46.4
RS005	37-031680-116-3	OBSIDIAN BUTTE	660.0	21889.4	121.3	22.1	28.5	164.5	-103.8	136.5	396.5	44.2
RS006	37-031680-116-2	OBSIDIAN BUTTE	893.8	25542.8	234.1	35.8	24.7	159.5	-101.6	115.5	326.1	38.3
RS007	37-031680-116-1	OBSIDIAN BUTTE	853.9	23130.6	159.9	33.8	29.0	161.2	-109.6	119.2	379.5	42.0

Table 1: pXRF elemental concentrations for all obsidian artifacts collected during the Rugged Solar project

Appendix B

Confidential Figures and Maps

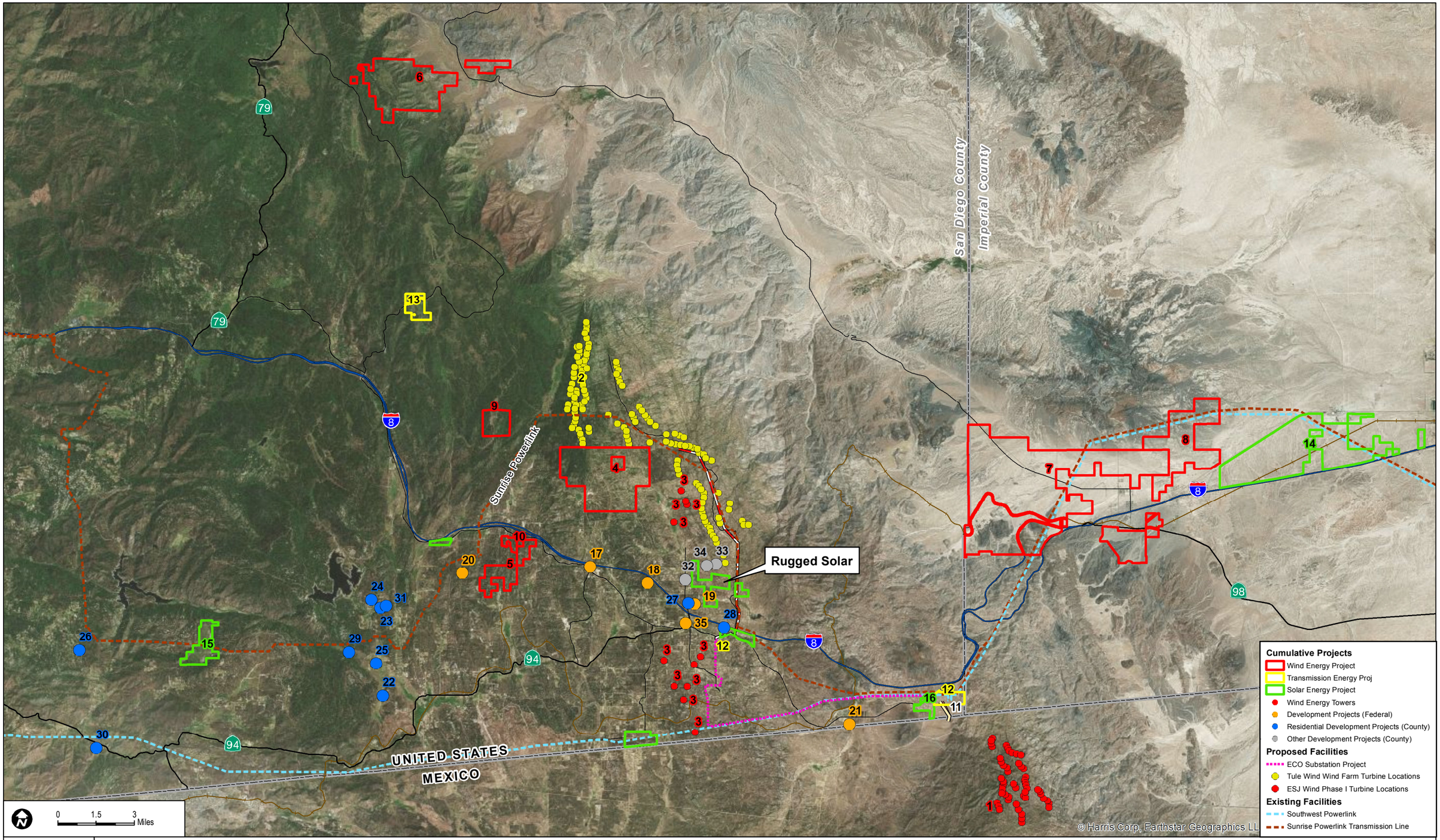
Appendix C

Confidential DPR Site Record Updates

Provided Under Separate Cover

Appendix D

Cumulative Impacts



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7345

SOURCE: CA Dept. of Conservatio, 2008; SanGIS 2011; AECOM 2012; Soitec 2012

FIGURE 1

Cumulative Projects Map

RUGGED SOLAR

Project	Project No.	Project Type	Project Location	Status	Map ID
Wind Energy Projects					
ENERGIA SIERRA JUAREZ WIND PROJECT I: Development of 400 MW of wind generation. Phase I (just north of the town of La Rumorosa) is proposed to generate approximately 100 MW of energy with 45 to 52 turbines. Point of interconnection proposed with the ECO Substation.	N/A	Public Facilities and Utilities (Wind)	Northern Baja California, Mexico, in the Sierra Juárez mountains north of the town of La Rumorosa	Final Interconnection Study completed. Draft Interconnection Agreement (IA) provided for review. (Queue No. 159a). The project would be built in multiple phases. Construction anticipated to be completed in 2014.	1
ENERGIA SIERRA JUAREZ WIND PROJECT II: Development of 300 MW of wind generation. Point of interconnection proposed with the ECO Substation.	N/A	Public Facilities and Utilities (Wind)	Northern Baja California, Mexico, in the Sierra Juárez mountains	Project schedule unknown.	—
ENERGIA SIERRA JUAREZ WIND PROJECT III: Development of 420 MW of wind generation. Point of interconnection proposed with the ECO Substation.	N/A	Public Facilities and Utilities (Wind)	Northern Baja California, Mexico, in the Sierra Juárez mountains	Project schedule unknown.	—
TULE WIND FARM, GENERAL PLAN AMENDMENT, 11-001: 12,239 acres of public lands, 186 MW; 67 wind turbines. The project would deliver power through the project substation by a 138 kV transmission line to run south to an interconnection with the proposed SDG&E Rebuilt Boulevard Substation.	3300-09-019	Public Facilities and Utilities (Wind)	Mountain Empire; North of I-8, Hwy 94, and Old Hwy 80	BLM approved December 19, 2011; County Board of Supervisors approved August 8, 2012. BLM Geotechnical Investigation notice to proceed issued September 17, 2012.	2
EGP JEWEL VALLEY – Wind and Solar Energy Facilities: Meteorological (MET) facilities have been approved that include erection of two Tilt-Up towers (A-1 and C-1) that would include the placement of three SoDAR (Sonic Detection and Ranging) units (A-2, B-2, and C-2).	3000-10-051 3000-10-052 3000-10-053	Public Facilities and Utilities (Wind)	1874/1888 Jewel Valley Road, Boulevard; South of Hwy 94 and Old Hwy 80	MET Facilities approved in June 2011.	3
MANZANITA WIND ENERGY PROJECT: Project of up to 57.5 MW, which could include up to 25 wind turbines. These wind turbines are proposed to be located on the same ridgeline as the existing Kumeyaay Wind facility. Turbines are proposed to be approximately 414 feet tall from ground to tip of the turbine blade fully extended. The Manzanita Wind project would connect with the Rebuilt Boulevard Substation component of the ECO Substation Project.	N/A	Wind Farm	Manzanita Band of Mission Indians Reservation, southeastern San Diego County	Pending	4

Project	Project No.	Project Type	Project Location	Status	Map ID
DEBENHAM ENERGY, CACA 0504855: Wind testing site. 2,169 acres.	N/A	Public Facilities and Utilities (Wind Measurement Testing)	West of the community of Boulevard, south of I-8 in southeastern San Diego County	Wind testing stage (Type II)	5
NATIONAL QUARRIES, CACA 050635: Wind testing site. 4,435 acres.	N/A	Public Facilities and Utilities (Wind)	North of I-8, east of Sunrise Highway in southeastern San Diego County	Memorandum of Understanding signed. Application complete April 22, 2009, Wind testing stage (Type II).	6
OCOTILLO EXPRESS LLC, CACA 051552: Development of 562 MW on 14,691 acres in two phases.	N/A	Public Facilities and Utilities (Wind)	North and south of I-8 in southwestern Imperial County	A Plan of Development (POD) prepared in September 2009. The project is currently in the wind testing stage (Type II) under CACA 047518 and CACA 050916 (MAP ID items 9 and 10). Notice to Proceed June 27, 2012. Phase I completed and constructed in 2012.	7
RENEWERGY LLC, CACA 048004: Wind testing site; 3,912 acres.	N/A	Public Facilities and Utilities (Wind)	North of I-8 in southwestern Imperial County	MET Tower Environmental Assessment nearing completion. Pending Native American consultation. Cultural literature started. Wind testing stage (Type II).	8
WIND MEASUREMENT TOWERS: The Descanso Ranger District proposes to authorize temporary wind measurement towers. The towers would be approximately 160 feet high and testing would be 3 years or less in duration.	N/A	Public Facilities and Utilities (Wind Measurement Testing)	Cleveland National Forest. Descanso Ranger District. San Diego County. North side of I-8, LEGAL - T 16 S, R 5 E, Sections 1, 2, and 13.	USFS issued a permit in February 2010 for three towers in the area of La Posta Valley and Fred Canyon Road.	9
A. BRUCCI LLC ADMINISTRATIVE PERMIT AG CLEARING, AD 10-035	3000-10-023	Agricultural clearing for MET Tower	3055 La Posta Circle, Pine Valley	Approved November 16, 2010.	10
Transmission and Other Energy Projects					
ENERGIA SIERRA JUAREZ U.S. TRANSMISSION, MUP: Power lines leading to SDG&E ECO Substation near the Mexican border.	3300-09-008	Transmission Line	Near SDG&E ECO Substation	Approved by County Board of Supervisors August 8, 2012.	11
ECO SUBSTATION: ECO Substation, Rebuilt Boulevard Substation, and 13.3-mile 138 kV line between Rebuilt Boulevard Substation and ECO Substation.	N/A	Substation and Transmission Lines		Notice to proceed for geotechnical activities and construction issued February 1, 2013.	12
SDG&E MASTER SPECIAL USE PERMIT: SDG&E is proposing to combine over 70 existing special use permits	N/A	Public Facilities and Utilities	Cleveland National Forest	In Progress.	13

Project	Project No.	Project Type	Project Location	Status	Map ID
for SDG&E electric facilities into one Master Special Use Permit to be issued by the USFS.					
Solar Energy Projects					
IMPERIAL VALLEY SOLAR - SOLAR TWO, CACA 047740: Development of up to 750 MW of energy on 6,140 acres of BLM-administered public lands and on 360 acres of private lands.	N/A	Public Facilities and Utilities (Solar)	North of I-8 in southwestern Imperial County	Application for Certification filed with California Energy Commission June 30, 2008. Application for Certification/POD determined adequate under minimal criteria. Notice of Intent published October 17, 2008. The Final EIS published July 2010.	14
SILVERADO POWER, Major Pre-application 11-009: The proposed project is a 58 MW photovoltaic /solar generation plant that would span approximately 350 acres of the 734-acre site. The proposed tie-line to the existing SDG&E Barrett-Vameron Transmission Line would be composed of three overhead conductor lines on 55-foot-high wood poles. The tie line would be approximately 0.25 mile long. The electricity generated would be delivered to the regional distribution network. The facility would be remotely monitored and controlled. Construction would consist of trenching for the underground electrical conduits, installation of foundations for the photovoltaic mounts, electrical inverters, transformers and gear, and internal access. The project may also require construction of a substation.	3992-11-009	Public Facilities and Utilities (Solar)	602-170-02 604-050-01 604-090-01	Pre-application meeting was held on July 19, 2011. County reviewed redesign of solar project on November 15, 2011. Pending.	15
JACUMBA SOLAR FARM, MAJOR PRE-APP 11-023	3992-11-023	Public Facilities and Utilities (Solar)	661-041-02,-03; 661-080-01,-04,-08	Pre-application meeting was held on January 12, 2012.	16
Development Projects (Federal)					
GOLDEN ACORN CASINO AND TRAVEL CENTER, SCH No. 2007071097: 33-acre expansion consisting of 150-room hotel, 900-space parking garage, surface parking, RV park, casino expansion, bowling alley, arcade, offices, retail, restaurants/food service, wind turbines, and water and wastewater improvements in three phases.	N/A	Commercial	South of I-8 at Crestwood	Draft off-reservation Environmental Evaluation complete. Public review ended August 2007. No commencement of work to date. Project schedule unknown.	17

Project	Project No.	Project Type	Project Location	Status	Map ID
CAMPO LANDFILL PROJECT: 493-acre landfill facility and a 657-acre buffer area surround landfill.	N/A	Public Facilities and Utilities	Southeast corner of Campo Reservation	On May 27, 2010, the Campo General Council voted to rescind applicable lease agreements in order to terminate the Campo Sanitary Landfill Project. The vote occurred at a special General Council meeting resulting from a petition signed by the required number of tribal members (Campo Kumeyaay Nation 2010).	18
BOULEVARD BORDER PATROL STATION: 32-acre site proposed for an administrative and training/educational facility, operated 24 hours a day, 7 days a week. At least 250 personnel, over three shifts, would occupy the site throughout the week.	N/A	Public Facilities and Utilities	North of I-8, on the east side of Ribbonwood Road	Final Environmental Assessment and Finding of No Significant Impact issued February 2010. Closed and Constructed.	19
LA POSTA MOUNTAIN WARFARE TRAINING FACILITY: Construction of a special warfare operation and training facility on approximately 2,250 acres.	N/A	Public Facilities and Utilities	La Posta Road, south of I-8, Campo	Final Environmental Assessment dated June 2007.	20
BORDER PATROL FENCE PROJECT: As of March 2009, the 18-foot-tall, 3-foot-deep fence has been completed in eastern San Diego County.	N/A	Public Facilities and Utilities	Along U.S.–Mexico border in eastern San Diego County	Constructed in eastern San Diego County between July 2008 to March 2009.	21
Residential Development Projects (County)					
STAR RANCH, Tentative Map (TM) 5459: Subdivide 2,160.1 acres into 460 single-family residential lots, commercial uses, equestrian facility, helipad, water treatment facility, and wastewater treatment facility.	3300-13-004	Residential	South of Big Potrero and west of Buckman Springs Road	Final Draft EIR submitted March 27, 2013.	22
VAUGHN, TM 5417: 14-lot TM with a 15th non-buildable lot for the roads and water system. The proposed lots range from 5.00 net acres to 6.85 net acres. The project site is 81.24 acres.	3100-5417	Residential	30069 Canvasback Drive, Campo, just west of Buckman Springs Road	Idle as of February 26, 2010.	23
McCLINTOCK, Tentative Parcel Map (TPM) 20755: Minor subdivision of 10.0 gross acres into two residential parcels of 4.15 acres and 4.56 acres net.	3200-20755	Residential	Basso Road in the Campo/Lake Morena Community	Project was approved on July 6, 2005.	24
BARTLETT, TPM 20754: Subdivide 164 acres into four single-family residential lots.	3200-20686	Residential	1850 Lake Moreno Drive	Project was approved on June 17, 2003.	25
TIBBOT TPM 20686: Subdivide 35 acres into four single-family residential lots.	3200-20686	Residential	20774 Bee Valley Road	Notice of Determination filed with County Clerk on October 17, 2006. Project was approved October 12, 2006.	26
DART TPM 20675: 33.46-acre subdivision into 3 lots. Two lots for single-family residential and one for general	3200-20675	Residential	Ribbonwood Road and Roadrunner	Project was approved November 27, 2006.	27

Project	Project No.	Project Type	Project Location	Status	Map ID
commercial uses.			Lane		
GRIZZLE: TPM 20719: Subdivision of one lot into four parcels with a remainder parcel for single-family residential development.	3200-20719	Residential	McCain Valley Road and I-8	Notice of Determination filed with County Clerk on Jun 29 2006. Project was approved on July 13, 2006.	28
ARELLANO: TPM 20756: Subdivide a 17.27-acre parcel into three parcels.	3200-20756	Residential	Hauser Creek Road west of Lake Morena Drive	Project was approved on January 26, 2009.	29
PIJNENBURG: TPM 20778: 5-lot subdivision on a 76-acre site.	3200-20778	Residential	Barrett Smith Road, North of Hwy 94	Approved on August 6, 2009.	30
HEALD, TPM 21014: 4-lot subdivision (5 net acres each) with a remainder lot (15 net acres) on a 36-acre site.	3200-21014	Residential	Southern terminus of Sunfish Way	Project is on idle status as of February 2, 2010.	31
Other County Development Projects					
RIBBONWOOD ROAD SIGHTLINE IMPROVEMENT: Approximately 270-foot improvement to sightline on a horizontal curve.	N/A	Public Facilities and Utilities	North of I-8 along Ribbonwood Road, approximately 0.25 mile south of Opalocka Road, near Boulevard	Estimated completion date Spring 2013.	32
ROUGH ACRES FOUNDATION CAMPGROUND FACILITY	3300-12-021	Conference/ retreat and wellness center and campground facility	2750 McCain Valley Road, Boulevard; north of I-8 and Hwy 94	Second major pre-app meeting held December 12, 2011; under review.	33
ROUGH ACRES FOUNDATION	3300-12-020	Rock crushing facility	2750 McCain Valley Road, Boulevard; north of I-8 and Hwy 94	Under review	34
BOULEVARD FIRE STATION: Project would replace existing fire station along Highway 94. The fire station would likely consist of a single-story structure between 5,000 square feet and 6,000 square feet in size, would include an apparatus bay, and would have a total footprint of disturbance of approximately 30,000 square feet of the 17.5-acre parcel. The site would include water tank facilities that would be filled infrequently as well as roadway improvements along its northern boundary and roadway access improvements to Manzanita Dulce. The project would use an on-site well and an on-site septic system.		Fire Station	Ribbonwood Road and Mazanita Dulce 612-020-47-00	Mitigated Negative Declaration received December 6, 2011.	35