APPENDIX K CULTURAL RESOURCES SURVEY AND EVALUATION PROGRAM

Cultural Resources Survey and Evaluation Program for the El Monte Sand Mining Project, Lakeside, California

PDS2015-MUP-98-014W2, PDS2015-RP-15-001, PDS2015-ER-98-14-016B

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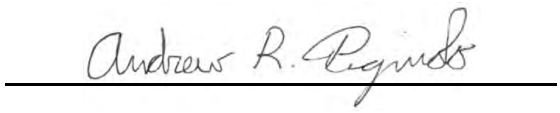

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National Archaeological Data Base Information

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Updated Sites:	CA-SDI-13652, CA-SDI-17300 (CA-SDI-13609 outside APE)
USGS Quadrangle:	San Vicente, El Cajon, El Cajon Mountain 7.5'
Acreage:	479.5 Acres
Permit Numbers:	PDS2015-MUP-98-014W2, PDS2015-RP-15-001, PDS2015-ER-98-14-016B
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LIST OF ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effects
Barona	Barona Band of Mission Indians
CEQA	California Environmental Quality Act
cm	centimeter
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
District	Helix Water District
DPR	California Department of Parks and Recreation
Local Register	San Diego County Local Register
m	meter
MSL	Mean Sea Level
NAHC	Native American Heritage Commission
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act of 1966, as amended
NRHP	National Register of Historic Places
OHP	California Office of Historic Preservation
PDS	Planning & Developmental Services
PRC	Public Resource Code
Reclamation	US Bureau of Reclamation
ROW	Right-of-Way
RPA	Register of Professional Archaeologists
RPO	San Diego County Resource Protection Ordinance
SCIC	South Coastal Information Center
SDG&E	San Diego Gas and Electric
SHPO	State Historic Preservation Officer
STP	Shovel Test Pit
USGS	US Geological Survey
Viejas	Viejas Band of Kumeyaay Indians

EXECUTIVE SUMMARY

El Monte Nature Preserve, LLC (Proponent) is proposing the El Monte Sand Mining Project (Project). The project will include sand mining and reclamation to an end use of open space with an open water pond and recreational trail easements. The combined mineral extraction and reclamation, staging areas, and trails will directly affect 262 acres of 479.5 acres of land located in El Monte Valley.

The County of San Diego (County) is the Lead Agency that must approve and regulate the Major Use Permit (MUP) and Reclamation Plan required for the Mining and Reclamation Components of the proposed Project. Since the proposed Project will receive funding from the US Bureau of Reclamation (Reclamation), the Project will be prepared in compliance with the National Environmental Policy Act (NEPA). While other federal agencies will also be providing funding and permits, Reclamation has been identified as the Lead Federal Agency and will be responsible for Section 106 consultation and coordination with the State Historic Preservation Officer (SHPO). The Project is located in central San Diego County. The Area of Potential Effects (APE) for the proposed Project has been identified as the 479.5 acres of the Project site.

A project-specific cultural resources literature and records search was conducted at the South Coastal Information Center on October 28, 2010 and updated on July 16, 2015. The records search included an examination of previous cultural resources survey coverage and reports, and known cultural resources within a 1-mile radius of the Project APE. Supplemental documents were obtained from the San Diego Museum of Man on March 31, 2011. The records search indicated that 70 studies have been documented within 1 mile of the Project APE, 13 of which appear to overlap with portions of the Project APE, and 85 cultural resources have been previously recorded within a 1-mile radius of the Project APE, including two resources (CA-SDI-13652 and CA-SDI-17300) located within the Project APE and two resources (CA-SDI-13609 and P-37-034482) located adjacent to the APE. Sites CA-SDI-13652 and CA-SDI-17300 have been previously evaluated and are considered significant prehistoric sites. The remaining two cultural resources (CA-SDI-13609 and P-37-034482) do not appear to have been previously evaluated. No human remains are known to be present at any of these sites. As part of the research for this Project, historic aerial photographs and historic maps were examined for the presence of potential historic built environment resources within the Project APE.

A cultural resources survey of the Project APE was conducted between April 4 and April 8, 2011 and included the 119 acres of the Project site along with additional areas as part of a different project. A spot check of potential historic resources was also conducted on July 6, 2015. The Project site was surveyed on foot with transects spaced at 15-m intervals. Ground visibility was generally poor, except in areas that had been subject to prior grading. Poor visibility was primarily due to heavy vegetation, present over a significant portion of the Project site.

An additional survey of portions of the project area constrained by surface visibility and environmental limitations was conducted between August 25 and 28, 2015 by Mr. Michael Vader and Mr. Jon Spenard. Mr. Frank Brown, a representative of the Viejas Band of Kumeyaay Indians, participated in the survey and served as Native American monitor. The dense vegetation and leaf litter reduced much of the ground surface visibility in the San Diego River bed to 0 to 50 percent. A large field area in the northern portion of the project included an area with zero percent visibility. This area was not subject to survey. The northeastern portion of the field area had approximately 50 percent ground surface visibility. Other areas had between 50 to 75 and 20 to 50 percent visible ground surface and were surveyed.

A Sacred Lands File search with the Native American Heritage Commission (NAHC) was requested by the District on October 19, 2010. Sacred Lands File search results did not indicate the presence of Native American cultural resources within ½-mile of the Project APE. Contact letters regarding a larger previous project were sent to all individuals and groups identified as having affiliation with the Project APE. The District conducted subsequent meetings with the Viejas Band of Kumeyaay Indians and with the Barona Band of Mission Indians. The District met with both groups periodically, and conducted site visits to the earlier Project APE with members of both groups.

A total of 28 cultural resources were identified as a result of the records search and the initial survey as being either within or adjacent to the Project APE at the time. Seven of these resources are prehistoric sites (CA-SDI-13609, CA-SDI-13652, CA-SDI-17300, CA-SDI-20797, CA-SDI-20799, CA-SDI-20800, and CA-SDI-20801), one resource is a historic-era site (CA-SDI-20798), three are historic-era structures (P-37-034482, P-37-034839, and P-37-034840), and 17 are isolated cultural resources (P-37-032955, P-37-032960 through P-37-032963 and P-37-032965 through P-37-032976).

The Project APE was adjusted and the secondary survey conducted in 2015 identified 18 previously unrecorded resources. Five additional sites (CA-SDI-21861, CA-SDI-21862, CA-SDI-21863, P-37-035816, and P-37-035818) and 13 isolates (P-37-035821 through P-37-035833) were identified within the surveyed portions of the current Project APE. The testing program in 2016 identified an additional three isolated resources (P-37-035877 through P-37-035879)

Within or adjacent to the revised current Project APE, 43 cultural resources were identified as a results of the records search, surveys, and testing. Seven of the resources identified in the initial survey are in areas excluded from the final project boundaries (CA-SDI-20797, CA-SDI-20801, P-37-032955, P-37-032960 trough P-37-032963). They are not included in the total here, but are described in the survey results only to include the comprehensive results of previous surveys. The resources not included within or adjacent to the final project footprint are not included in the impacts analysis. Within the final APE, seven of these resources are prehistoric sites (CA-SDI-13609, CA-SDI-13652, CA-SDI-17300, CA-SDI-20799, CA-SDI-20800, CA-SDI-21862, and CA-SDI-21863), seven resources are historic-era structures or features (CA-SDI-20798, P-37-035816, CA-SDI-21861, P-37-035818, P-37-034482, P-37-034839, and P-37-034840), and 29 are isolated resources (P-37-032964 through P-37-032976, P-37-035821 through P-37-035833, and P-37-035877 through P-37-035879).

A portion of prehistoric site CA-SDI-13652 and sites CA-SDI-20798, CA-SDI-21861, and P-37-035818 would be both directly and indirectly impacted by the proposed project based on the current plot plan. Isolates P-37-032964, P-37-032965, P-37-032966, P-37-032967, P-37-032968, P-37-035827, P-37-035828, P-37-035829, P-37-035830, P-37-035831, P-37-035832, and P-37-035833 are also within the proposed impact area. Because all or portions of these four sites and 12 isolates cannot be avoided and incorporated into open space easements, a testing program was needed to address impacts to these resources and determine if these resources are eligible for listing on the California Register of Historical Resources (California Register).

CA-SDI-13652 has already been determined to be a significant RPO eligible site and a boundary determination and evaluation program was needed to determine if significant portions of this site are present within the proposed project's APE, and if buried portions of the site may be present.

Testing at sites CA-SDI-13652, CA-SDI-20798, CA-SDI-21861, and P-37-035818 included development of a research design. The research design includes appropriate research questions for these sites. Testing included detailed site mapping and feature documentation, historic archival research, surface collection of artifacts, subsurface boundary determination and excavation, and analysis.

Testing and evaluation was conducted at sites CA-SDI-20798, CA-SDI-21861, and P-37-035818 and boundary determination was conducted at CA-SDI-13652 between May 27 and June 2, 2016. The testing plan also proposed to relocate and collect Isolates P-37-032964 through P-37-32968, and P-37-035827 through P-37-035833, within the project impact area. However, only those that could be relocated and confirmed as cultural artifacts were collected. Three previously unrecorded isolates (P-37-035877 through P-37-035879) were identified during the testing program and collected. Further information was recovered from site CA-SDI-20798, CA-SDI-21861, and P-37-035818 during testing. Testing also determined that site CA-SDI-13652 does not extend into the project impact area and will not be directly affected by this project.

With the exception of site CA-SDI-13652, none of these impacted resources are eligible for the County Resource Protection Ordinance (RPO). Based on the current testing program, sites CA-SDI-20798, CA-SDI-21861, and P-37-035818 do not qualify as cultural resources eligible for nomination to the California Register. Several isolates identified in the surveys could not be relocated, or turned out not to be cultural artifacts. Three new isolates were identified and recorded. Isolates that were collected include P-37-032965, P-37-032967, P-37-035833, and P-37-035877 through P-37-035879. Based on the results of the survey and testing program no significant cultural resources will be directly affected by the proposed project.

There is potential for the presence of previously unknown, buried archaeological resources within the Project APE. Recommended mitigation measures include the retention of a County-approved archaeologist to carry out all mitigation (CUL-1), and avoidance and protection through the establishment of Environmentally Sensitive Areas (ESAs) and dedicated open space prior to ground disturbance and monitoring during Project construction and operation (CUL-2).

1.0 INTRODUCTION

1.1 Project Description

El Monte Nature Preserve, LLC. (applicant) is proposing the El Monte Sand Mining Project (project). The proposed project would produce 12.5-million tons of quality constructionaggregate (sand and gravel) over a 12-year period in El Monte Valley on land that is zoned for extractiveuse. As mining is completed in phases, the disturbed areas previously mined will be progressivelyreclaimed starting in year four of the project. Reclaimed areas will be restored to an end use of openspace with recreational trail easements. The combined mineral extraction and reclamation, staging areas,trails, and fuel modification areas will affect 262 acres of land located in El Monte Valley on approximately 479.5 acres currently owned by El Monte Nature Preserve, LLC.

The County of San Diego (County) is the Lead Agency that must approve and regulate the Major Use Permit (MUP) and Reclamation Plan required for the Mining and Reclamation Components of the proposed Project. Since the proposed Project will receive funding from the US Bureau of Reclamation (Reclamation), the Project will be prepared in compliance with the National Environmental Policy Act (NEPA). While other federal agencies will also be providing funding and permits, Reclamation has been identified as the Lead Federal Agency and will be responsible for Section 106 consultation and coordination with the State Historic Preservation Officer (SHPO).

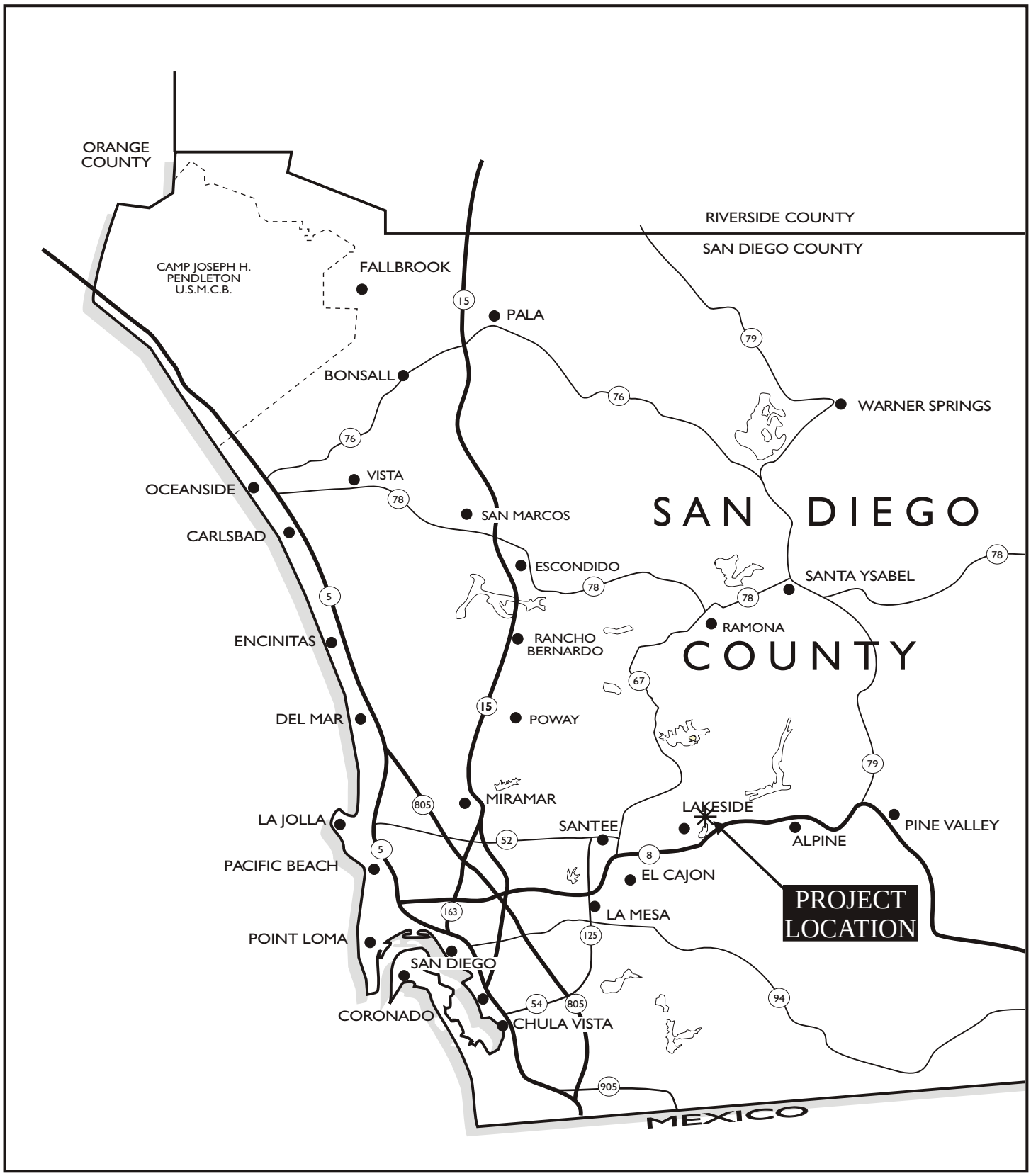
1.1.1 Project Location

The 479.5-acre Project is located in central San Diego County (Figure 1). The Project site is located in the San Diego River watershed within unincorporated San Diego County near the community of Lakeside. The Project site is situated within an unsectioned portion of the El Cajon Land Grant in Township 15 South, Range 3 East, as depicted on the El Cajon Mountain, San Vicente Reservoir, and El Cajon USGS 7.5-minute topographic quadrangles. The Project site is roughly bordered by El Monte Road and Miss Ellie Lane to the south, and Willow Road to the north. The El Capitan Dam is located to the east, upstream of the Project site, and El Cajon Mountain is located to the northeast (Figure 2).

1.1.2 Proposed Project Description

The mineral extraction project will include the modification of an approved Major Use Permit (MUP) (PDS2015-MUP-98-014W2) for a golf course complex. The MUP would be modified to eliminate the golf course use and allow extraction of construction aggregates. In addition to this action, a Reclamation Plan (PDS2015-RP-15-001) for the mining operations will need to be approved in compliance with County ordinance and the California Surface Mining and Reclamation Act of 1975 (SMARA).

Approximately 228 acres will be affected by mining and reclamation activities, including backfilling and reclaiming of about 15 acres of ponds and roads built by the golf course for water hazards (Figure 3). Areas disturbed by the operation will be progressively reclaimed starting in year four as mining proceeds to the west. Reclamation is an ongoing process that commences when mining operations have ceased within a given area and continues until all mining related disturbance is reclaimed and all equipment involved in these operations have been removed.



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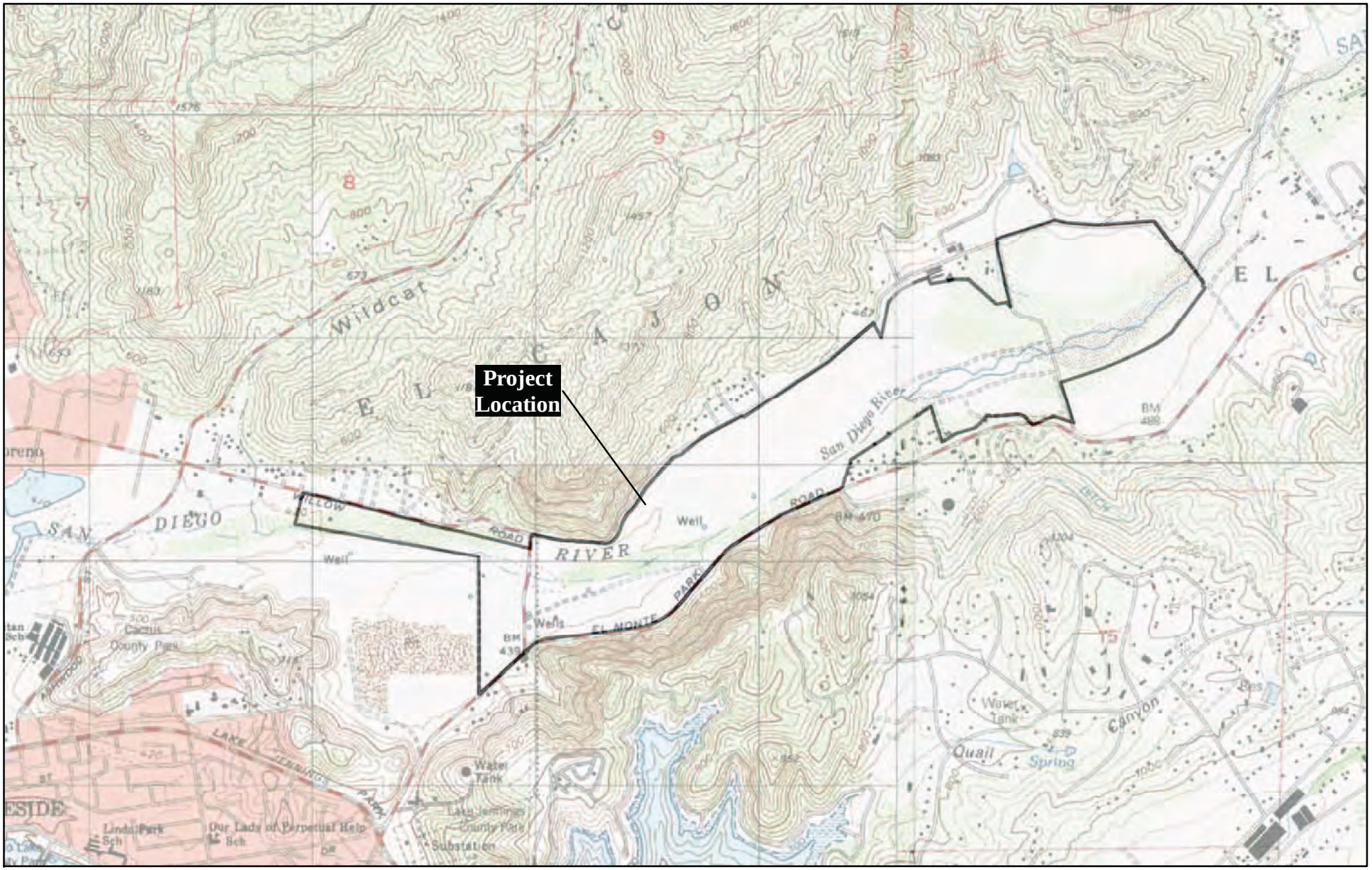
M I L E S

Figure 1
Regional Location Map

Laguna Mountain Environmental, Inc.



Source: USGS 7.5' El Cajon, El Cajon Mt., Alpine & San Vicente Res. Quadrangles

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Figure 2
Project Location

Laguna Mountain Environmental, Inc.

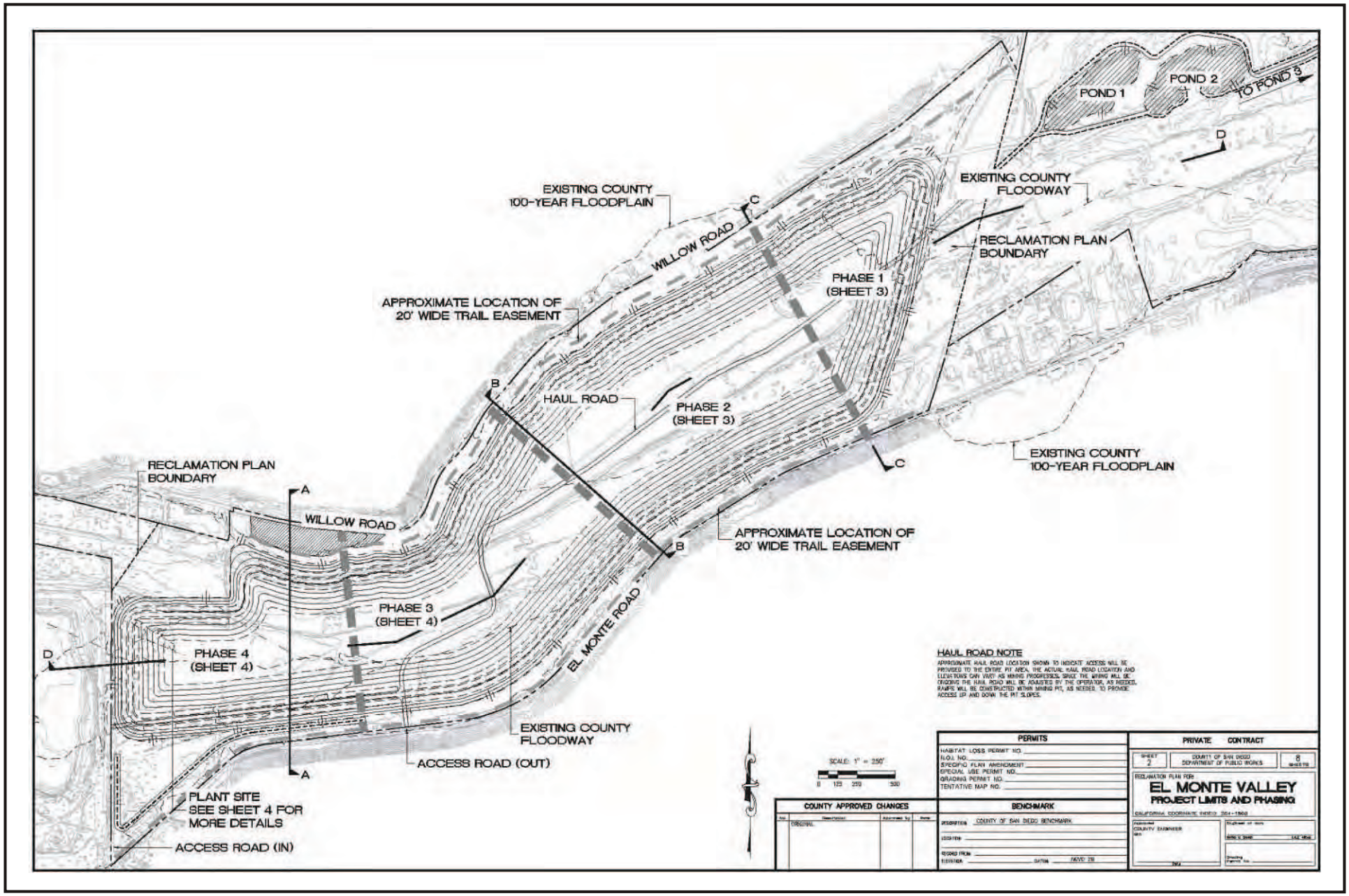

Figure 3
Project Plan

Laguna Mountain Environmental, Inc.

The project is expected to be fully completed in 16 years (mining will be ongoing for 12 years). Reclamation will commence four years after the start of mining and will continue over a 12 year period. As such, reclamation is expected to be concluded four years after the completion of mining. Associated activities include an aggregate processing facility and all support structures and buildings in the form of scales, scale house module, and storage containers. Setbacks of 50 feet in width will be established along El Monte and Willow Roads prior to commencing operations. The project footprint is illustrated in Figure 3.

The requested MUP modification would eliminate the approved golf course use and authorize a maximum permitted production limit of 157 one-way heavy vehicle trips per day and 12.5 million tons of total shipped product.

Mining would begin with site preparation, and progress in a series of westerly advancing phases (Phases 1 through 4), with reclamation completed as final reclaimed surfaces are established. In the final phase (Phase 4), the western portion of the project would be extracted, all equipment removed from the property, and the final area (50 acres) of mining related disturbance reclaimed.

Mining operations would consist of excavating materials with wheeled front-end loaders; moving the material directly into the processing plant. One off-road haul truck would be used to transport wash fines from the plant for use as fill in the depression east of Dairy Road, and to transport wash fines for use as backfill for construction of the final topography. A slurry pipeline may also be used to transport wash fines to the depression. Prior to filling the depression, sediment would be stockpiled near the depression parallel to the prevailing wind direction for dewatering prior to being used as fill. Fugitive dust control measures for these stockpiles would include surface watering, use of wind barriers, and if necessary, covering with polyethylene tarps.

Operations would commence at the eastern limits of the excavation area where a channel erosion barrier, or drop structure, would be constructed across the San Diego River channel to prevent head cutting of the channel to the east during periods of water flow in the river channel. The drop structure would be located approximately 300 feet west of Dairy Road, and would consist of grouted rip rap approximately 2.7 feet thick. Cut slopes would be mined at a constant 3H:1V (horizontal:vertical) slope.

A 20-foot-wide bench would be constructed around the entire pit, excluding the drop structure. The bench would be located approximately 30 feet interior of the 150-foot setback and 10-feet below the setback elevation. The bench would have approximately 20 feet of flat to gently sloped surface with a 3H:1V slope between the bench and the 150-foot setback area. There would be approximately 20 feet of elevation difference between the surface of the bench and the bottom of the pit. Final cut slopes would be at a 3H:1V ratio.

1.1.3 Area of Potential Effects (APE)

The Area of Potential Effects (APE) for the proposed Project has been identified as the approximate 479.5-acre Project site (Figure 4). The Project site is bounded by El Monte Road and Miss Ellie Lane to the south and Willow Road to the north.

1.2 Existing Conditions

1.2.1 Environmental Setting

1.2.1.1 Natural Setting

The Project site is located within an east-west trending, alluvium-filled valley and lies within the drainage of the San Diego River. The Project site generally consists of a flat to gently sloping valley that includes accumulations of floodplain deposits (loose sands and gravels) related to the San Diego River drainage. Granitic rock outcrops dominate the elevated areas on either side of the valley.

Soils present in the Project site include fill and alluvium (Ninyo & Moore 2011). Fill materials are present at various locations related to agricultural activities and the previous initial grading done for the Golf Course Project. Depths of fill are unknown. The fill generally consists of various shades of brown, gray, and red, damp to moist, very loose to medium dense, poorly-graded to well-graded fine to coarse sand, silty sand, clayey sand, and sandy silt with gravel, cobbles, and scattered roots. Younger alluvium (less than 2 million years old) is present from existing ground surface and to depths of up to approximately 81 feet. The alluvium generally consists of various shades of brown, gray, and red, damp to saturated, very loose to very dense, poorly-graded to well-graded fine to coarse sand, silty sand, clayey sand, and sandy silt with gravel, cobbles, and scattered roots. Basal lag deposits, consisting of gravel, cobbles, and boulders, are commonly found at the bottom of alluvial deposits immediately above the underlying formational materials. Granitic rock and metavolcanic rock underlay the alluvium (Ninyo & Moore 2011).

Granitic rock is present at a depth of approximately 75 feet below ground surface (Ninyo & Moore 2011). The granitic rock generally consisted of various shades of brown, saturated, soft, weathered granitic rock. Metavolcanic bedrock underlies the alluvium at depths ranging from approximately 20 to 80 feet below ground surface. The metavolcanic rock generally consists of various shades of brown and gray, saturated, soft, weathered metavolcanic rock (Ninyo & Moore 2011).

Vegetation consists mostly of non-native grass and brush with some trees. Current land uses adjacent to the site include residential, dairy farming, sand and gravel mining, agricultural, and open space. Wildlife present in the area include house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), California towhee (*Pipilo crissalis*), side-blotched lizard (*Uta stansburiana*), western fence lizard (*Sceloporus occidentalis*), California ground squirrel (*Spermophilus beecheyi*), and Audubon's cottontail (*Sylvilagus audubonii*).

The topography of the Project site is naturally flat; however, site alterations due to historic mining and more recent grading activities associated with the Golf Course Project created rugged sandy "dunes" in portions of the upland areas. Elevations range from approximately 540 feet above mean sea level (MSL) at the eastern portion of the study site to approximately 420 feet above MSL at the western end of the site. The river basin extends in an east-west direction and consists of a low-flow natural channel and the associated floodplain (Chang 2011).

Sand and mining operations that occurred on-site approximately 30 years ago created a clearly defined river channel, which varies in width from 250 feet to nearly 400 feet. The channel is typically 10 to 20 feet lower than the elevations of the surrounding lands (Chang 2011).

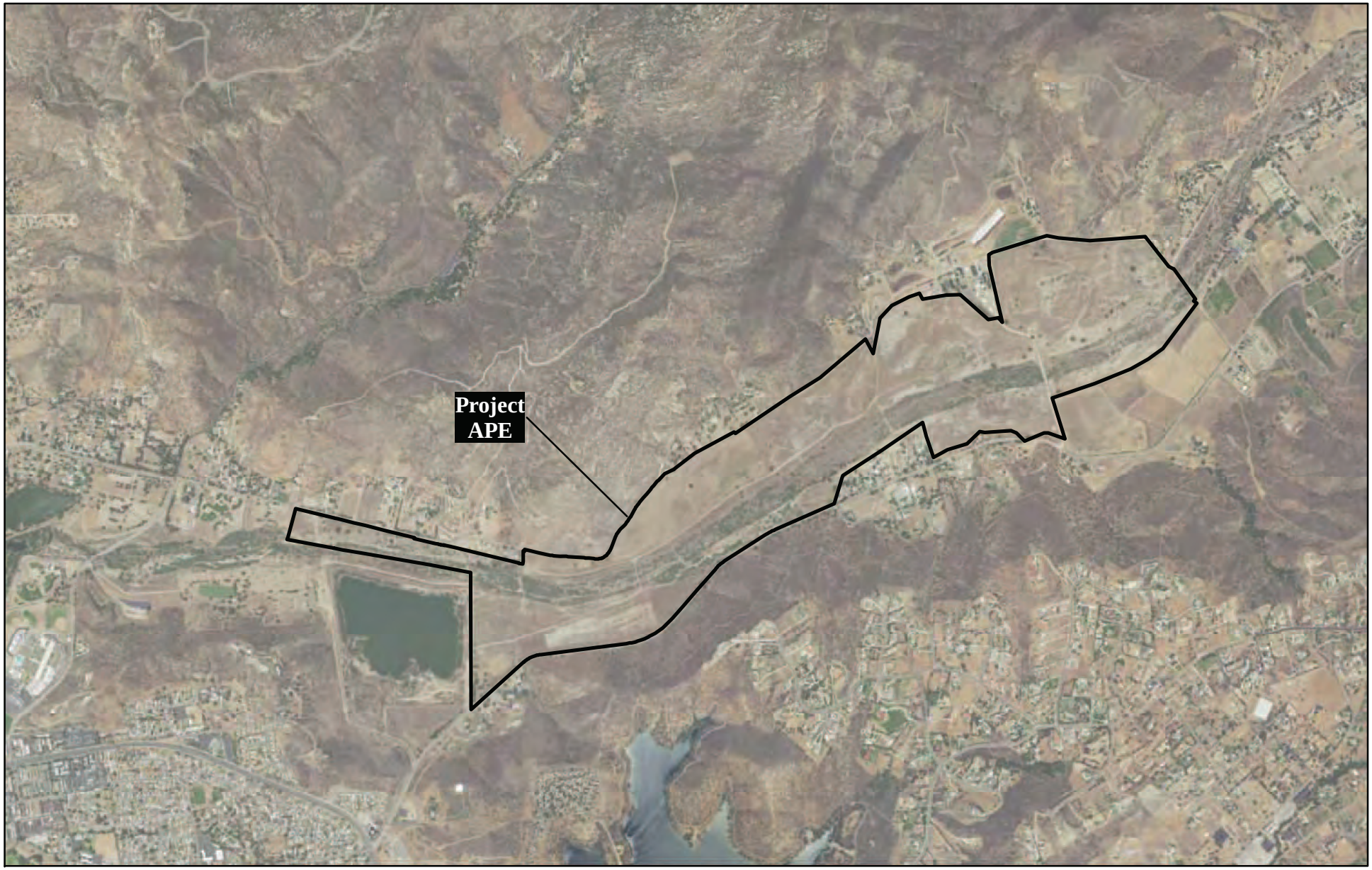

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Figure 4
Project APE

Laguna Mountain Environmental, Inc.

1.2.1.2 Cultural Setting

Prehistoric Setting

The chronology of coastal Southern California is typically divided into three general time periods: the Early Holocene (11,000 to 7,600 Before Present [B.P.]), the Middle Holocene (7,600 to 3,600 B.P.), and the Late Holocene (3,600 B.P. to A.D. 1769). Within this timeframe, the archaeology of southern California is generally described in terms of cultural "complexes". A complex is a specific archaeological manifestation of a general mode of life, characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture.

Early Holocene (11,000 to 7,600 B.P.)

While it is not certain when humans first came to California, their presence in southern California by about 11,000 B.P. has been well documented. At Daisy Cave, on San Miguel Island, cultural remains have been radiocarbon dated to between 11,100 and 10,950 B.P. (Byrd and Raab 2007:219). On the mainland, radiocarbon evidence confirms occupation of the Orange County and San Diego County coast by about 9,000 B.P., primarily in lagoon and river valley locations (Gallegos 2002:29). The earliest known sites in San Diego County are the Harris Site (CA-SDI-149), Agua Hedionda sites (CA-SDI-210/UCLJ-M-15 and CA-SDI-10695), Rancho Park North (CA-SDI-4392/SDM-W-49), and Remington Hills (CA-SDI-11069), dating between 9,500 to 8,000 B.P. (County of San Diego 2007a:4). During the Early Holocene, the climate of southern California became warmer and more arid and the human population, residing mainly in coastal or inland desert areas, began exploiting a wider range of plant and animal resources (Byrd and Raab 2007:217).

The primary Early Holocene cultural complex in coastal southern California was the San Dieguito Complex occurring between approximately 10,000 and 8,000 B.P. The people of the San Dieguito Complex inhabited the chaparral zones of southwestern California, exploiting the plant and animal resources of these ecological zones (Warren 1967:168). Leaf-shaped and large-stemmed projectile points, scraping tools, and crescentics are typical of San Dieguito Complex material culture.

Middle Holocene (7,600 to 3,600 B.P.)

During the Middle Holocene, there is evidence for the processing of acorns for food and a shift toward a more generalized economy. The processing of plant foods, particularly acorns, increased, a wider variety of animals were hunted, and trade with neighboring regions intensified (Byrd and Raab 2007:220).

The Middle Holocene La Jolla Complex (approximately 8,000-4,000 B.P.) is essentially a continuation of the San Dieguito Complex. La Jolla groups lived in chaparral zones or along the coast, often migrating between the two. Coastal settlement focused around the bays and estuaries of coastal Orange and San Diego Counties. La Jolla peoples produced large, coarse stone tools, but also produced well-made projectile points, and milling slabs. The La Jolla Complex represents a period of population growth and increasing social complexity, and it was also during this time period that the first evidence of the grinding of seeds for flour, as indicated by the abundance of millingstones in the archaeological record, appears (Byrd and Raab 2007:220). Contemporary with the La Jolla Complex, the Pauma Complex has been defined at inland sites in San Diego (True 1958:255). The Pauma Complex is similar in technology to the La Jolla Complex; however, evidence of coastal subsistence is absent from Pauma Complex sites. The Pauma and La Jolla Complexes may either be indicative of separate inland and coastal groups with

similar subsistence and technological adaptations, or, alternatively, may represent inland and coastal phases of one group's seasonal rounds. The latter hypothesis is supported by the lack of midden and deeply buried artifacts at Pauma sites, indicating that these sites may have been temporary camps for resource gathering and processing.

Late Holocene (3,600 B.P. to A.D. 1769)

During the Late Holocene, native populations of southern California were becoming less mobile and populations began to gather in small sedentary villages with satellite resource-gathering camps. Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence, towards a focus on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants (Byrd and Raab 2007:223). In coastal southern California, conditions became drier and many lagoons had been transformed into saltwater marshes. Because of this, populations abandoned mesa and ridge tops to settle nearer to permanent freshwater resources (Gallegos 2002:31). While Late Holocene coastal sites are known, sites of this period are more common along river valleys and interior locations (Gallegos 1995:200). Many sites located in the San Diego River Valley date to the Late Holocene.

Although the intensity of trade had already been increasing, it now reached its zenith, with asphaltum (tar), seashells, and steatite being traded from southern California to the Great Basin. Major technological changes appeared as well, particularly with the advent of the bow and arrow, which largely replaced the use of the dart and atlatl. Small projectile points, ceramics, including Tizon brownware pottery, and obsidian from Obsidian Butte (Imperial County), are all representative artifacts of the Late Holocene. Cremation burials are also common in this period (County of San Diego 2007a:5).

The San Diego River Valley was important as a travel corridor between the ocean and inland mountains and deserts; as a resource procurement area; and for permanent settlement (Gallegos 1995:195). Major habitation sites tended to be located at the confluence of the San Diego River and major drainages, while smaller habitation sites were located throughout the river valley.

Ethnographic Setting

The greater San Diego area was inhabited by a group of people known generally as the Kumeyaay. The Kumeyaay were also known as the Diegueño, a term used to describe a number of linguistically and culturally related Native groups that came under the governance of the Mission San Diego de Alcalá after the mission was established in 1769 (Luomala 1978:592). The Kumeyaay have also been referred to as Ipai-Tipai. Diegueño groups residing in the Imperial Valley were sometimes known as the Kamia or Desert Kumeyaay (Luomala 1978:592).

The Kumeyaay occupied an area that encompassed roughly southern present-day San Diego County, southern Imperial County, and northern Baja California (Kroeber 1925:709). Their territory ranged from the coast through the Peninsular Ranges to the Colorado Desert. To the east of the Kumeyaay and along the southern Colorado River area were the Yuman peoples (traditional *Quechan* tribal area). Kumeyaay territory was bordered on the north by the Luiseño, Cupeño, and Cahuilla.

The Kumeyaay language belonged to the Yuman language family, Hokan stock - the same family that includes the lower Colorado River tribes and other Arizona groups (Luomala 1978:592). Culturally, however, the Kumeyaay also shared many similar traits with their northern, Luiseño and Cahuilla neighbors. Within their cultural assemblage are numerous lithic tools such as projectile points, scrapers,

baskets, pottery manufacture, twines for nets and other textile objects, houses of bulrush, the bow and arrow, and cremation burials. Subsistence strategy for the Kumeyaay involved small-game hunting and resource gathering, with a noted reliance upon marine resources near San Diego Bay and along the Pacific Coast. Inland Kumeyaay populations followed similar subsistence strategies to the Luisueño and the Cahuilla, with a primary reliance upon the exploitation of small game animals including insects, fish, birds, dove, rabbits, and squirrels, as well as abundantly available vegetal resources such as many varieties of seeds, principally the acorn, cacti, and herbaceous plants. Studies indicate that the Kumeyaay divided their seasonal subsistence between the mountain and the desert ecological zones. With the seasons, the Kumeyaay moved in small bands from one productive area to another to ensure a near constant food supply (Luomala 1978:599).

The Kumeyaay were semi-sedentary and resided in politically autonomous villages, which were generally located in areas where water was easily accessible. Several large villages were located along the San Diego River, including a village located in the area now covered by the El Capitan reservoir; a village in the area of Santee Greens located in eastern Santee; El Corral, located near Mission Gorge; Nipaquay, located near Mission San Diego de Alcala; and Cosoy, located near the mouth of the San Diego River (Bowden-Renna and Apple 2007:9). The nearest village sites to the APE are the Santee Greens site, located about 6 miles west of the APE along the San Diego River, and El Capitan, located about 5 miles east of the APE under what is now the El Capitan Reservoir. The village was said to be located at the point where the San Diego River turned northward (Pourade 1961; Rensch 1956).

In 1769, the Mission San Diego de Alcala was founded and Kumeyaay were recruited, often forcibly, to live and work at the mission. The Kumeyaay resisted Mission control and several violent uprisings occurred within the first decade of missionization. In 1775, about 800 Kumeyaay from at least 15 different villages came together to attack the Mission (Luomala 1978:595). In 1834, Mexico secularized the missions and mission lands, although they were supposed to be transferred back to Native ownership, were sold to other Mexican or Euro-American settlers. When California became a part of the United States of America, the area saw an influx of settlers, particularly after gold was discovered in Julian in 1870. Many immigrants settled on Kumeyaay land and brought with them diseases such as smallpox and measles. In addition, the United States government failed to ratify the treaty that had been negotiated with representatives of the Kumeyaay in 1852. An executive order in 1875 established the first Kumeyaay reservations. However, many reservations were inadequate for the traditional lifestyle of the Kumeyaay, as overgrazing and water diversion had destroyed much of the natural environment (Luomala 1978:595).

Today, Kumeyaay tribal members within the United States are divided into 13 federally-recognized bands: Barona, Campo, Ewiiaapaayp, Inaja-Cosmit, Jamul, La Posta, Manzanita, Mesa Grande, San Pasqual, Santa Ysabel, Sycuan, Viejas, and Capitan Grande. An additional four bands are present in Mexico.

Native American Perspective

In addition to the culture history and ethnographic points of view discussed above, other perspectives exist to explain the presence and nature of Native American occupation in the region. Many Kumeyaay believe that, as told in creation stories, they have been here from the beginning. In addition, they do not necessarily agree with the distinction that is made between different archaeological cultures or periods, instead believing that there is a continuum of culture throughout the past.

Contemporary Kumeyaay communities take an active interest in their cultural history and work to ensure that their cultural traditions are carried on into the future. A commonly expressed desire is that archaeological sites and places of cultural importance be respected, protected, and preserved, and made available for traditional or ceremonial use.

Furthermore, archaeological practices of defining resource boundaries may conflict with broader landscape approaches common to Native American views. Native Americans often prefer to view the cultural landscape in its entirety with entire areas or regions constituting prehistoric living areas. In order to acknowledge this perspective and to fully understand the importance or significance of cultural resources, consultation and communication with Native American communities is essential and beneficial for a successful cultural resources study.

Historic Setting

The first European presence near present-day San Diego came in 1542, when Juan Rodriguez Cabrillo led an expedition along the coast. Europeans did not return until 1769, when the expedition of Gaspar de Portola traveled overland from San Diego to San Francisco. In the late 18th century, the Spanish began establishing missions in California and forcibly relocating and converting native peoples (Horne and McDougall 2003:33). The nearest mission to the APE was Mission San Diego de Alcalá, founded in 1769 by Junipero Serra.

Disease and hard labor took a toll on the native populations; by 1900, the Native Californian population had declined by as much as 95 percent (Chartkoff and Chartkoff 1984:248). In addition, native economies were disrupted, trade routes were interrupted, and native ways of life were significantly altered.

In 1821 Mexico, which included much of present-day California, became independent from Spain, and during the 1820s and 1830s the California missions were secularized. Mission property, although it was supposed to have been held in trust for the Native Californians, was handed over to civil administrators and then into private ownership. After secularization, many former Mission Indians were forced to leave the Missions and seek employment as laborers, ranch hands, or domestic servants (Horne and McDougall 2003:34).

In 1848 gold was discovered in California, leading to a huge influx of people from other parts of North America. In 1850 California became part of the United States of America. The opening of the Butterfield Overland Stage route in 1858 and later the California Southern Railroad line in 1882 greatly increased the number of people coming to southern California (Helmich 2008:1-4; Lowell 1985).

History of the Project APE and Vicinity

The Project APE was part of the 48,800-acre Mexican-era El Cajon Rancho land grant, given by Governor Pio Pico to Maria Antonia Estudillo de Perorena in 1845 (Brackett 1939:51-52). After California became part of the United States, the land grant was gradually sold to Americans, including Isaac Lankershim who purchased a large portion of the grant in 1868 (Birkett 1962:45-49).

The Project site, situated in the El Monte Valley, is within the San Diego watershed. Historic maps indicate that the San Diego River changed course sometime between 1903 and 1939, shifting from a more northerly alignment adjacent to the foothills to a more southerly alignment within the Project site (USGS

1903; 1939). The Project site does not appear to have ever been developed (historicaerials.com 2011). However, historically, north of the river, much of the Project site was cultivated for dry land cereal grain production during the winter and spring.

In 1999, a 460-acre golf course was proposed for the Project site. Preliminary grading for the golf course occurred between 2003 and 2005 in some areas; however the Golf Course Project was abandoned in 2005.

Existing land uses surrounding the Project site include low-density residential housing, agricultural lands, dairy farming, public utilities, and open spaces. Trails used by equestrians and hikers occur throughout the Project site. Crops typically grown in the area include bamboo shoots, chives, and snow peas.

The offsite purified recycled water pipeline, located within exiting roadway ROWs, traverses the communities of Santee and Lakeside. Historically, the vicinity of the offsite purified recycled water pipeline was largely agricultural until the 1970s and 1980s, when residential developments appeared (historicaerials.com 2011). The area remains largely residential.

1.2.2 Records Search Results

A Project-specific cultural resources literature and records search was conducted at the California Historical Resources Information System South Coastal Information Center (SCIC) on October 28, 2010 and an updated record search for the current project was conducted on July 16, 2015 (Appendix A). This records search included an examination of previous cultural resources survey coverage and reports, and known cultural resources within a 1-mile radius of the Project APE. Other sources reviewed include the California Points of Historical Interest, the California Historical Landmarks, the California Register of Historical Resources (CRHR), the National Register of Historic Places (NRHP), the California State Historic Resources Inventory, and historic maps. Supplemental documents were obtained from the San Diego Museum of Man on March 31, 2011.

1.2.2.1 Previous Studies

A total of 70 studies have been conducted within one mile of the Project APE (Table 1). These include 35 surveys/assessments, 14 environmental documents/studies, 12 testing/data recovery programs, 7 mitigation/management/treatment plans, and 2 archaeological monitoring programs. According to the records search results, 13 previous studies appear to overlap with portions of the Project APE. It appears that at least 85 percent of the Project site has been previously surveyed.

1.2.2.2 Previously Recorded Sites within or Adjacent to the Project APE

Eighty-six cultural resources have been previously recorded within one mile of the Project APE (Table 2), including four resources located within or adjacent to the Project APE (Table 3). One resource is located within the APE and three resources are located adjacent to the APE. For the purposes of this study, adjacent resources are considered resources located within 50 feet of the Project APE. Table 2 also includes the 23 resources recorded in 2011 during the initial survey for this Project.

Table 1. Previous Studies within One Mile of the Project APE

Author	Report Title	Year
American Pacific Environmental Consultants	Draft Environmental Impact Report for a Major Use Permit KCBQ (AM) Radio Towers; EAD #81-14-83; MUP 81-072	1982
Apple and Olmo	An Investigation of Archeological Resources Quail Canyon Estates, Lakeside, California	1980
Berryman	Mobile Home Estates	1975
Berryman	Cultural Resource Assessment for Lakeside Boukai Joint Venture	1990
Bever	Cultural Resources Inventory and Impact Assessment for the County Flume Trail Project, San Diego County, California	2012
Blotner	ETS #20587, Cultural Resources Survey for the TL 678 W2s: Distribution Relocation for the TL 678 Wood Steel and Reconductor Project, Los Coches to Alpine Substations, San Diego County, California	2010
Bowden-Renna	*El Monte Valley Restoration Project*	*2006*
Bowden-Renna and McCorkle-Apple	*Archaeological Literature Review, Site Visit, and Research Design for CA-SDI-13652 and CA-SDI-17300 and for El Monte Valley Nature Park Project, San Diego County, California*	*2008*
Bowden-Renna, McCorkle-Apple and Lilburn	Cultural Resource Survey for the San Diego Water Authority Moreno-Lakeside Alternatives Project, San Diego County, California	2000
Bray	BLM Abandoned Mine Lands Cultural Resources Inventory: Mines near El Cajon, San Diego County, California	2010
Bull	An Archaeological Survey for Blossom Valley Estates	1977
Carrico	Archaeological Investigations at Lake Jennings Ranch Unit 1, Sites SDI-5552 (LJR-6) and SDI-5553 (LJR-7)	1978
Chambers Group	Lindo Lake Boathouse Historic Structure Report and Rehabilitation Plan	2008
Cheever and Berryman	*Results of a Cultural Resource Survey and Expanded Site Boundary Evaluation of CA-SDI-4901 for the Proposed Widening of Wildcat Canyon Road, County of San Diego, California*	*2003*
City of San Diego	Draft Mitigated Negative Declaration of the Villas de Derby Downs	1998
Clowery and Blotner	ETS #8789; TL 678 Wood to Steel and Reconductor, Los Coches to Alpine Substations, Cultural Resources Inventory Report	2010
Cook	High Meadows Ranch	1985
Cook	Cultural Resource Analysis for the Upper San Diego River Improvement Project Redevelopment Plan	1989
Cook and White	Archaeological Survey and Report Lake Jennings Ranch	1977
Corum	An Archaeological Survey Report for a Proposed Highway Widening Project on Route 67 near Lakeside, 11-SD-67 P.M. 66/9.4	1978
Corum	First Supplemental Historic Property Survey 11-SD-52 P.M. 7.3/17.2	1986
County of San Diego	An Archaeological Assessment of Bureau of Land Management Lakeside Site 1	1983
Craig R. Lorenz and Associates	Quail Canyon Specific Plan SP77-01 Phase 3, TM 4627, Log 76-14-155 Lakeside Community Plan Area County of San Diego, California	1988
Craig R. Lorenz and Associates	Quail Canyon Specific Plan SP77-01 Phase 4, TM 4809 RPL, Log#88-14-144 Lakeside Community Plan Area County of San Diego California	1989
Cupples	*An Archaeological Survey of the San Diego River Valley*	*1975*
Development Planning Consultants	Kevane Mobile Home Subdivision TM 4292, P81-66n, LOG #81-14-72 Lakeside Community Planning Area County of San Diego, CA	1984
Easland	An Environmental Impact Report of a 20 Acre Parcel in Lakeside, California.	1975
Fink	A Cultural Resource Assessment of Louis A. Stelzer Regional Park, Lakeside, California Project No: UJ0331	1979
Fulton	Cultural Resource Assessment Class Iii Inventory Verizon Wireless Services Riverview Farms-rodeo Facility City of Lakeside San Diego County, California	2013

Table 1. Previous Studies within One Mile of the Project APE
(Continued)

Author	Report Title	Year
Gallegos, Schroth, and Tift	*Cultural Resource Survey for the San Diego County Water Authority Moreno-lakeside Pipeline*	*1998*
Garcia-Herbst, Iversen, Laylander, and Williams	*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*	*2010*
Gardner	Cultural Resources Survey for the SDG&E Qc P272424 and P176656 Pole Replacement Project, Alpine, San Diego County, California	2009
Haney	Negative Archaeological Survey Report Acquisition of 2 Parcels Southeast of Route 67 & Willows Road Intersection	2000
Hanna	Lake Jennings Vista County of San Diego Archaeology Survey and Report	1977
Hector	*Cultural Resources Sensitivity Analysis for the Carryover Storage and San Vicente Dam Raise Project (CSP) Alternatives Analysis*	*2006*
Jordan and Eckhardt	Cultural Resources Phase 1 Survey and Inventory of the Proposed Trail and Equestrian Staging Area, El Monte Regional Park, San Diego County, California	2008
Jordan, Eckhardt, and Craft	Cultural Resources Phase I Survey and Inventory of County of San Diego El Capitan and Oakoasis Preserves and El Monte and Louis A. Stelzer Regional Parks, San Diego County, California	2008
Lorenz	Draft Environmental Impact Report: Lakeside Jehovah Witness Church	1994
Mason	Cultural Resources Records Search and Field Survey for a Verizon Telecommunications Facility: Los Coches in the City of El Cajon, San Diego County, California	2002
McDonald and Pallette	Negative Archaeological Survey of the SR-125 Biological Mitigation Parcels Located near Lake Jennings San Diego County, California	1998
McGinnis	Letter Report: ETS 20687- Cultural Resources Testing and Evaluation of Site CA-SDI-20170 for Los Coches Substation Modification, Community of Lakeside, Eastern San Diego County, California- IO7011102	2013
McGinnis	Letter Report: ETS 20687- Cultural Resources Monitoring for Los Coches Substation Modification, Community of Lakeside, Easter San Diego County, California- IO 7011102	2013
McLean	Verizon Wireless Riverview Farms- Rodeo Facility 12584 Mapleview St., Lakeside	2013
Michael R. Alberson and Associates	Griffin Mobile Home Park TM4420, Log 83-14-50 Lakeside, California	1984
Connolly	ETS #23648, Cultural Resources Survey for the Res Ext., P249819, Jacob Simpson, Lakeside Project, San Diego County, California	2012
Mooney & Associates	Draft Environmental Impact Report for the Upper San Diego River Improvement Project (USDRIP) Redevelopment Plan	1989
Mooney-Lettieri & Associates	Draft Environmental Impact Report for High Meadow Ranch TM4521 P85-04 PAP-A85-01 Log#84-14-2	1985
Mooney-Lettieri & Associates	Draft Environmental Impact Report for Gilboa Estates Mobilehome Park Major Use Permit MUP# P81-109 EAD Log#81-14-122	1982
Morgan	ETS #20687; Cultural Resources Inventory Report for the Proposed Los Coches Substation Expansion, Lakeside, San Diego County, California	2011
Multi Systems Associates	Environmental Impact Report Quail Canyon Estates, Lakeside, California	1976
Noah	Three CDBG Projects, Lakeside, Lindo Lake Park, San Diego County	1990
Pettus	A Cultural Survey of Portions of the Las Chollas, South Las Chollas, Los Coches Forester, and Loma Alta Stream Basins in San Diego County, California.	1979
Pigniolo, Phillips, and Schilz	Cultural Resource Survey of the Eucalyptus Hills and Tooma Street Alternative Sites for the Navy Housing Environmental Assessment, San Diego County, California	1988
Rosenberg and Smith	*An Archaeological Site Evaluation for the 15256 Willow Road Project, Lakeside, San Diego County, California, APN 390-040-57*	*2007*

Table 1. Previous Studies within One Mile of the Project APE
(Continued)

Author	Report Title	Year
Ryzdynski	Archaeological Environmental Impact Report, Lakeside Irrigation District Lakeside Avenue Reservoir, Lakeside, California	1976
Scroth, Gallegos, McHenry, and Harris	Historical/Archaeological Survey Report for the Water Repurification Pipeline and Advanced Water Treatment Facility, City of San Diego, California	1996
Shalom	Cultural Resources Survey Report for Coker TPM 21102, Log No. 07-14-012 - Negative Survey	2007
Shalom	Cultural Resources Survey Report for Danube Properties - MUP/REZ 08-001, Long No. 08-14-001, APN 392-070-02	2008
Smith	Results of a Cultural Resource Study of the Padre Dam Municipal Water District Phase 1 Reclaimed Water System Project	1992
Smith	Archaeological Survey and Cultural Evaluation at the Lakeside Congregation of Jehovah's Witness Project	1993
Spelts	*Letter Report: ETS 25986- Cultural Resources Monitoring Report for Installation of New Interset Pole (P250034), Community of Lakeside, San Diego County, California- IO200413802*	*2014*
SWCA	Final Cultural Resources Survey of Alternatives for the Sunrise Powerlink Project in Imperial, Orange, Riverside, and San Diego Counties, California	2008
Townsend	*Southwest Powerlink Cultural Resources Management Plan*	*1984*
True	Archaeological Investigations in San Diego County, California: High Meadows Ranch Project	1978
Wade	Archaeological Mitigation: TPM-20037-RPC	1994
Wilson	Letter Report: ETS 26569- Cultural Resources Survey for Replacement Activities for Pole P272423, Community of Lakeside, San Diego County, California- IO 7011102	2014
Wirth Associates	*APS/SDG&E Interconnection Project Phase II Corridor Studies, Cultural Resources: Archaeology*	*1974*
Wirth Associates	*APS/SDG&E Interconnection Project Environmental Study Phase II Corridor Studies - Native American Cultural Resources Appendices*	*1980*
Wright	Cultural Resources Negative Survey Report For: TPM 20742, Log No. 03-14-026-Humphrey Minor Subdivision APN 392-020-59, 60 Negative Findings	2004
Xinos	Draft Supplemental Environmental Impact Report: High Meadow Ranch, EAD Log #77-14-371	1984

Italicized reports exist within current Project APE

Table 2. Previously Recorded Cultural Resources within One Mile of the Project APE

Resource No.	Resource Type	Recorder (Year)
CA-SDI-4517	Bedrock Milling & Camp Site	Mooney & May (1975); Rosenberg (2007)
CA-SDI-4678	Bedrock Milling & Camp Site	Underwood (1976); Cook (1977); Apple (1980)
CA-SDI-4900*	Bedrock Milling & Camp Site	Toren & Schiowitz (1977)
CA-SDI-4901	Camp Site	Toren & Lilburn (1977); Pierson (1992)
CA-SDI-4902	Rock Wall	Toren & Lilburn (1977); Hightower (1979)
CA-SDI-4913*	Camp Site & Rock Shelters	Toren & Lilburn (1977)
CA-SDI-5547	Lithic Scatter	Cook (1977)
CA-SDI-5548	Bedrock Milling & Temporary Camp	Cook (1977)
CA-SDI-5549	Milling Station	Cook (1977)
CA-SDI-6844	Milling Station	Fink (1979)
CA-SDI-6845	Milling Station	Fink (1979)
CA-SDI-6846	Milling Station	Fink (1979); Sweet (2004)
CA-SDI-6847	Bedrock Milling	Taton (1979)
CA-SDI-8126	Bedrock Milling & Temporary Camp	Fink & Hughes (1980); Serr & Baksh (1991)
CA-SDI-8127	Milling Station	Fink & Hughes (1980); Serr & Baksh (1991)
CA-SDI-8128	Bedrock Milling & Temporary Camp	Fink & Hughes (1980); Serr & Baksh (1991)
CA-SDI-8251	Bedrock Milling & Habitation Site/Historic Structures, Abandoned Mine & Trash	Hedges (1980); Wesson et al. (2007); Pick (2007); Craft et al. (2008); Williams (2009); Bray (2010)
CA-SDI-8397	Bedrock Milling	Cook (1976)
CA-SDI-8398	Bedrock Milling & Lithic Scatter	Cook (1976)
CA-SDI-8399	Bedrock Milling & Temporary Camp	Cook (1976)
CA-SDI-8400	Milling Station	Cook (1976)
CA-SDI-8401	Milling Station	Cook (1976)
CA-SDI-8402	Bedrock Milling & Camp Site	Cook (1976)
CA-SDI-8403	Lithic Scatter	Cook (1976)
CA-SDI-8607	Camp Site	McCorkle & Apple (1987)
CA-SDI-8915	Milling Station & Rock Shelter	Fergoda & Whalen (1981)
CA-SDI-9900	Bedrock Milling & Rock Walls	Banks (1984); Pigniolo (1988)
CA-SDI-11296	Historic San Diego Flume & Tunnels	Roth (1989); DeGiovine & Craft (2008); Hoffman (2012); Richards (2014)
CA-SDI-12212	Lindo Lake Park	Joyner & Maier (1990)
CA-SDI-12870	Historic Trash Scatter	Pierson (1992)
CA-SDI-13605	Bedrock Milling & Lithic Scatter/Historic Structures & Trash	James et al. (1993); Craft et al. (2008)
CA-SDI-13606	Bedrock Milling	James et al. (1993); Craft & DeGiovine (2008)
CA-SDI-13607	Temporary Camp	James et al. (1993)
CA-SDI-13608	Temporary Camp/Historic Silo & Trash	James et al. (1993)
CA-SDI-13609	Milling Station	James et al. (1993)
CA-SDI-13610	Bedrock Milling & Temporary Camp	James et al. (1993)
CA-SDI-13611	Bedrock Milling	James et al. (1993); Williams (2009)
CA-SDI-13622	Bedrock Milling & Rock Wall	James et al. (1993)
CA-SDI-13623	Milling Station	James et al. (1993)
CA-SDI-13624	Bedrock Milling/Historic Stone Foundation & Wall	James et al. (1993)

Table 2. Previously Recorded Cultural Resources within One Mile of the Project APE
(Continued)

Resource No.	Resource Type	Recorder (Year)
CA-SDI-13652	Bedrock Milling, & Rock Shelter	Pigniolo et al. (1993); Bowden-Renna (2007); Williams (2009)
CA-SDI-14272	Lithic Scatter	Scroth et al. (1995)
CA-SDI-14273	Lithic Scatter & Shell	Scroth et al. (1995)
CA-SDI-14274	Not a Site	Scroth et al. (1995); Haney (2000)
CA-SDI-17088	Bedrock Milling & Ceramic Bowl/Historic Can Scatter	Sweet (2004)
CA-SDI-17089	Bedrock Milling	Sweet (2004)
CA-SDI-17090	Rock Shelter & Bedrock Milling	Sweet (2004)
CA-SDI-17091	Bedrock Milling	Sweet (2004)
CA-SDI-17300	Habitation Site	Smith (2005)
CA-SDI-19217	Possible Rock Shelter	Craft et al. (2008)
CA-SDI-19218	Milling Station	Craft et al. (2008)
CA-SDI-19296	Milling Station (not relocated)	Pick (2008); Williams (2009)
CA-SDI-19644	Shell Scatter	Dorrler & Hubbs (2009)
CA-SDI-19752	Shell Scatter	Blotner (2010)
CA-SDI-19759	Bedrock Milling & Temporary Camp	Clowery (2010)
CA-SDI-19762	Manos & Shell Scatter	Williams et al. (2009)
CA-SDI-19763	Historic Complex	Williams et al. (2009)
CA-SDI-19764	Historic Cistern & Dirt Road	Williams et al. (2009)
CA-SDI-19767	Historic Complex	Williams et al. (2009)
CA-SDI-20170	Historic Complex & Trash	Morgan & Tennesen (2010); McGinnis (2013)
CA-SDI-20797	Lithic Scatter & Manos	Ehringer (2011)
CA-SDI-20798	Historic Trough & Well	Ehringer (2011)
CA-SDI-20799	Lithic Scatter & Manos	Ehringer (2011)
CA-SDI-20800	Manos (5)	Ehringer (2011)
CA-SDI-20801	Milling Station & Rock Shelter	Ehringer (2011)
CA-SDI-20986	Bedrock Milling	Williams (2011)
CA-SDI-21509	Milling Station	Richards (2014)
CA-SDI-21510	Milling Station	Richards (2014)
CA-SDI-21511	Historic Foundation	Richards (2014)
CA-SDI-21578	Bedrock Milling	Toenjes & Cox (2015)
P-37-015481	Isolate Mano & Flake	James et al. (1993)
P-37-015482	Isolate Mano	Briggs & Pigniolo (1993)
P-37-015483	Isolate Sherd	Briggs et al. (1993)
P-37-030131	Isolate Core & Flake	Craft et al. (2008)
P-37-030135	Isolate Flake	Craft et al. (2008)
P-37-030274	Isolate Flakes	Pick (2008)
P-37-030354	Isolate Sherd	Pick (2008)
P-37-031190	Historic Dirt Road	Williams et al. (2009)
P-37-031876	Historic Residence	Dalope & Gunderman (2009)
P-37-031877	Historic Residence	Dalope & Gunderman (2009)
P-37-031878	Historic Livestock Pen	Dalope & Gunderman (2009)
P-37-031879	Historic Residence	Dalope & Gunderman (2009)
P-37-031880	Historic Residence	Dalope & Gunderman (2009)
P-37-031881	Historic Residence	Dalope & Gunderman (2009)
P-37-031883	Historic Residence	Dalope & Gunderman (2009)
P-37-031885	Historic Residence	Dalope & Gunderman (2009)
P-37-031886	Historic Residence	Dalope & Gunderman (2009)

Table 2. Previously Recorded Cultural Resources within One Mile of the Project APE
(Continued)

Resource No.	Resource Type	Recorder (Year)
P-37-031887	Historic Residence	Dalope & Gunderman (2009)
P-37-032955	Isolate Sherd	Ehringer (2011)
P-37-032960	Isolate Mano	Ehringer (2011)
P-37-032961	Isolate Lithics	Ehringer (2011)
P-37-032962	Shell Scatter (of unknown origin)	Ehringer (2011)
P-37-032963	Isolate Historic Sherd	Ehringer (2011)
P-37-032964	Isolate Flake	Ehringer (2011)
P-37-032965	Isolate Mano & Flake	Ehringer (2011)
P-37-032966	Isolate Mano	Ehringer (2011)
P-37-032967	Isolate Shell & Bone (modern?)	Ehringer (2011)
P-37-032968	Isolate Metate & Sherd	Ehringer (2011)
P-37-032969	Isolate Core	Ehringer (2011)
P-37-032970	Isolate Mano	Ehringer (2011)
P-37-032971	Isolate Shell	Ehringer (2011)
P-37-032972	Isolate Mano	Ehringer (2011)
P-37-032973	Isolate Mano	Ehringer (2011)
P-37-032974	Isolate Manos	Ehringer (2011)
P-37-032975	Isolate Mano	Ehringer (2011)
P-37-032976	Isolate Flake	Ehringer (2011)
P-37-034482	Historic Pump Station	Yates & Chmiel (2014)
P-37-034486	Historic Water Pipeline	Richards & Yates (2014)

* sites combined into CA-SDI-13652

Table 3. Previously Recorded Sites within or Adjacent to the Project APE

Resource Number	Other Designation	Site Type	Size	Year Recorded	Recorder	Comments
CA-SDI-13609[b]		Bedrock milling station	4m²	1993	James et al.	
CA-SDI-13652[a]	W-457 SDI-4900 SDI-4913	Late Prehistoric habitation	165,000m²	1993	Pigniolo et al.	Updated 2007, 2009. Sites SDI-4900 and SDI-4913 were combined with SDI-13652. Tested in 1990s and partially capped in 2003.
CA-SDI-17300[b]		Late Prehistoric habitation	17,622m²	2005	Smith	Tested 2005
P-37-034482 [b]	El Monte Pump Station	Historic pump station	n/a	2015	Yates and Chmiel	

[a] Indicates site located within current APE

[b] Indicates site located adjacent to current APE (within 50 feet of the APE)

1.2.2.3 CA-SDI-13609

Site CA-SDI-13609 was recorded by Ogden Environmental in 1993 (James et al. 1993:1-3). The site is located south of El Monte Road, about 20 feet from the Project APE. The site consists of one granitic bedrock outcrop with one milling slick and measured approximately 2 m by 2 m. No associated artifacts were noted. The surveyors noted that larger granitic outcrops were located near the site and that other bedrock milling features may have been destroyed when El Monte Road was cut. The site does not appear to have been previously evaluated for its significance.

1.2.2.4 CA-SDI-13652

CA-SDI-13652 was first recorded as two separate sites (CA-SDI-4900 and -4913). CA-SDI-4900 was recorded in 1977 by Wirth Associates (Miller et al. 1977:1-4) and consisted of bedrock milling features, lithics, ground stone, and ceramics. The site was re-visited in 1979 and was described as a Late Prehistoric camp (Jensen 1979:1-3). Site CA-SDI-4913 was also recorded in 1977 by Wirth Associates (Miller 1977:1-4) and was described as a camp site with two rock shelters and ground stone fragments. The surveyors noted that extensive pot-hunting had occurred at the site.

In 1993, the sites were re-recorded by Ogden Environmental (Pigniolo et al. 1993:1-4) and combined to create CA-SDI-13652. At that time, the entire site measured over 31,000 square m and extended north and south of Willow Road into the Project site. The site included three loci (A, B, and C). Locus A consisted of a large midden area, over 10 bedrock milling features, a rock shelter, and hundreds of fragments of ceramics, ground stone, and lithics. Locus B consisted of two bedrock milling features and a small concentration of ceramics. Locus C consisted of three bedrock milling features with more than 20 ceramic fragments, debitage, and a Desert Side-notched arrow point.

In 1996, ASM Affiliates (ASM) re-recorded site CA-SDI-13652 during a survey for a proposed golf course project and conducted testing of the portion of the site south of Willow Road. A total of 38 shovel test pits (STPs) and one 1.0 by 0.5 m unit were excavated, revealing a cultural deposit to a depth of 85 centimeters (cm). Recovered artifacts included ceramics, lithics, ground stone, shell, burned and unburned faunal bone, and fire-affected rock. No human bone was noted (Cook 1996:1-7). This portion of the site was determined to be a significant historical resource under CEQA and capping of this portion of the site was recommended. Capping was conducted in 2003 and monitored by Brian F. Smith & Associates (Smith 2003:1-2). The capped portion of the site is located within the Project APE.

The site was re-visited by EDAW, Inc. in 2006, who noted that some vegetation had returned to the capped portion of the site, which appeared intact. The authors stated that "based on previous assessments, the site appears to meet the qualification requirements for the [San Diego County] Local Register and RPO [San Diego County Resource Protection Ordinance]" (Bowden-Renna and Apple 2007:19, 21)

In 2009, ASM expanded the boundary of the site to the south and east during a survey for the SDG&E Sunrise Powerlink project, making the current site dimensions approximately 300 m north-south by 550 m east-west (Garcia-Herbst et al. 2010:228). ASM recorded two granitic ground stone fragments and two fine-grained metavolcanic flakes at that time (Williams 2009:1-3). The expanded portion of the site is currently located within the Project APE.

1.2.2.5 CA-SDI-17300 (P-37-026065)

Site CA-SDI-17300 was first recorded in 2005 by Brian F. Smith & Associates. The site was discovered during construction grading for the Golf Course Project and measures 79 m north-south by 225 m east-west. It is located south of Willow Road, about 30 feet from the Project site. Subsurface archaeological testing was conducted to determine site significance. Nineteen STPs and one test unit were excavated, revealing a cultural deposit to a depth of 130 cm. Recovered artifacts included ground stone, lithics, ceramics, fire-affected rock, faunal bone, marine shell, and charcoal. No human bone was noted (Smith 2005a:1-5; 2005b:1-3). Smith (2005b:1) determined that the site was a significant historical resource under CEQA, but did not appear to qualify for the RPO.

The site was re-visited by EDAW in 2006, who noted that heavy vegetation covered the site (Bowden-Renna and Apple 2007:14, 19, 21). The authors stated that "based on previous assessments, the site appears to meet the qualification requirements for the Local Register and RPO."

1.2.2.6 P-37-034482

Site P-37-034482 was first recorded in 2014 by T. Yates and K. Chmiel. The resource was identified during a cultural resource inventory for the San Diego River Trail El Monte Segment. It is located south of El Monte Road, about 30 feet from the Project site. The El Monte Pump Station's historic-period elements include a pump house, a small building that appears to be a control panel house, and multiple daylighting pipes and associated concrete features. The main structure has a Public Works Administration panel dating the facility to 1937.

1.2.3 Additional Historic Research

Historic aerial photographs and historic maps were examined for the presence of potential historic built environment resources within the Project APE.

Historic aerial photographs were available for the years 1953, 1964, 1968, 1971, 1980, 1989, 2003, and 2005 (historicaerials.com 2011). Historical maps consulted include 1903 El Cajon 15-minute, 1903 Cuyacama 30-minute, 1939 El Cajon15-minute, 1955 San Vicente Reservoir 7.5-minute, 1955 El Cajon Mountain 7.5-minute, 1955 El Cajon 7.5-minute, and 1955 Alpine 7.5-minute USGS topographic maps.

Historical maps and aerial photographs did not indicate any buildings or structures that are extant with the Project APE and therefore no historic built environment resources were identified. Historic research indicated that the Project site has remained within the San Diego River watershed and largely undeveloped over time.

1.3 Applicable Regulations

Resource importance 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, and culture. A number of criteria are used in demonstrating resource importance. Specifically, criteria outlined in Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA), the NRHP, CEQA, the CRHR, the Local Register, and the RPO provide the guidance for making such a determination. The following sections detail the criteria that a resource must meet in order to be determined important.

1.3.1 Section 106 of the National Historic Preservation Act (NHPA)

Archaeological resources are protected through the NHPA of 1966, as amended (16 USC 470f), and its implementing regulation, Protection of Historic Properties (Code of Federal Regulations [CFR] 36 Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria at 36 CFR 60.4.

1.3.2 National Register of Historic Places (NRHP)

The NRHP was established by the NHPA of 1966, as "an authoritative guide to be used by federal, State, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be considered for protection from destruction or impairment" (36 CFR Section 60.2). The NRHP recognizes both historical-period and prehistoric archaeological properties that are significant at the national, state, and local levels. In the context of the Project, which does not involve any historical-period structures, the following NRHP criteria are given as the basis for evaluating archaeological resources.

To be eligible for listing in the NRHP, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Districts, sites, buildings, structures, and objects of potential significance must meet one or more of the following four established criteria (US Department of the Interior 1995):

A) Are associated with events that have made a significant contribution to the broad patterns of our history;

B) Are associated with the lives of persons significant in our past;

C) Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D) Have yielded, or may be likely to yield, information important in prehistory or history.

Unless the property possesses exceptional significance, it must be at least 50 years old to be eligible for NRHP listing (US Department of the Interior 1995).

In addition to meeting the criteria of significance, a property must have integrity. Integrity is defined as "the ability of a property to convey its significance" (US Department of the Interior 1995). The NRHP recognizes seven qualities that, in various combinations, define integrity. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. The seven factors that define integrity are location, design, setting, materials, workmanship, feeling, and association.

1.3.3 California Environmental Quality Act (CEQA)

The State implements the NHPA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation (DPR), implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historic Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the State's jurisdictions.

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on archaeological resources. CEQA is codified at Public Resource Code (PRC) sec 21000 et seq. As defined in Section 21083.2 of CEQA a "unique" archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

In addition, the *State CEQA Guidelines* recognize that certain historical resources may also have significance. The Guidelines recognize that a historical resource includes: (1) a resource in the CRHR; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of Section 21084.1 of CEQA and Section 15064.5 of the *State CEQA Guidelines* apply. If an archaeological site does not meet the criteria for a historical resource contained in the *State CEQA Guidelines*, then the site is to be treated in accordance with the provisions of CEQA Section 21083, which is a unique archaeological resource. The *State CEQA Guidelines* note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (*State CEQA Guidelines* Section 15064.5(c)(4)).

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

(d) 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 PRC Section 5097.98. 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:

1) 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).

2) The requirement of CEQA and the Coastal Act.

1.3.4 California Register of Historical Resources (CRHR)

The CRHR is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC Section 5024.1[a]). The criteria for eligibility for the CRHR are based upon NRHP criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the CRHR, including California properties formally determined eligible for, or listed in, the NRHP.

To be eligible for the CRHR, a prehistoric or historical-period property must be significant at the local, State, and/or federal level under one or more of the following criteria:

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

A resource eligible for the CRHR must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the NRHP, but it may still be eligible for listing in the CRHR.

Additionally, the CRHR consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The CRHR automatically includes the following:

- California properties listed on the NRHP and those formally Determined Eligible for the NRHP;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion in the CRHR.

Other resources that may be nominated to the CRHR include:

- Historical resources with a significance rating of Category 3 through 5 (Those properties identified as eligible for listing in the NRHP, the CRHR, and/or a local jurisdiction register);
- Individual historical resources;

- Historical resources contributing to historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

1.3.5 San Diego County Local Register of Historical Resources (Local Register)

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

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

1.3.6 San Diego County Resource Protection Ordinance (RPO)

The RPO protects significant cultural resources, defined 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 National Register of Historic Places by the Keeper of the National Register; or

   (b) To which the Historic Resource ("H" Designator) Special Area Regulations have been applied; or

2. One-of-a-kind, locally unique, or regionally unique cultural resources which contain a significant volume and range of data and 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 Indian Religious Freedom Act or PRC Section 5097.9, such as burial(s), pictographs, petroglyphs, solstice observatory sites, sacred shrines, religious ground figures or,

   (b) Other formally designated and recognized sites which are of ritual, ceremonial, or sacred value to any prehistoric or historic ethnic group.

The RPO does not allow non-exempt activities or uses damaging to significant prehistoric or historic lands on properties under County jurisdiction. The only exempt activity is scientific investigation authorized by the County. All discretionary projects are required to be in conformance with applicable County standards related to cultural resources, including the noted RPO criteria on prehistoric and historic sites. Non-compliance would result in a project that is inconsistent with County standards.

1.3.7 Traditional Cultural Properties/Tribal Cultural Resources

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.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCP) 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.

The County of San Diego Guidelines identifies that cultural resources can also include TCPs, such as gathering areas, landmarks, and ethnographic locations in addition to archaeological districts (2007). These guidelines incorporate both State and Federal definitions of TCPs. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district; traditional cultural landscape), or an area of cultural/ethnographic importance.

The Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American representatives during the project planning process. The intent of this legislation is to encourage consultation and assist in the preservation of "Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance" (County of San Diego 2007). It further allows for tribal cultural places to be included in open space planning. State Assembly Bill 52, in effect as of July 1, 2015, introduces the Tribal Cultural Resource (TCR) as a class of cultural resource and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally-defined TCP, however incorporates consideration of local and state significance and required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resources described in PRC §21083.2, or is a non-unique archaeological resource if it conforms with the above criteria.

In 1990 the NPS and Advisory Council for Historic Preservation introduced the term 'TCP' through National Register Bulletin 38 (Parker and King 1990). A TCP may be considered eligible based on "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" (Parker and King 1990:1). Strictly speaking, Traditional Cultural Properties are both tangible and intangible; they are anchored in space by cultural values related to community-based physically defined "property referents" (Parker and King 1990:3). On the other hand, TCPs are largely ideological, a characteristic that may present substantial problems in the process of delineating specific boundaries. Such a property's extent is based on community conceptions of how the surrounding physical landscape interacts with

existing cultural values. By its nature, a TCP need only be important to community members, and not the general outside population as a whole. In this way, a TCP boundary, as described by Bulletin 38, may be defined based on viewscape, encompassing topographic features, extent of archaeological district or use area, or a community's sense of its own geographic limits. Regardless of why a TCP is of importance to a group of people, outsider acceptance or rejection of this understanding is made inherently irrelevant by the relativistic nature of this concept.

2.0 GUIDELINES FOR DETERMINING SIGNIFICANCE

Any of the following will be considered a potentially significant environmental impact to cultural resources:

1. The project causes a substantial adverse change in the significance of a historical resource as defined in §15064.5 of the State Guidelines. This shall include the destruction, disturbance or any alteration of characteristics or elements of a resource that cause it to be significant in a manner not consistent with the Secretary of Interior Standards.

2. The project causes a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5 of the State CEQA Guidelines. This shall include the destruction or disturbance of an important archaeological site or any portion of an important archaeological site that contains or has the potential to contain information important to history of prehistory.

3. The project disturbs any human remains, including those interred outside of formal cemeteries.

4. The project proposes activities or uses damaging to significant cultural resources as defined by the Resource Protection Ordinance (RPO) and fails to preserve those resources.

5. The project proposes activities or uses that would impact tribal cultural resources as defined under Public Resources Code §21074.

The Guidelines listed above have been selected for the following reasons:

Guidelines 1 and 2 are derived directly from CEQA. Section 21083.2 of CEQA and 15064.5 of the State CEQA Guidelines recommend evaluating historical and archaeological resources to determine whether or not a proposed action would have a significant effect on unique historical or archaeological resources. Guideline 3 is included because human remains must be treated with dignity and respect and CEQA requires consultation with the "Most Likely Descendant" as identified by the Native American Heritage Commission (NAHC) for any project in which human remains have been identified.

Guideline 4 was selected because the RPO requires that cultural resources be considered when assessing environmental impacts. Any project that would have an adverse impact (direct, indirect, and cumulative) on significant cultural resources as defined by the RPO would be considered a significant impact. The only exception is scientific investigation.

Guideline 5 was selected because tribal cultural resources are of cultural value to Native American tribes. Any project that would have an adverse impact (direct, indirect, and cumulative) on tribal cultural resources as defined by PRC §21074 would be considered a significant impact.

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

3.0 RESEARCH DESIGN

The goal of the testing and evaluation program was to assess the potential effects of the proposed project on sites CA-SDI-13652, CA-SDI-20798, CA-SDI-21861, and P-37-035818. To accomplish this goal, background information was examined and assessed, and this research design and testing plan was developed to identify the extent, integrity, and content of the sites in order to evaluate the recovered information against a set of relevant research questions.

3.1 Integrity

Resource integrity is a critical part of evaluation. For archaeological purposes, integrity usually refers to the preservation of artifact associations and stratigraphy. Bioturbation and other natural factors affecting artifact associations are common in the San Diego region, and much of the region area has also been affected by agriculture and urban development.

3.2 Native American Heritage Concerns

Native American Heritage concerns need to be included in significance evaluations as part of State and County policy. Native American concerns particularly focus on religious sites, sites that contain human remains, and sites with items used for ceremonial purposes.

3.3 Research Potential

Research potential is the most applicable of the California Register criteria for archaeological resources. To establish a framework to evaluate if a site may be likely to yield information important in prehistory or history, important research questions are established along with data needs. These research criteria are established below.

3.4 Theoretical Orientation

As a social science, archaeology seeks to understand human behavior. Because of the nature of the archaeological record, archaeologists look at behavior in terms of cultural patterns, and environmentally oriented archaeologists attempt to explain these patterns in the context of various and changing natural and social environments. While much of the past archaeological research in San Diego County has focused on reconstructing culture change over time or "culture history," new theoretical ideas in the 1960s and 1970s highlighted the importance of the environment and shifted the emphasis of archaeology from reconstructing history to understanding culture (Binford 1989).

The fundamental theoretical orientation that underlies this study, and much of the work that has been conducted in San Diego County to date is cultural materialism. "Cultural materialism" as used here essentially holds that practical, survival, and economic aspects of culture ultimately determine the success or the spread of specific behavior patterns (Hayden 1993). Cultural ecology and environmental archaeology are forms of cultural materialism, emphasizing the role of the environment as a practical controlling factor on culture and human behavior. The perspectives of cultural materialism and cultural ecology are appropriate for the study area because of the direct relationship between hunter-gatherer economy and the environment and because these concepts represent a continuation of recent thinking in the region. Cultural materialism is also appropriate for study of the historical archaeological resources because it focuses on relationships within systems.

3.5 Research Topics, Implications, and Data Requirements

3.5.1 Prehistoric Subsistence

Reconstructing the subsistence economy of prehistoric hunter-gatherers is a key question for cultural ecology. Historic period hunter-gatherers typically occupied extreme environments and/or had been heavily impacted by European colonial expansion. As a consequence, understanding the cultural adaptations of hunter-gatherers in more productive environments is heavily reliant on archaeological data.

For the most part, subsistence during the Late Prehistoric in San Diego County is fairly well understood through the ethnographic record. Ethnographic information has provided a level of detail beyond the archaeological record, but certain aspects are poorly known.

Based on the presence of bedrock milling features at site CA-SDI-13562 it is likely that subsistence was focused on inland terrestrial resources.

- How does site subsistence pattern relate to resource availability?

Hypothesis: The general pattern is one of using available resources: Acorn processing subsistence technologies and small mammal procurement should dominate the assemblage. Marine resources, if present, will represent a minimal component of the assemblage.

Data Needs:

•Stratigraphic contexts that indicate the sites contain interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.

- Material suitable for establishing chronology from these contexts.

- Vertebrate and invertebrate faunal material, along with tools that reflect subsistence focus and activities such as projectile points, bifaces, and milling tools.

- Sufficient quantities of ecofactual material to allow patterns to be defined. To obtain a statistically valid sample, quantities of 50 items per m^3 are required.

3.5.2 Prehistoric Chronology

Chronology and aspects of culture history have long been the subjects of archaeological research in the San Diego region. Late Prehistoric period sites are common in the region, and are relatively easily identified through the presence of bedrock milling, ceramics, and bow and arrow technology. Early Archaic period sites are more difficult to recognize and perhaps less common in the area. Furthermore, while Archaic period sites have been scrutinized in coastal regions, few have been studied in depth in inland areas.

- Is CA-SDI-13562 solely a Late Prehistoric site or is there potential for an Archaic period component? What portion(s) of the Late Prehistoric period are represented at this site?

Hypothesis: Based on past discoveries, the majority of the site is represented by very late Late Prehistoric activity with abundant ceramics. If present, Archaic Period evidence will be represented by rare dart points, differences in lithic material selection and reduction technology, and flaked lithic tool types.

Data Needs:

- Stratigraphic contexts that indicate the site contains interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.

- Material suitable for radiocarbon dating from these contexts.

- Biface tools and artifacts representative of activities carried out at the site. To obtain a statistically valid sample, quantities of 50 items per m^3 are required.

3.5.3 Prehistoric Mobility and Settlement

Settlement Patterns have been the subject of considerable research in San Diego County. This topic contributes to the definition of settlement systems and the study of their change through time, both elements important to local prehistoric studies. The interaction of cultural groups and the natural landscape is an important aspect of human behavior. Just as cultural geographers study current land use patterns to aid in urban planning, the study of prehistoric settlement patterns can provide insight into past strategies of interaction with the environment.

Most settlement pattern studies focus on the relationship between natural resources and areas of human occupation. A general assumption is that important resources for subsistence create a draw for settlement, and that people will tend to locate near important water and food resources. Other types of sites may also be located near resources, but may not be related to habitation. These special task sites, such as isolated bedrock milling stations and lithic procurement/reduction areas, also provide important evidence on how people used the natural landscape.

An examination of resources used at a site and their source provenience is a means of examining mobility. Direct procurement, or travel over relatively large distances to procure resources is one aspect of mobility. Another aspect relates to territoriality. A seasonal round type of mobility strategy with bipolar village locations is often the model for Late Prehistoric mobility.

- How does CA-SDI-13562 fit into the regional settlement system through time?

Hypothesis: Site patterning in relation to water, landform, and lithic resources is expected. Exchange played a very minor role in resource procurement and, although mobility provided a range of available resources at different time intervals, the sites reflect foraging and processing behavior and the local resources of the area. Roughly 90% of the assemblage will represent local materials within a 10-km foraging radius.

Data Needs:

- Stratigraphic contexts that indicate the sites contain interpretable cultural strata that can be taken to represent the results of relatively short-term occupations or a single occupation that can be compared to other single occupation sites.

- Material suitable for chronological control from these contexts.

- Artifacts representative of activities carried out at the sites. To obtain a statistically valid sample, quantities of 50 items per m^3 are required.

- Sufficient quantities of source specific lithic material to allow patterns to be defined. To obtain a statistically valid sample, quantities of 50 items per m^3 are required.

3.5.4 Water Development and Historic Boom Bust

Water development evidence from the rural parts of the county may show differences from urban development related to the establishment of economic life. It may also indicate responses to boom and bust periods. The kinds of artifacts expected from agricultural settings include structural and building hardware remains, ceramics, glass, and metal.

San Diego's population grew rapidly during Boom periods, especially during the years of 1886 to 1888 and in the late 1920s. After the California Southern Railroad connected San Diego to the East Coast in 1885, a surge of people moved west creating a great influx of population. The need for a better water supply grew along with the increasing population. The development of a sufficient water supply has been a fundamental asset to San Diego's growth. Within a short period in the late 1800s, developers planned water projects which resulted in the creation of multiple water companies. The companies that came to existence included the San Diego Flume Company in 1886.

- What are the historical and archaeological San Diego patterns for wells? What materials were commonly used to construct the wells? Do the construction materials vary in relation to location?

Hypothesis: The wells were developed after the construction of El Capitan Dam to provide agricultural farming needs.

Data Needs: Archival evidence on well development, their age, function, and ownership.

4.0 ANALYSIS OF PROJECT EFFECTS

4.1 Methods

4.1.1 Survey Methods

4.1.1.1 Initial Survey

A cultural resources survey of the Project APE was initially conducted between April 4 and April 8, 2011 and included the 517 acres of the approximate 565-acre Project site.

The survey crew included: Ms. Candace Ehringer, M.A., RPA (field director); Ms. Madeleine Bray, M.A., RPA; Mr. Damien Tietjen, B.A.; and Mr. Jon Spenard, M.A. Mr. Frank Brown of the Viejas Band of Kumeyaay Indians (Viejas) served as the Native American monitor for the survey. Ms. Monica Strauss, M.A., RPA served as principal investigator and quality assurance/control reviewer. Resumes of key personnel are provided in Appendix B. A spot check to record existing wells was conducted by Mr. Andrew Pigniolo on July 6, 2015.

The Project site was surveyed on foot with transects spaced at 15-m intervals. Ground visibility was generally poor, except in areas that had been subject to prior grading. Poor visibility was primarily due to heavy vegetation, present over a significant portion of the Project site (Figure 5).

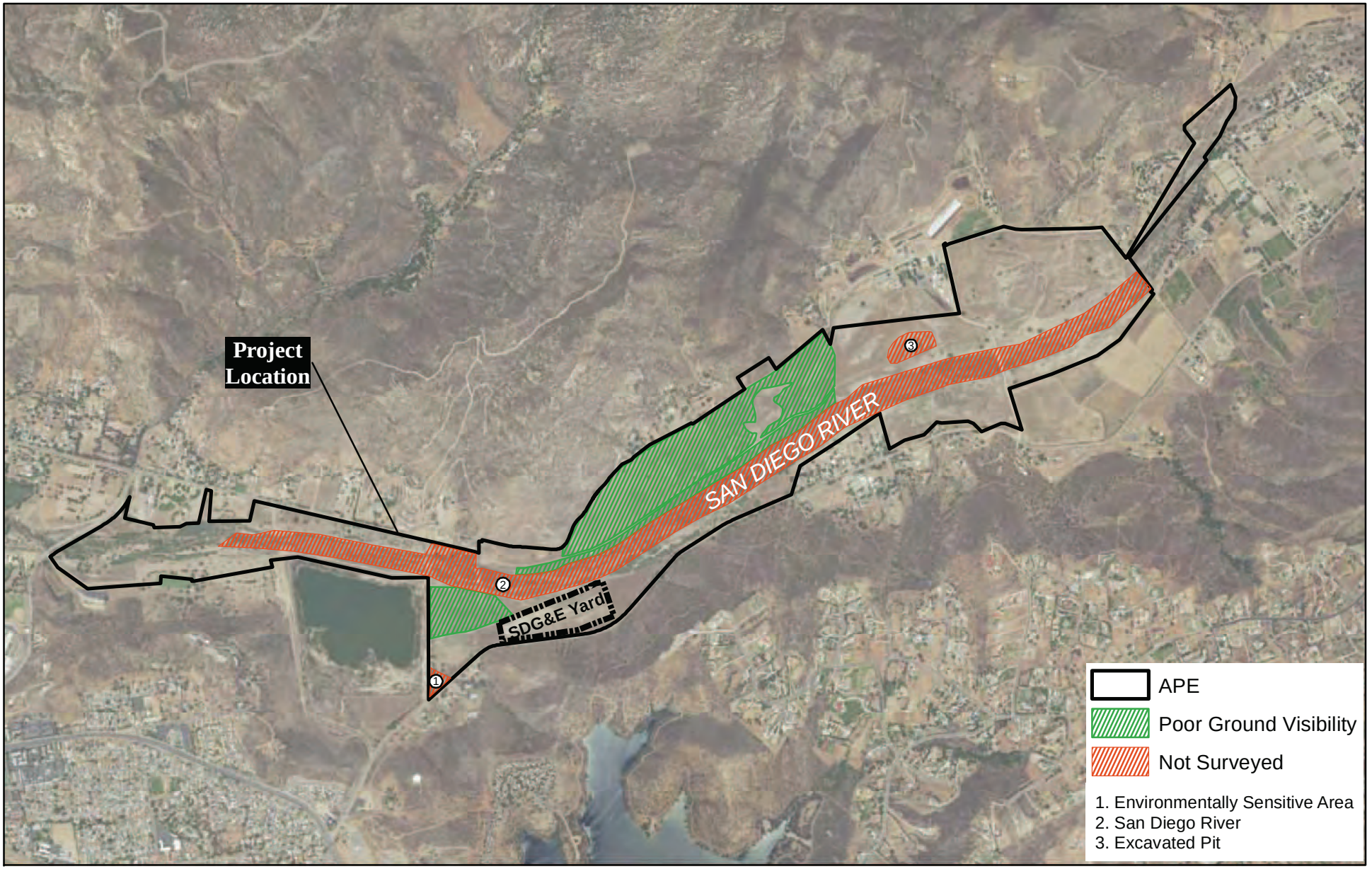
Some sections of the Project APE could not be surveyed for various reasons (see Figure 5). Areas that were not surveyed include the following:

1. The southwest corner of the Project site, located near the El Monte Road entrance (due to an ESA, i.e., nesting bird)
2. The majority of the San Diego River bed (due to dense vegetation)
3. A large excavated pit (due to steep slopes)

4.1.1.2 Supplementary Survey

An additional survey of portions of the project area constrained by surface visibility and environmental limitations was conducted between August 25 and 28, 2015 by Mr. Michael Vader and Mr. Jon Spenard. Mr. Frank Brown, a representative of the Viejas Band of Kumeyaay Indians participated in the survey and served as Native American monitor.

Due to variations in topography and ground visibility, systematic, opportunistic, and reconnaissance-level survey methods were employed (Figure 6). Portions of the survey area with relatively flat topography and 50 to 100 percent ground surface visibility were subject to systematic pedestrian survey with transects spaced at intervals no greater than 15 m (approximately 50 feet). Portions of the survey area covered in thick riparian vegetation with 0 to 50 percent ground surface visibility were subject to an opportunistic survey wherein trails and clearings were intensively examined for the presence of cultural resources. Reconnaissance-level surveys were conducted in areas with steep slopes wherein the slopes were examined to identify any visible stratigraphy. Portions of the Project APE with dense vegetation limiting access and no ground surface visibility were not surveyed.



0 1,000 2,000 Feet

Figure 5
Survey Coverage Map 2011

Laguna Mountain Environmental, Inc.

Figure 6
Survey Coverage Map 2015

Confidential Figure
Bound Separately in Appendix G

Prehistoric sites were defined as consisting of three or more artifacts within a 10-square meter area. Historic period sites were defined as consisting of three or more artifacts, with at least one being diagnostic, and/or one feature within a 10-square m area. Newly recorded resources were assigned temporary numbers, photographed, and documented on California Department of Parks and Recreation (DPR) 523 forms (Appendix C). Previously recorded resources were updated on DPR 523 forms, as necessary.

4.1.2 Test Methods

4.1.2.1 CA-SDI-13652 Boundary Determination and Testing

Archaeological testing at site CA-SDI-13652 was limited to the area of potential direct impacts. Boundary determination and testing was conducted in a portion of the southern part of site CA-SDI-13652 that had not been previously tested. This is the area located south of the capped portion of the site and is the expanded site portion identified by Garcia-Herbst et al. (2010). This area is entirely within the area of direct impacts related to the proposed project. The tested area measures approximately 400 m east/west and varies from approximately 60 m to 160 m north/south.

The testing and boundary determination program at CA-SDI-13652 included surface collection within the portion of the site area within the area proposed for direct impacts. Site mapping was conducted using GPS.

Boundary determination and testing included excavation of 20 shovel test pits (STPs) and approximately 100 feet of mechanical trenching. STPs were set out in cardinal directions across the site area. STPs were laid out at 25 m intervals along an east-west baseline with two additional north/south lines. STPs were manually excavated circular test pits measuring 30 cm in diameter. STPs were excavated in 10-cm arbitrary, contour levels. The goal of STP placement was to identify areas within the site that contain subsurface cultural material. All excavated soil was passed through 1/8-inch mesh hardware cloth and dry-screened in the field. Recovered material was removed from the screens and bagged by level.

A series of 10 test trench segments were distributed across the portion of the site area under evaluation. Trench segments were approximately 10 feet (3 m) in length. The purpose of the backhoe excavation was to test subsurface deposits quick and efficiently across a broad area, to expedite the potential controlled excavation of cultural materials buried beneath culturally sterile overburden, and to determine if buried cultural deposits were present. No test units were excavated since primary subsurface deposits and buried deposits were not identified.

A photographic record was kept to document the progress of the testing program. This included general overviews, and views of site excavation. A photographic log was kept to document orientation and subject matter (Appendix D).

4.1.2.2 CA-SDI-20798 Documentation

CA-SDI-20798 is a historic-era site consisting of a concrete block and cast iron watering trough, probable well, and two vertical metal poles. The concrete block structure measures about 15 feet long by 5 feet wide by 3 feet tall. The walls are about 6 inches thick. The concrete appeared to have been reinforced by

rebar and barbed wire and the east wall of the trough was partially stuccoed. The trough is full of rusted barbed wire, sheet metal, rocks, red roof tiles, a colorless glass bottle and glass fragments. The glass bottle, which has a faceted shoulder, is embossed: "4/5 QUART" on the heel and "7592/ ROMA/WINES/ MG [slanted left] 4 on the base." Based on the Maywood Glass Company mark (MG), the bottle dates from 1930 to 1959.

The possible well is located about 15 feet northwest of the northwest corner of the trough and was covered. It is composed of rusting cast iron metal and measures about 15 inches in diameter and 18 inches in height. One vertical metal pole was located just south of the trough and a second pole was located about 6 feet east of the southeast corner of the trough. Both poles measured about 6 inches in diameter and 4 feet in height.

Documentation and evaluation of the site included additional field documentation and archival research focused on historic land development in the area. The historic-age bottle would have been collected during the current phase and treated as an isolate if it had still been present. However, it appears to have been removed from the site between the survey and testing phases.

4.1.2.3 CA-SDI-21861 Documentation

This resource is a multi-component site that consists of one historic-period well stand pipe and one fine-grained metavolcanic (FGMV) secondary flake. The well pipe is composed of sections of sheet metal riveted together and is 1.7 feet in diameter by 7.5 inches tall. The FGMV secondary flake is located approximately 12 feet west of the well stand pipe and has dimensions of 4.3 cm long by 3.1 cm wide by 1.2 cm thick. The resource is located within a field located south of the San Diego River bed.

Evaluation of the well stand pipe included field documentation and archival research focused on historic land development in the area. The flake was treated as a prehistoric isolate and collected.

4.1.2.4 P-37-035818 Documentation

This is a historic-period feature consisting of a well stand pipe composed of sections of sheet metal riveted together. The feature has a circumference of approximately 4.5 feet and stands approximately 5.28 feet tall. The top section of the stand pipe is welded to the lower section. The feature is located on the northern levee of the San Diego River.

Evaluation of the well stand pipe included field documentation and archival research focused on historic land development in the area.

4.1.2.5 Isolated Artifacts

During the survey phase, it was recommended that isolated artifacts be relocated, collected, and curated. The 12 isolates within the impact area (P-37-032964, P-37-032965, P-37-032966, P-37-032967, P-37-032968, P-37-035827, P-37-035828, P-37-035829, P-37-035830, P-37-035831, P-37-035832, and P-37-035833) were relocated to the extent possible, mapped, collected, catalogued, and will be curated. Isolates within the current APE were collected if they could be relocated and confirmed as cultural. Those isolates that were collected and those that could not be relocated are specifically described in the results section.

4.1.3 Laboratory and Cataloging Procedures

Cultural material recovered from the field will be separated into historic and prehistoric artifact categories, bagged and labeled by provenience, and taken to the laboratory for cleaning, analysis, and temporary curation. The procedures used in the initial processing of recovered material included the cleaning (as appropriate), sorting, and cataloging of all items. All materials were individually examined and cataloged according to class, type, and material under the direction of the Laboratory Director Ms. Carol Serr. All recovered items were counted, weighed on a digital scale and labeled as appropriate; dimensions for whole items were measured in centimeters. The attribute data were then entered into an Excel file that served as the master catalog from which analyses could be performed (Appendix E).

4.1.4 Disposition of Artifacts

All cultural material recovered during the testing and evaluation program have been temporarily curated at Laguna Mountain. This material will be transferred for final curation to the San Diego Archaeological Center (SDAC) or to a culturally affiliated tribal curation facility. Alternatively, the cultural material may be repatriated to a culturally affiliated tribe.

4.1.5 Native American Participation/Consultation

A sacred lands search was conducted by the Native American Heritage Commission on September 12, 2016 (Appendix F). It indicated that sites have been located within the APE that may be impacted by the project and provided a listing of Native American contacts to consult.

Tribal consultation per Assembly Bill 52 for the current project was initiated by the County of San Diego (County) on August 13, 2015. It included outreach and information requests to the Ipai Nation of Santa Ysabel (Santa Ysabel), the Viejas Band of Kumeyaay Indians (Viejas), and the Kwaaymii Laguna Band (Kwaaymii). A response from the Kwaaymii on August 16, 2015 declined further consultation, but requested monitoring. The County responded to the Kwaaymii that the project would be conditioned with Native American monitoring. Viejas responded on August 31, 2015 requesting additional information. On February 1, 2016, a meeting was held with Julie Hagen of Viejas and representatives of the County to discuss this project. No concerns were raised by Viejas at the meeting.

On September 7, 2016, a copy of the draft cultural resources technical report was forwarded to Viejas. Additional AB 52 tribal outreach was initiated on September 7, 2016 with the Barona Group of Capitan Grande Indians, the Campo Kumeyaay Nation, and the Sycuan Band of the Kumeyaay Nation. Barona requested formal consultation. The County met with Barona on March 3, 2017. Barona requested that the project be conditioned with monitoring. Viejas and Barona were advised that the project will be conditioned with monitoring. The Jamul Indian Village was contacted on April 4, 2017 pursuant to AB-52. No response has been received.

Both survey efforts included the participation of Mr. Frank Brown, a representative of the Viejas Band of Kumeyaay Indians who served as Native American monitor. The testing and evaluation program included the participation of Mr. Fred Tesam, a representative of the Viejas Band of Kumeyaay Indians who served as Native American monitor.

4.2 Results

4.2.1 Tribal Cultural Resources

No Tribal cultural resources have been identified as a result of the field survey and evaluation or through Native American consultation. A Sacred Lands check was conducted with the Native American Heritage Commission on September 12, 2016. The check indicated that sites that may be impacted by the project are located within the APE. The NAHC recommended contacting the Viejas Band of Kumeyaay Indians. See Section 4.1.5 for a discussion of tribal outreach.

4.2.2 2011 Survey and Field Check

A total of 26 cultural resources were updated or recorded during the 2011 survey, including two previously-recorded sites (CA-SDI-13652 and CA-SDI-17300) and 24 new archaeological resources (Table 4, Figure 7**)**. CA-SDI-13652 and CA-SDI-17300 were updated since a portion of the sites are currently located within the Project site and because of the importance to interested Native American groups, who requested the sites be re-visited. Two additional previously-recorded resources (CA-SDI-13609 and P-37-034482) are located outside of, but adjacent to, the Project APE. An isolate flake (P-37-032964) was recorded in 2011 but existed outside the APE in July 2015.

The 24 newly-recorded archaeological resources (CA-SDI-20797 through CA-SDI-20801, P-37-032955, P-37-032960 through P-37-032963, P-37-032965 through P-37-032976, P-37-034839 and P-37-034840) include four prehistoric sites, one historic-era site, two historic features, and 17 isolated artifacts. Resource locations are depicted on Figure 7 (in Appendix G). All newly-recorded resources were documented on appropriate DPR 523 forms and are included at the end of Appendix C.

Table 4. Cultural Resources Recorded/Updated During the 2011 Survey

Resource No.	Resource Type	Site Dimensions
CA-SDI-13652	Bedrock Milling, Habitation & Rock Shelter	300 m (N/S) x 550 m (E/W)
CA-SDI-17300	Habitation Site	79 m (N/S) x 225 m (E/W)
CA-SDI-20797	Lithic Scatter and Manos	25 m (N/S) x 34 m (E/W)
CA-SDI-20798	Historic Trough and Well	19 ft (N/S) x 29 ft (E/W)
CA-SDI-20799	Lithic Scatter and Manos	25 m (N/S) x 32 m (E/W)
CA-SDI-20800	Manos (5)	30 m (N/S) x 10 m (E/W)
CA-SDI-20801	Milling Station and Rock Shelter	50 m (N/S) x 170m (E/W)
P-37-034839	Historic Well Standpipe	–
P-37-034840	Historic Well Standpipe	–
P-37-032955	Isolate Sherd	–
P-37-032960	Isolate Mano	–
P-37-032961	Isolate Lithics	–
P-37-032962	Shell Scatter (of unknown origin)	–
P-37-032963	Isolate Historic Sherd	–
P-37-032965	Isolate Mano and Flake	–
P-37-032966	Isolate Mano	–
P-37-032967	Isolate Shell and Bone (modern?)	–
P-37-032968	Isolate Metate and Ceramic Sherd	–
P-37-032969	Isolate Core	–
P-37-032970	Isolate Mano	–
P-37-032971	Isolate Shell	–
P-37-032972	Isolate Mano	–
P-37-032973	Isolate Mano	–
P-37-032974	Isolate Manos	–
P-37-032975	Isolate Mano	–
P-37-032976	Isolate Flake	–

Figure 7
2011 Survey Results

Confidential Figure
Bound Separately in Appendix G

4.2.2.1 CA-SDI-13652

Site CA-SDI-13652 was re-examined as part of the current field effort because a portion of the site is currently located within the Project site and because of the site's importance to interested Native American groups, who requested the site be re-visited. The capped portion of the site remains largely intact and was mapped. Several artifacts, including lithics and ground stone, were noted on top of the capped portion of the site. The artifacts recorded by ASM in 2009, which resulted in the site boundary's southern and eastern expansion, could not be relocated; however heavy vegetation hindered ground visibility.

ESA also conducted a cursory investigation of the portion of the site north of Willow Road to determine current conditions of the site and adequacy of past site records. Surveyors noted numerous bedrock milling features and rock shelters. In addition, hundreds of ceramic sherds and pieces of debitage were observed. Many of the artifacts were piled on bedrock outcroppings, likely as a result of pot-hunting activities. One rock shelter contained a modern cushion and bucket. Past site records have noted the general constituents of the site; however, the site would benefit from more detailed documentation, including mapping of features and documentation of bedrock milling features on appropriate DPR 523 forms.

4.2.2.2 CA-SDI-17300

Site CA-SDI-17300 was re-examined as part of the field effort because of the site's importance to interested Native American groups, who requested the site be re-visited. Surveyors noted a covered excavation unit and evidence of past water screening activities. Wooden stakes were spaced throughout the site, possibly marking previous STPs. Heavy vegetation limited ground visibility, but ceramic fragments were observed in several locations. One fragment of fire-affected rock was noted south of the site boundary and may have eroded from the site. The site remains generally as described in the past.

4.2.2.3 CA-SDI-20797 (Helix-1)

CA-SDI-20797 is a prehistoric site consisting of five artifacts, including one flake, one core, two complete manos, one with possible pecking, and one mano fragment (Table 5). The site measures 25 m north-south by 34 m east-west and is located in the westernmost portion of the Project site. The site is located along a dirt access road just south of the riverbed. A riveted cast iron pipe is located nearby. Soils consist of light gray-brown coarse sandy silt.

Table 5. CA-SDI-20797 Artifacts

Item	Material	Groundstone Wear	Comments
Flake	Green-gray metavolcanic	–	–
Core	Black metavolcanic	–	–
Mano, complete	Gray granitic	Bifacial	Possible pecking
Mano, complete	Granitic	Bifacial	–
Mano, fragment	Pink granitic	Unifacial?	–

4.2.2.4 CA-SDI-20798 (Helix-2)

CA-SDI-20798 is a historic-era site consisting of a concrete block and cast iron watering trough, probable well, and two vertical metal poles. The concrete block structure measures about 15 feet long by 5 feet wide by 3 feet tall. The walls are about 6 inches thick. The concrete appeared to have been reinforced by rebar and barbed wire and the east wall of the trough was partially stuccoed. The trough is full of rusted barbed wire, sheet metal, rocks, red roof tiles, a colorless glass bottle and glass fragments. The glass bottle, which has a faceted shoulder, is embossed: "4/5 QUART" on the heel and "7592/ ROMA/WINES/ MG [slanted left] 4 on the base." Based on the Maywood Glass Company mark (MG), the bottle dates from 1930 to 1959 (Whitten 2011).

The possible well is located about 15 feet northwest of the northwest corner of the trough and was covered. It is composed of rusting cast iron metal and measures about 15 inches in diameter and 18 inches in height. One vertical metal pole was located just south of the trough and a second pole was located about 6 feet east of the southeast corner of the trough. Both poles measured about 6 inches in diameter and 4 feet in height. Ground visibility at the site was generally poor, due to heavy vegetation. Observed soils consist of light gray-brown sandy silt.

4.2.2.5 CA-SDI-20799 (Helix-3)

CA-SDI-20799 is a prehistoric site consisting of six artifacts. Observed artifacts include four granitic mano fragments and two metavolcanic flakes (Table 6). The site is located in a disturbed area, which appears to have been previously graded as evidenced by tractor marks and an artificial slope. The site measures about 25 m north-south by 32 m east-west and is adjacent to the riverbed. Ground visibility at the site was fair. Observed soils consist of light gray-brown sandy silt.

Table 6. CA-SDI-20799 Artifacts

Item	Material	Groundstone Wear	Approx. Measurements (L x W x T cm)
Mano, fragment	Gray coarse granitic	Unifacial	5 x 3 x 3
Mano, fragment	Pink coarse granitic	Bifacial	3 x 2 x 5
Mano, fragment	Gray coarse granitic	Unifacial	6 x 3 x 3
Mano, fragment	Pink coarse granitic	Unifacial	4 x 4 x 3
Flake	Green-gray-brown metavolcanic	–	3 x 2 x .05
Flake	Gray metavolcanic	–	2 x 1 x 0.5

4.2.2.6 CA-SDI-20800 (Helix-4)

CA-SDI-20800 is a prehistoric site consisting of five artifacts, including one complete mano and four mano fragments (Table 7). The site measures 30 m north-south by 10 m east-west, and is located about 90 m northwest of previously-recorded site CA-SDI-13609. CA-SDI-20800 is located in an area that appeared to have been previously graded as evidenced by artificial slopes. Ground visibility at the site was generally fair to poor, due to moderately heavy vegetation. Observed soils consist of light gray-brown sandy silt.

Table 7. CA-SDI-20800 Artifacts

Item	Material	Wear	Comments	Approx. Measurements (L x W x T cm)
Mano, complete	Gray coarse granitic	Unifacial	–	6 x 6 x 3
Mano, fragment	Gray coarse granitic	Unifacial	Possible pecking	5 x 4 x 4
Mano, fragment	Gray coarse granitic	Unifacial	–	3 x 4 x 5
Mano, fragment	Dark gray granitic	Unifacial	–	4 x 2 x 4
Mano, fragment	Pink coarse granitic	Bifacial	–	6 x 3 x 3

4.2.2.7 CA-SDI-20801 (Helix-5)

CA-SDI-20801 is a prehistoric site consisting of five bedrock milling features (Table 8), one rock shelter, and one ceramic fragment. The site measures about 50 m north-south by 170 m east-west. The rock shelter measures about 1.5 m wide at the mouth and extended about 2.5 m into the interior. Possible smoke staining was observed on the ceiling. The full extent of the site could not be determined due to the presence of a mountain lion.

Table 8. CA-SDI-20801 Features

Feature	Outcrop dimensions (N/S x E/W x H cm)	Milling Surfaces	Approx. Measurements (L x W x D cm)	Comments
BMF 1	136 x 178 x 45	Slick	22 x 24	–
		Possible Mortar	Undetermined	Filled with soil and obscured by vegetation
BMF 2	240 x 130 x 60	Slick	65 x 29	Connected to mortar
		Mortar	25 x 26 x 4	Filled with water
		Possible slick	15 x 10	–
BMF 3	130 x 225 x 137	Slick	30 x 44	–
BMF 4	60 x 40 x 16	Slick	15 x 10 x 1	–
BMF 5	10 x 230 x 110	Slick 1	30 x 30	South
		Slick 2	24 x 30	North

4.2.2.8 Isolates

A total of 18 isolated artifacts were documented during the 2011 survey, including lithics, ground stone, ceramic fragments, marine shell, and faunal bone (see Table 4 for a complete list).

4.2.2.9 Historic Built Environment Resources

Two historic-age wells were identified within the Project APE.

P-37-034839 (Well-1)

This well is located within the San Diego River bed, north of El Monte Road and south of Willow Road. The resource consists of the historic-era metal standpipe of a water well located along the northern edge of the riparian channel associated with the San Diego River in the El Monte Valley. The year this well was drilled is unknown. The pipe is made up of approximately 3 ft. long segments of riveted steel. The 24-inch diameter iron pipe appears very weathered. It stands approximately 15 ft. high. The height is

roughly equal to that of the nearby terrace. It is likely that this is a cased well that has been exposed to its current height by channel downcutting. A small vent or gauging pipe is welded on near the top of the larger casement.

P-37-034840 (Well-2)

Well 2 is located upstream from Well-1, also consisting of the historic metal standpipe of a water well. The year this well was drilled is unknown. The pipe is made up of approximately 3 ft. long segments of riveted steel. The 24-inch diameter iron pipe appears very weathered. It stands approximately 15 ft. high. The height is roughly equal to that of the nearby terrace. It is likely that this is a cased well that has been exposed to its current height by channel downcutting. A larger, 4-foot diameter pipe is welded on near the top, covering approximately 4/5 of the length of the inner pipe.

4.2.3 2015 Survey

The 2015 survey included five areas within the APE that had not been completely surveyed due to visibility and access restrictions. Survey results for each of the five areas are provided below (Figure 8):

1) San Diego Riverbed: This area was largely covered in thick riparian vegetation that included willow scrub, thick stands of tamarisk, sycamore, and dense seasonal grasses (Figure 9). The dense vegetation and leaf litter reduced much of the ground surface visibility in the San Diego River bed to 0 to 50 percent. One portion of the river bed located along the eastern boundary of the Project APE consisted of a series of east-west oriented gravel bars that lacked the thick vegetation encountered in the rest of the river bed. Vegetation on the gravel bars consisted of California buckwheat and beavertail cactus with sporadic stands of tamarisk (see Figure 9). In general, ground surface visibility within this portion of the river bed ranged from 75 to 100 percent. The portion of the river bed covered in thick riparian vegetation was subject to an opportunistic survey methodology, and the portion of the river bed dominated by the gravel bars was subject to a systematic pedestrian survey. A total of 12 cultural resources were documented or updated including: two prehistoric archaeological sites (CA-SDI-21862 and CA-SDI-21863); four historic period features (P-37-035816, and P-37-035818, and P-37-034839, and P-37-034840), and six prehistoric isolates (P-37-035821, through P-37-035826) (Table 9).

2) Large field located between Willow Road and the San Diego River: This area consisted of flat topography and was covered in thick seasonal grasses and tumble weeds, reducing ground surface visibility to zero percent within the southwestern half of the area (Figure 10). As such, this area was not subject to survey. The northeastern portion of the area appears to have been previously graded and the vegetation was less dense resulting in approximately 50 percent ground surface visibility (see Figure 10).

As such, only the northeastern portion was subject to systematic survey. A total of three cultural resources were documented or updated in this area including: two prehistoric isolates (P-37-035832 and –P-37-035833) and one previously recorded prehistoric archaeological site (CA-SDI-13652).

Figure 8
2015 Survey Results

Confidential Figure
Bound Separately in Appendix G

a. Thick Vegetation within San Diego River, Looking West

b. Gravel Bars within San Diego River, Looking East

Figure 9
San Diego River Survey Conditions

a. Thick Vegetation within Southwestern Portion of Large Field, Looking West

b. Vegetation within Northeastern Portion of Large Field, Looking West

Figure 10
Field Survey Conditions

Table 9. Cultural Resources Identified or Updated During the 2015 Survey

Resource No.	Resource Type	Site Dimensions
CA-SDI-13652	Bedrock Milling, Habitation and Rock Shelter	300 m (N/S) x 550 m (E/W)
P-37-035816	Historic-period feature – poured-concrete well foundation	–
CA-SDI-21861	Multi-component archaeological site – well standpipe and a secondary flake	–
P-37-035818	Historic-period feature – well stand pipe	–
CA-SDI-21862	Prehistoric archaeological site – sparse artifact scatter	86 m x 122 m
CA-SDI-21863	Prehistoric archaeological site – 2 flakes and 1 ceramic sherd	5 m x 7 m
P-37-034839	Historic Well Standpipe	–
P-37-034840	Historic Well Standpipe	–
P-37-035821	Prehistoric isolate – quartz secondary flake	–
P-37-035822	Prehistoric isolate – granitic mano	–
P-37-035823	Prehistoric isolate – FGMV primary flake	–
P-37-035824	Prehistoric isolate – FGMV secondary flake	–
P-37-035825	Prehistoric isolate – quartz secondary flake	–
P-37-035826	Prehistoric isolate – quartz leaf-shaped projectile point	–
P-37-035827	Prehistoric isolate – FGMV tertiary flake	–
P-37-035828	Prehistoric isolate – quartzite tertiary flake	–
P-37-035829	Prehistoric isolate – FGMV secondary flake	–
P-37-035830	Prehistoric isolate – FGMV primary flake	–
P-37-035831	Prehistoric isolate – 1 FGMV secondary flake and 1 FGMV hammerstone	–
P-37-035832	Prehistoric isolate – FGMV end-scraper	–
P-37-035833	Prehistoric isolate – 1 granitic groundstone and 1 FGMV tertiary flake	–

FGMV = fine-grained metavolcanic stone

3) Smaller field located south of the San Diego River bed: This area consisted of flat topography and was covered with seasonal grasses resulting in 50 to 75 percent ground surface visibility (Figure 11). A systematic survey of the field was conducted. A total of five cultural resources were documented including: one multi-component archaeological site (CA-SDI-21861) and four prehistoric isolates (P-37-035827, P-37-035828, P-37-035829, and P-37-035831).

4) Environmentally Sensitive Area: This area is located amongst a stand of eucalyptus and pepper trees and was covered with seasonal grasses that reduced ground surface visibility to 25 to 50 percent (see Figure 11). The area was systematically surveyed. One prehistoric isolate (P-37-035830) was documented.

5) Previously excavated pit: This area was irregularly shaped and was approximately 60 feet deep with steep slopes covered in seasonal grasses (Figure 12). Due to the previous disturbance and the steep slopes, this area was subject to a reconnaissance-level survey wherein the sidewalls of the pit were examined to see if any stratigraphy was visible. No stratigraphy was visible due to the seasonal grasses and no cultural resources were documented.

Figure 11
Small Field and ESA Survey Conditions

Confidential Figure
Bound Separately in Appendix G

Figure 12
Previously Excavated Pit Survey Conditions, Looking Northeast

A total of 21 cultural resources were documented or updated as a result of the survey (see Figure 8; see Table 9) including three prehistoric archaeological sites (CA-SDI-13652, CA-SDI-21862, and CA-SDI-21863), four historic-period features (P-37-034839, P-37-034840, P-37-035816 and P-37-035818), one multi-component site (CA-SDI-21861) and 13 prehistoric isolates (P-37-035821, through P-37-03833). Each of these resources is described in more detail below.

4.2.3.1 Previously Recorded Resources

CA-SDI-13652

Resource CA-SDI-13652 is a prehistoric archaeological site that was originally recorded in 1993 as a late period occupation site consisting of ceramic, lithic, and groundstone artifacts, as well as bedrock milling features (Pigniolo et al. 1993). In 2003, a portion of the site located within the Project APE was capped as a means of protection and preservation. During the 2015 survey, one quartzite scraper measuring 5.5 cm long by 3.6 cm wide by 1.2 cm thick was documented on the capped portion of the site (Figure 13).

a. Scraping Tool Found within Site CA-SDI-13652

b. Overview of P-37-034839, Looking Northeast

Figure 13
Resources CA-SDI-13652 and P-37-034839

P-37-034839 (Well-1)

This resource is a historic-period feature consisting of a 24-inch diameter well standpipe composed of 3-foot long segments of steel riveted together originally documented by Pigniolo in July 2015 (Pigniolo 2015a) (Figure 13). The feature was relocated as part of the current survey effort within the San Diego River bed and was found to be as previously recorded.

P-37-034840 (Well-2)

This resource is a historic-period feature consisting of a 24-inch diameter well standpipe composed of 3-foot long segments of steel riveted together originally documented by Pigniolo in July 2015 (Pigniolo 2015b). The feature was relocated as part of the current survey effort within the San Diego River bed and was found to be as previously recorded.

4.2.3.2 Newly Recorded Resources

Archaeological Sites

P-37-035816 (ElMonte-MDV-001-H)

P-37-035816 is a historic-period feature consisting of a poured concrete well pad with a capped bore hole within its eastern half (Figure 14). The concrete pad measures 6.7 feet long (east-west) by 5 feet wide (north-south) by 0.5 feet in height. The capped well boring is 2.67 feet in diameter. The feature does not have any diagnostic markings, nor are there diagnostic artifacts associated with it. The feature does not appear on historic aerial photographs or topographic maps (historicaerials.com 2015). The resource is located on the northern terrace of the San Diego River bed, south of Willow Road.

CA-SDI-21861 (ElMonte-MDV-003-M)

This resource is a multi-component site that consists of one historic-period well stand pipe and one fine-grained metavolcanic (FGMV) secondary flake. The well pipe is composed of sections of sheet metal riveted together and is 1.7 feet in diameter by 7.5 inches tall. The FGMV secondary flake is located approximately 12 feet west of the well stand pipe and has dimensions of 4.3 cm long by 3.1 cm wide by 1.2 cm thick. The resource is located within a field located south of the San Diego River bed.

P-37-035818 (ElMonte-MDV-004-H)

This is a historic-period feature consisting of a well stand pipe composed of sections of sheet metal riveted together (see Figure 13). The feature has a circumference of approximately 4.5 feet and stands approximately 5.28 feet tall. The top section of the stand pipe is welded to the lower section. The feature is located on the northern levee of the San Diego River.

CA-SDI-21862 (ElMonte-MDV-006-P)

CA-SDI-21862 is a prehistoric archaeological site consisting of a sparse artifact scatter located amongst a number of east-west oriented gravel swales within the San Diego River bed (Figure 15). The site has measures 122 m (northeast-southwest) by 86 m (northwest-southeast). The northern terrace of the river that overlooks the site was inspected for the presence of artifacts in order to determine whether the site

a. Overview of P-37-035816, Looking Northwest

b. Overview of P-37-035818, Looking North

Figure 14
Resources P-37-035816 and P-37-035818

a. Overview of P-37-035826, Looking Southeast

b. Overview of P-37-035827, Looking South

Figure 15
Resources P-37-035826 and P-37-035827

constituents eroded into the river bed from the terrace; however, no artifacts were noted on the terrace. As such, the artifacts may represent an in-situ site. A total of 16 artifacts were recorded and include: 10 ceramic body sherds, 3 FGMV tertiary flakes; 1 rhyolitic tertiary flake; 1 rhyolitic primary flake; and 1 volcanic unifacial mano. One of the ceramic sherds exhibits a faint diamond pattern on its exterior.

CA-SDI-21863 (ElMonte-MDV-007-P)

The resource is a small prehistoric archaeological site consisting of three artifacts located adjacent to a horse trail amongst a tamarisk grove within the San Diego River bed (see Figure 15). The site has dimensions of approximately 7 m (northwest-southeast) by 5 m (northeast-southwest). Artifacts include 1 ceramic body sherd with fine quartz temper, 1 FGMV secondary flake, and 1 FGMV pressure flake.

Isolates

P-37-035821 (ElMonte-MDV-ISO-001-P)

This is a prehistoric isolate consisting of a quartz secondary flake with dimensions of 3.2 cm long by 2.6 cm wide by 0.7 cm thick. The isolate was located along a horse trail within the San Diego River bed.

P-37-035822 (ElMonte-MDV-IS0-002-P)

This prehistoric isolate is a granitic unifacial mano measuring 10.9 cm long by 7.8 cm wide by 8.6 cm thick. The isolate was located on a sandy swale amongst a stand of tamarisk within the San Diego River bed.

P-37-035823 (ElMonte-MDV-ISO-003-P)

The prehistoric isolate consists of a FGMV primary flake with dimensions of 6.0 cm long by 3.0 cm wide by 3.0 cm thick. The isolate was located on the north levee of the San Diego River.

P-37-035824 (ElMonte-MDV-ISO-004-P)

This is a prehistoric FGMV secondary flake measuring 3.6 cm long by 3.0 cm wide by 0.9 cm thick. The isolate was located along the margin of a horse trail within the San Diego River bed.

P-37-035825 (ElMonte-MDV-ISO-005-P)

This prehistoric isolate consists of a quartz secondary flake with dimensions of 3.7 cm long by 3.1 cm wide by 1.9 cm thick. The flake was located along a horse trail within the San Diego River bed.

P-37-035826 (ElMonte-MDV-ISO-006-P)

The prehistoric isolate consists of a quartz leaf-shaped projectile point with dimensions of 4.2 cm long by 1.9 cm wide by 0.8 cm thick. The resource was located in a sandy clearing within the San Diego River bed.

P-37-035827 (ElMonte-MDV-ISO-007-P)

This prehistoric isolate is a FGMV tertiary flake with dimensions of 3.9 cm long by 2.4 cm wide by 1.0 cm thick. The resource was located in a field immediately south of the San Diego River bed.

P-37-035828 (ElMonte-MDV-ISO-008-P)

The resource is a prehistoric isolate that consists of a quartzite tertiary flake with dimensions of 5.1 cm long by 3.2 cm wide by 1.7 cm thick. The resource was located in a field immediately south of the San Diego River bed.

P-37-035829 (ElMonte-MDV-ISO-009-P)

This isolate is a prehistoric FGMV secondary flake with dimensions of 3.7 cm long by 3.1 cm wide by 1.9 cm thick. The resource was located in a field immediately south of the San Diego River bed.

P-37-035830 (ElMonte-MDV-ISO-010-P)

This prehistoric isolate consists of a FGMV primary flake with dimensions of 5.7 cm long by 5.3 cm wide by 2.3 cm thick. The resource was found amongst a stand of eucalyptus and pepper trees immediately north of El Monte Road.

P-37-035831 (ElMonte-MDV-ISO-011-P)

This prehistoric isolate consists of one FGMV secondary flake with dimensions of 6.0 cm long by 4.1 cm wide by 1.2 cm thick and one FGMV hammerstone fragment measuring of 4.7 cm long by 2.5 cm wide by 2.1 cm thick. The resource was located in a field immediately south of the San Diego River bed.

P-37-035832 (ElMonte-MDV-ISO-012-P)

P-37-035832 is a prehistoric isolate that consists of a FGMV end-scraper with dimensions of 3.5 cm long by 3.2 cm wide by 1.5 cm thick. The resource was located along a horse trail on the northern terrace overlooking the San Diego River bed.

P-37-035833 (ElMonte-MDV-ISO-014-P)

The isolate is a prehistoric groundstone implement and one FGMV tertiary flake. The groundstone has a circumference of 38 cm, and it has a ground concavity of 3 cm in diameter by 1 cm deep. The FGMV tertiary flake measures 3.6 cm long by 3.4 cm wide by 1.2 cm thick. These items were located in a field north of the San Diego River bed that has been highly disturbed by previous grading activities.

4.2.4 Testing and Boundary Determination Program

Testing at resources CA-SDI-13652, CA-SDI-20798, CA-SDI-21861, and P-37-035818 included development of a research design. The research design includes appropriate research questions for these sites. Testing included detailed site mapping and feature documentation, historic archival research, surface collection of artifacts, subsurface boundary determination and excavation, and analysis.

Testing was conducted at resources CA-SDI-20798, CA-SDI-21861, and P-37-035818 and a boundary determination was conducted at CA-SDI-13652 between May 27 and June 2, 2016. Isolates within the project impact area were also collected when they could be relocated.

4.2.4.1 Historic Resource Evaluation

Further information was recovered through documentation from historic resources CA-SDI-20798, CA-SDI-21861, and P-37-035818 during testing.

CA-SDI-20798

CA-SDI-20798 was revisited during the testing and evaluation program and additional documentation was conducted. This resource is a historic-era site consisting of a concrete block watering trough, a well standpipe, and two associated vertical metal poles (Figure 16). The 14.3 feet long, 3.8 feet wide trough structure is oriented at a 45-degree angle to cardinal directions, making it more difficult to indicate the sides by direction (Figure 17). The trough length is oriented northwest to southeast.

The concrete block trough is almost 3 feet tall including a cap of 2-inch thick rounded concrete rim above seven-plus courses of block; at least one course is half buried. The walls are 5.5 inches thick and the blocks appear to be hollow but were filled with concrete during construction. The concrete blocks were reinforced with rebar, and barbed wire was used inside the added rim top. The exterior northeast wall was partially stuccoed. Remnants of stucco are also present on the "east" end and a small portion of the adjacent southeast corner. Yellow and orange lichen varieties are growing on the concrete structure suggesting some age.

Two 4.5-inch diameter steel pipes exist at each end of the trough and are filled with concrete. These pipes have 3/16-inch thick walls and vary in height from 4 to 4.5 feet tall. There is a 1.25-inch diameter horizontal supportive pipe welded to each upright pipe that extends across the length of the trough 4 feet above the trough floor. For some reason, the shorter pipe at the northwest end was positioned 4 inches away from the trough wall, while the southern pipe abuts the outer wall.

In the center of the trough is a concrete-coated 3-inch diameter vertical metal pipe that abuts the base of the horizontal pipe (Figure 18). The upper 17 inches of this pipe are bare, but then the pipe becomes incased in an 8-inch diameter concrete "collar" that constricts 2 inches below for 5 inches (vertically) then expands back to an 8-inch cylinder surrounding the pipe. The function of this element inside the trough is unknown.

For an unknown reason, three blocks, spaced one block apart and beginning three blocks down from the rim, extend out 2.5 inches on the southwest end. A single block on the northwest end also juts out, but from the top course of blocks. Another puzzling feature at this site is the function of two other 4.5-inch diameter concrete-filled steel pipes existing 7 feet from the ends of the trough. The southern pipe is oriented along the length of the trough, while the northern pipe exists northeast of the northern pipe at the trough, perpendicular to the trough length. Each of these nearly 5-foot tall pipes has segments of 2-inch diameter threaded pipe welded on one side near the top and bottom. It appears that a full length of pipe was attached and then the mid-portion was cut off as well as a portion of the pipe side. Perhaps a pivoting rod was used to form some sort of fence, but no attachment to the pipes adjacent to the trough is present.

a. Overview of Site, Looking North. Well Stand Pipe at Left (PR-05430-040)

b. Overview of Trough with Well in Background, Looking West (PR-05430-046)

Figure 16
Views of CA-SDI-20798

Figure 17
CA-SDI-20798 Site Map

Confidential Figure
Bound Separately in Appendix G

a. View of Trough Showing Center Pipe, Looking West (PR-05430-043)

b. Close-up of Concrete Encased Trough Pipe, Looking West (PR-05430-048)

Figure 18
Views of CA-SDI-20798 Trough Pipe

The trough interior was filled with rusted barbed wire, sheet metal, rocks, terra cotta hollow block fragments, and glass fragments. The glass bottle was not present within the trough during re-examination of the site but was recorded to have facets on the shoulder and lower neck portion. Embossing on the heel portion read "4/5 QUART" twice, and the base was marked "7592" over "ROMA/WINES" with the maker's mark of "MG" [slanted left] at left and "4" at right, below. This Maywood Glass Company mark was used from 1930 to 1959 (Whitten 2011). Additional research on the internet revealed advertisements for bottles matching this shape with faceted shoulders that were introduced in late 1953, and purported to be dripless bottles - due to a "Magic Top" (a plastic insert in the bore). So the discard of this bottle was in the mid-1950s suggesting the construction of the trough predates this item.

A 1.4 foot diameter sheet metal well stand-pipe is located 13 feet west of the northwest corner of the trough. The 1.5 foot tall pipe is covered with a tack welded on lid with handmade handles that include bolts and nuts. Ground visibility at the site was generally poor, due to heavy vegetation. Observed soils consist of light, gray-brown sandy silt. Numerous rodent burrows were present including large holes at both ends of the trough. Most of the vegetation is non-native herbs and grasses.

CA-SDI-21861

This resource was recorded as a multi-component site that consists of a historic-age well stand pipe and a prehistoric artifact. During the evaluation program the site was revisited. The site is situated on a low mound some 60 feet west of a north/south oriented dirt track and south of the San Diego River channel. The mound area may be the result of soil movement for agricultural activity. Cultural material within the site area included two pieces of glass and a possible piece of metavolcanic (FGMV) debitage (Figure 19).

Non-local gravel was also present in the area and the flake may be associated with this gravel. The 14.5-inch diameter well pipe is composed of curved sections of sheet metal riveted together (Figure 20). Since the site was initially recorded, an 1/8-inch thick flat circular sheet metal lid has been tack-welded onto the top of pipe to cap it. The upper portion of the pipe was trimmed with a cutting torch to create a flat surface for the cap, so the adjusted height is now only 6 inches high from the ground surface (on the north side). The lid has a 3 1/8-inch diameter hole in the center.

A small non-local volcanic boulder is present roughly 8 feet west of the stand pipe. The original site form recorded a flake in this general area, but an intensive search of a 6-foot wide radius failed to relocate the secondary flake. A 1/16-inch thick piece of colorless patinated window glass was found within 1 foot of the south side of the boulder, however. Additionally, a 3/8-inch thick base fragment of an olive green alcohol bottle was found 12 inches north of the well pipe near the base of a metal fence post stake that has been bent over since the original site photographs were taken. It is unknown if these glass items are associated with the well use but neither fragment appears water-tumbled so it would seem unlikely that they were deposited during a flooding event of the river channel. A redwood stake is present about 6 inches west of the metal post and other pieces of old milled lumber have been partially exposed. A hard patch of tar-like substance abuts the pipe at the southeast edge.

A few inches northwest of the boulder, a possible flake fragment was found. It lacks a platform portion, has an uncertain dorsal scar, and there is no cortex present. The black volcanic material has irregular white veins throughout. It was collected because its measurements are similar to the recorded flake. It measures 4 cm long by 3.5 cm wide and is 0.8 cm thick. Most of the vegetation is non-native grasses and herbs.

Figure 19
CA-SDI-21861 Site Map

Confidential Figure
Bound Separately in Appendix G

a. Overview of Site, Looking West.
Pinflags at Sides of Boulder Mark Window Glass and Debitage Locations (PR-05430-001)

b. Overview of Site, Looking North (PR-05430-004)

Figure 20
Views of CA-SDI-21861

This is a historic-period feature consisting of a well stand pipe composed of curved sections of 1/4-inch thick sheet metal welded together (Figure 21). The 16.5-inch diameter pipe stands midway up the bank on the north side of the San Diego River levee (see Figure 21). The pipe height from the west side is 59 inches above ground surface. The pipe is comprised of a lower portion and a welded on 16.5-inch tall upper section that was aligned 1/2-inch off the alignment of the vertical seam of the lower portion. An 1/8-inch thick cap is tack-welded to the top of the pipe with a 4-inch tall, 2-inch diameter threaded pipe welded in the center topped by a 1/4-inch tall galvanized cap (Figure 22).

A 2 1/8 inch wide by 5 inch long hole was torch cut out of the northwest side, the lower end abutting the horizontal weld attaching the two sections of pipe. Two 3.5-4 inch long gashes are present on the south side of the lower section (see Figure 22). A 4-inch long, 2-inch wide outward bulge with a 1/2-inch wide opening is 9 inches below the horizontal weld, and a 3.5-inch long 2-inch wide outward bulge exists 12.2 inches below the weld, with an opening of less than 1/2-inch wide. How these holes were created is uncertain since they appear to be "pushed" out from the interior.

No artifacts were observed in association with the stand pipe. Vegetation consists of non-native grasses and herbs with riparian vegetation along the river channel to the south.

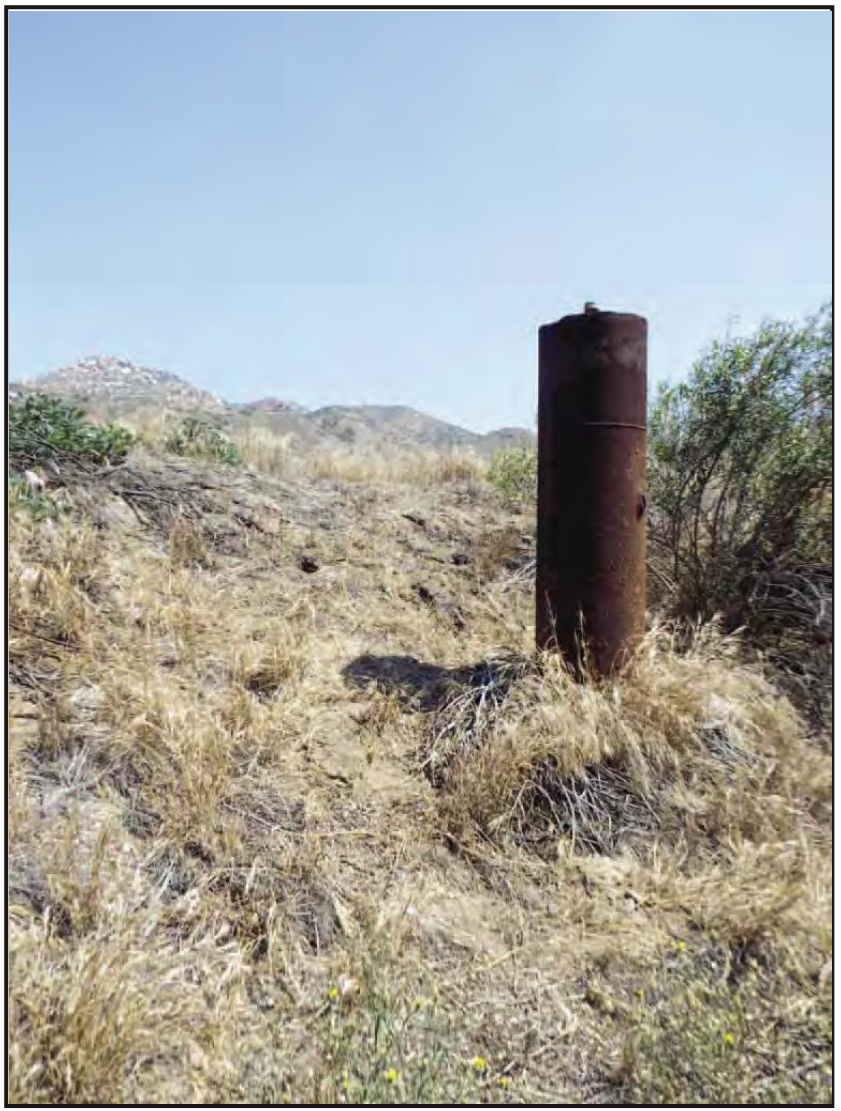
4.2.4.2 CA-SDI-13652 Boundary Delineation

Testing was conducted in the portion of CA-SDI-13652 that had been added to the southern site boundary (Garcia-Herbst et al. 2010:228). The surface artifacts that were used to expand the site boundaries consisted of two granitic ground stone fragments and two fine-grained metavolcanic flakes (Williams 2009:1-3). These surface artifacts were not relocated during the 2015 resurvey of the area or during the testing and evaluation program.

Testing within the expanded boundary of CA-SDI-13652 included the excavation of 20 STPs and 10 backhoe trenches (Figure 23). STP excavation resulted in the recovery of no prehistoric artifacts anywhere within the expanded site boundary. Recent intrusive material was very sparse. Soils were dominated by coarse to fine sands suggesting moderate to high energy fluvial deposits. Very limited evidence of soil development was present suggesting that the soils represented fairly recent deposits that may be historic in age.

Test trenching also failed to recover any prehistoric material associated with the site. Sediments exposed during trenching were consistent with the STP results. Sediments were dominated by moderate energy river deposits. They included massive to finely bedded sands and some small cobble lenses. Some of the deposits were cross bedded showing shifts in flow direction and channel slopes. In at least two areas poorly developed buried soils were present. These appeared to represent silty sand deposits with mottled oxidation representing seasonal or ephemeral lower energy sediment deposits representing temporary wetland environments. No associated cultural material was present in these soils and again the oxidation suggests they were not upland environments.

a. View of Stand Pipe, Looking South-Southwest (PR-05430-020)



b. View of Stand Pipe, Looking Northeast (PR-05430-027)

Figure 21
Views of P-37-035818

a. Torch Cut Hole in North Side of Pipe, Looking South (PR-05430-022)

b. Close-up of Gashes in Pipe, Looking Northeast (PR-05430-023)

Figure 22
P-37-035818 Pipe Features

Figure 23
CA-SDI-13652 Test Locations

Confidential Figure
Bound Separately in Appendix G

Figure 24a shows the east wall of Trench 2 showing sand strata and the buried soil. Figure 24b shows the west side of Trench 1 with cross bedded sands. Testing results, combined with previous geotechnical studies and the valley geomorphology, all suggest that CA-SDI-13652 does not extend further south of the capped site boundary. A rocky ridgeline protrudes into the river channel on the north end of the site. River flow moving downstream would likely be deflected southward by this promontory resulting in a more protected and stable terrace down stream. The capped site area fits into this area downstream of the promontory. The boundary as expanded by (Garcia-Herbst et al. 2010) extends into an area unprotected from down river flow. Sediments identified during testing in this area support generally consistent moderate energy river flow in this area and a lack of a stable surface for prehistoric settlement.

Testing determined that site CA-SDI-13652 does not extend into the project impact area and will not be directly affected by this project. Artifacts identified by Garcia-Herbst et al. (2010) in this area probably represent isolated items of secondary origin that were transported in historic-era or recent flood events.

4.2.4.3 Isolate Recovery

Isolates that were recorded within the final APE include P-37-032964 through P-37-32968, and P-37-035827 through P-37-035833. During the testing and evaluation program, these were collected when they could be relocated and confirmed as cultural artifacts. Heavy bioturbation and vegetation cover resulted in some of these artifacts not being relocated. Additionally some of the isolates were reevaluated as non-cultural items. Isolates identified during previous phases of the project which now fall outside the APE were not collected. Previously recorded isolates that were collected include: P-37-032965, P-37-032967, and P-37-035833. . Changing surface conditions also allowed for the identification and recovery of three previously unrecorded isolates (P-37-035877 through P-37-035879).

P-37-032964

This isolate was not possible to relocate based on current conditions. It is likely that this item was buried by more recent rodent bioturbation.

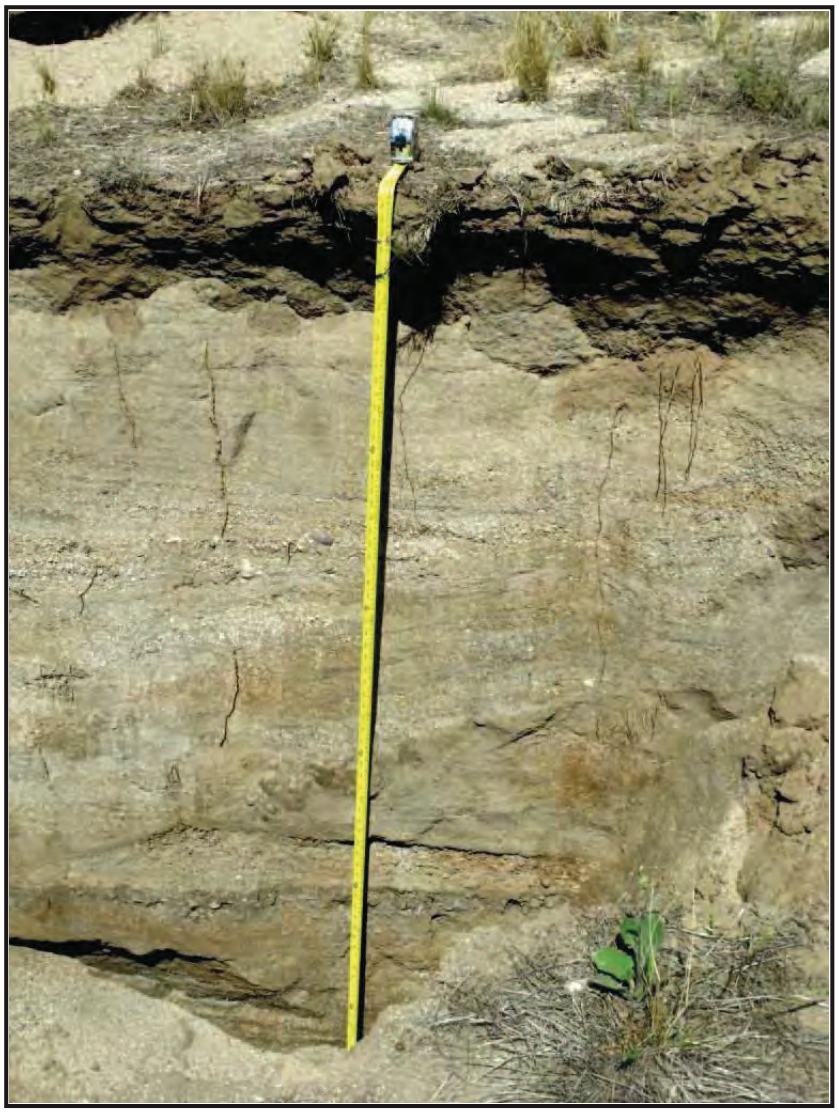
P-37-032965

The isolate was recorded as a mano and a flake. Examination of the recorded area and a surrounding 5-meter radius failed to relocate any cobble that served as a grinding tool. Several cobbles were present, but none showed evidence of cultural modification. A large, light blue-gray chunk of porphyritic volcanic rock was found at the location. One 4 cm long, 60-degree angled margin has a few 3-cm long flakes removed, suggesting initial trimming of the piece had been performed, perhaps to serve as a scraping tool. No use-wear is evident indicating modification was abandoned prior to actual use. Other minor nicks on an opposite margin are probably from tumbling action in a stream environment. Based on the size of the previously described flake, this is likely to be the item previously recorded.

P-37-032966

This isolate was recorded as a mano fragment. The only cobble found at the GPS coordinates recorded for this artifact is a fragment of a natural cobble exhibiting no grinding wear. One edge and both faces are actually concave so could not have served as a grinding tool.

a. East Wall of Trench 2 (PR-05440-041)



b. West Wall of Trench 1 (PR-05440-057)

Figure 24
CA-SDI-13652 Trench Wall Profiles

P-37-032967

The isolate was recorded as a piece of marine shell and animal bone, possibly of modern origin rather than prehistoric. Examination of the recorded area failed to relocate any shell. A badly surface-weathered, partially buried large mammal bone was collected. This bone is non-human and based on associated surface refuse appears to be modern in origin.

P-37-032968

This isolate was recorded as a mano and a single ceramic sherd. Surface visibility in the area was good, but the isolate could not be relocated. Changing conditions and bioturbation may explain the lack of recovery.

P-37-035827 (ElMonte-MDV-ISO-007-P)

This prehistoric isolate could not be relocated as previously recorded. Surface visibility in area was moderate, but again bioturbation may have changed current conditions. The only item found at the location of this recorded isolate is a coarsely porphyritic volcanic piece of stone that lacks diagnostic flake characteristics. The measurements of the recovered item do not compare well with the original recorded flake and they probably represent different items. A newly discovered isolate, P-37-035877, was located, recorded, and collected to the southeast of this location, but does not match the previous description.

P-37-035828 (ElMonte-MDV-ISO-008-P)

The resource is a prehistoric isolate that was recorded as a quartzite tertiary flake. Surface visibility in the location of the isolate was good. Intensive resurvey of the area failed to relocate any quartzite material in the area or any item matching the previous description. An isolate prehistoric ceramic sherd, P-37-035878, was located and recovered within meters of the original location of the isolate however.

P-37-035829 (ElMonte-MDV-ISO-009-P)

This isolate was initially recorded as a prehistoric secondary flake. Surface visibility in the area was moderate, but the isolate could not be relocated. Changing conditions and bioturbation may explain its lack of recovery.

P-37-035830 (ElMonte-MDV-ISO-010-P)

This isolate was initially recorded as a prehistoric primary flake. Surface visibility in the area was moderate, but the isolate could not be relocated. Changing conditions and bioturbation may explain its lack of recovery.

P-37-035831 (ElMonte-MDV-ISO-011-P)

This prehistoric isolate was recorded as a volcanic secondary flake and a volcanic hammerstone fragment. Surface visibility in the area was moderate, but the isolate could not be relocated. Changing conditions and bioturbation may explain its lack of recovery.

P-37-035832 (ElMonte-MDV-ISO-012-P)

P-37-035832 was a prehistoric isolate that consists of a FGMV end-scraper. The resource was noted as being located along a horse trail. The isolate location and horse trail were relocated, but the item has either been collected or covered by soil in this highly eroded and active area.

P-37-035833 (ElMonte-MDV-ISO-014-P)

The isolate was recorded as a prehistoric groundstone implement and one volcanic tertiary flake. Surface visibility in the area was good, but the isolate could not be relocated. Since the description of the groundstone implement noted "it has a ground concavity of 3 cm in diameter by 1 cm deep" it was presumed to be a metate or grinding base. Intensive examination of the recorded isolate area in the previously graded field north of the San Diego River failed to relocate any type of grinding implement or any cobbles suitable for such use.

A distal flake fragment of black porphyritic volcanic stone was found that lacks cortex as noted on the initial recorded flake, but the dimensions do not match the original definition. Instead, the recovered fragment measures 4 cm long by 3.2 cm wide and 0.9 cm thick.

4.2.4.4 Newly Identified Isolates

P-37-035877 (ELM-I-1)

This artifact is a Santiago Peak Volcanic flake. It was located more than 30 m southeast of the location of previously recorded P-37-035827. The artifact is a small distal flake fragment of aphanitic Santiago Peak Volcanic stone lacking cortex. Dimensions of the dark charcoal gray flake measure 2 cm long by 1.5 cm wide and 0.4 cm thick. The flake surface appears somewhat water-tumbled, more so on the ventral surface, which would not be unusual for debitage found in a river channel. The dorsal side still exhibits flake scars and ripples that indicate the certainty of this being a man-made flake.

P-37-035878* (*ELM-I-2)

This artifact is an isolated prehistoric Tizon Brown Ware ceramic body sherd. It was located and collected within meters of the location of previously recorded P-37-035827. The 0.4-cm thick sherd exhibits coarse quartz temper and measures 1.9 cm wide by 2.2 cm long. A slight reddish surface is present on part of the interior surface.

P-37-035879* (*ELM-I-3)

This isolate consists of a mano and a single historic ceramic sherd. It was located while searching for isolate P-37-032968. The well-shaped bifacial granitic mano measures 13.1 cm long by 10.8 cm wide and 4.7 cm thick at the thickest end, 4.2 cm thick at the opposite end. The well-worn, nearly flat grinding surfaces had both been pecked to resharpen the surface prior to the last usage.

A base fragment of a small Japanese Export ware porcelain plate has the dark blue transfer print that is heavily dulled from weathering related to water tumbling of the upper surface. The design is the popular Phoenix Bird pattern. The fragment has the wavy line tail portion mostly within the flat surface of the center portion of the possibly 7-inch plate. It is likely that both of these items represent secondary flood deposited isolates.

4.2.5 Results Summary for the Current Project APE

The two previous surveys described in this report covered both portions of a larger APE and portions, but not the complete current project APE. The current project APE includes a total of 6 archaeological sites, 6 historic age features, and 29 isolated cultural resources (Figure 25, Table 10). A total of 41 cultural resources are present within the project APE. Sites CA-SDI-20797, CA-SDI-20801, and isolates P-37-032955, and P-37-032960 through P-37-032963 were identified during the initial survey for the project, but due to changes in the project APE boundaries these resources are not within the final project APE and are not analyzed further. Archaeological resources within the APE include 2 prehistoric habitation sites (CA-SDI-13652 and CA-SDI-17300) and 4 prehistoric artifact scatters (CA-SDI-20799, CA-SDI-20800, CA-SDI-21862, and CA-SDI-21863). The six historic age features all appear to be related to water procurement and use. Each includes a well or well standpipe. The 29 isolated cultural resources are dominated by prehistoric artifacts. In addition, there are two cultural resources (CA-SDI-13609 and P-37-034482) located directly adjacent to the project APE. These resources include a prehistoric bedrock milling site and a historic-age pump station respectively.

With the exception of site CA-SDI-13652, none of these resources are significant under the County Resource Protection Ordinance (RPO). However, any sites not tested are assumed RPO significant. These would include sites CA-SDI-13609, CA-SDI-20799, CA-SDI-20800, CA-SDI-21862, CA-SDI-21863, P-37-034482, P-37-034839, P-37-034840, and P-37-035816. This includes sites within and adjacent to the APE.

Based on the current testing program, sites CA-SDI-20798, CA-SDI-21861, and P-37-035818 do not qualify as cultural resources eligible for nomination to the California Register. Isolates P-37-032964 through P-37-32968, P-37-035827 through P-37-035833, and P-37-035877 through P-37-035879 were collected where possible, and do not qualify as significant cultural resources pursuant to CEQA. Testing determined that site CA-SDI-13652 does not extend into the project impact area and will not be directly affected by this project. Based on the results of the survey and testing program no significant cultural resources will be directly affected by the proposed project. There is moderate potential for the presence of previously unknown, buried archaeological resources within the Project APE.

Figure 25
Project APE and Associated Cultural Resources

Confidential Figure
Bound Separately in Appendix G

Table 10. Cultural Resources within and Adjacent to the Current Project APE

Resource No.	Resource Type	Site Dimensions
CA-SDI-13609†	Bedrock Milling Station	4 m (N/S) x 4 m (E/W)
CA-SDI-13652	Bedrock Milling, Habitation & Rock Shelter	300 m (N/S) x 550 m (E/W)
CA-SDI-17300	Habitation Site	79 m (N/S) x 225 m (E/W)
CA-SDI-20798	Historic Trough and Well	19 ft. (N/S) x 29 ft. (E/W)
CA-SDI-20799	Lithic Scatter and Manos	25 m (N/S) x 32 m (E/W)
CA-SDI-20800	Manos (5)	30 m (N/S) x 10 m (E/W)
CA-SDI-21861	Multi-component Site: Well Standpipe and Flake	5 ft. (N/S) x 14 ft. (E/W)
CA-SDI-21862	Sparse Artifact Scatter	86 m x 122 m
CA-SDI-21863	Prehistoric Site (2 flakes and 1 ceramic sherd)	5 m x 7 m
P-37-035816	Historic Concrete Well Foundation	–
P-37-035818	Historic Well Standpipe	–
P-37-034839	Historic Well Standpipe	3 m (N/S) x 3 m (E/W)
P-37-034840	Historic Well Standpipe	3 m (N/S) x 3 m (E/W)
P-37-034482†	Historic Pump Station	NA
P-37-032964	Isolate Flake	–
P-37-032965	Isolate Mano and Flake	–
P-37-032966	Isolate Mano	–
P-37-032967	Isolate Shell and Bone (modern?)	–
P-37-032968	Isolate Metate and Ceramic Sherd	–
P-37-032969	Isolate Core	–
P-37-032970	Isolate Mano	–
P-37-032971	Isolate Shell	–
P-37-032972	Isolate Mano	–
P-37-032973	Isolate Mano	–
P-37-032974	Isolate Manos	–
P-37-032975	Isolate Mano	–
P-37-032976	Isolate Flake	–
P-37-035821	Isolate Flake	–
P-37-035822	Isolate Mano	–
P-37-035823	Isolate Flake	–
P-37-035824	Isolate Flake	–
P-37-035825	Isolate Flake	–
P-37-035826	Isolate Projectile Point	–
P-37-035827	Isolate Flake	–
P-37-035828	Isolate Flake	–
P-37-035829	Isolate Flake	–
P-37-035830	Isolate Flake	–
P-37-035831	Isolate Flake and Hammerstone	–
P-37-035832	Isolate Scraper	–
P-37-035833	Isolate Groundstone and Flake	–
P-37-035877	Isolate Flake	–
P-37-035878	Ceramic Sherd	–
P-37-035879	Isolate Metate and Historic Ceramic Sherd	–

† Indicates site located adjacent to current APE (within 50 feet of the APE)

5.0 INTERPRETATION OF RESOURCE IMPORTANCE AND IMPACT IDENTIFICATION

5.1 Resource Importance

A total of 43 cultural resources were identified during the records search and surveys as being either within or adjacent to the Project APE (see Figure 25). Initial surveys for the Project identified additional resources, but these do not occur in the final project APE and are excluded from the following analysis. Seven of the resources in the current APE are prehistoric sites, seven are historic features/structures, and 29 are isolated artifacts. Table 11 lists each resource with known significance and suggestions for further work to determine significance, if necessary.

According to County guidelines (County of San Diego 2007a:19), resources may be treated as significant and avoided:

> *Unless a resource is determined to be "not significant" based on the above criteria, 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. In addition, a treatment plan must be prepared that will include preservation of cultural resources.*

Eleven resources (CA-SDI-13609, CA-SDI-13652, CA-SDI-17300, CA-SDI-20799 through CA-SDI-20800, P-37-035816, CA-SDI-21862 through CA-SDI-21863, P-37-034482, P-37-034839, and P-37-034840) will be treated as significant resources for the purposes of this Project.

Four resources, CA-SDI-13652, CA-SDI-20798, CA-SDI-21861 and P-37-035818 were subject to additional study to determine their significance or boundaries. Three of these resources (CA-SDI-21861, CA-SDI-20798 and P-37-035818) are not significant based on testing and/or evaluation and site CA-SDI-13652 was determined not to extend into the area of direct impacts based on the boundary determination program. Twenty-nine resources (P-37-032964 through P-37-032976, P-37-035821 through P-37-035833, and P-37-035877 through P-37-035879) are isolates and were also determined not to be significant. While the isolates are not considered to be significant resources (County of San Diego 2007b:4), those items within the direct impact area were collected and will be curated.

No Tribal cultural resources were identified within the Project APE, so no mitigation measures are necessary.

5.2 Impact Identification

Cultural resources are considered nonrenewable resources and are afforded protection under federal, state, and local statues and guidelines. As such, impacts to significant resources, defined as resources determined to be eligible for the NRHP, significant under CEQA, or important or RPO-eligible under San Diego County guidelines, must be taken into account during the environmental review process. Impacts can be direct or indirect. Direct impacts include grading or other ground disturbance that will destroy, demolish, or otherwise alter a resource. Figure 26 shows proposed direct impacts in relation to the cultural resources within the project APE. Indirect impacts can include increased foot or vehicular traffic.

Table 11. Resource Significance

Resource Number	Other Designation	Resource Type	Resource Significance*	Impact	Suggested Further Work to Determine Significance
CA-SDI-13609†	–	Bedrock milling station	Due to lack of testing/evaluation site is assumed RPO significant	None	None (assume significant)
CA-SDI-13652	W-457	Late Prehistoric habitation	Previously determined eligible for CRHR; Local Register; RPO	Indirect	Testing determined not within impact area. None
CA-SDI-17300	–	Late Prehistoric habitation	Previously determined eligible for CRHR; Local Register; RPO	Indirect	None
CA-SDI-20798	Helix-2	Historic-era site	Not eligible for CRHR; Local Register; RPO	Direct	None (not significant)
CA-SDI-20799	Helix-3	Prehistoric site	Due to lack of testing/evaluation site is assumed RPO significant	Indirect	None (assume significant)
CA-SDI-20800	Helix-4	Prehistoric site	Due to lack of testing/evaluation site is assumed RPO significant	Indirect	None (assume significant)
P-37-035816	–	Historic-era well foundation	Due to lack of testing/evaluation site is assumed RPO significant.	Indirect	None (assume significant)
CA-SDI-21861	–	Historic-era well standpipe and prehistoric flake	Not eligible for CRHR; Local Register; RPO	Direct	None (not significant)
P-37-035818	–	Historic-era well stand pipe	Not eligible for CRHR; Local Register; RPO	Direct	None (not significant)
CA-SDI-21862	–	Prehistoric artifact scatter	Due to lack of testing/evaluation site is assumed RPO significant	Indirect	None (assume significant)
CA-SDI-21863	–	Prehistoric artifact scatter	Due to lack of testing/evaluation site is assumed RPO significant	Indirect	None (assume significant)
P-37-034482†	El Monte Pump Station	Historic-era structure	Due to lack of testing/evaluation site is assumed RPO significant	None	None (assume significant)
P-37-034839	Well 1	Historic-era well	Due to lack of testing/evaluation site is assumed RPO significant	Indirect	None (assume significant)
P-37-034840	Well 2	Historic-era well	Due to lack of testing/evaluation site is assumed RPO significant	Indirect	None (assume significant)
P-37-032964 – P-37-032976	ISO 7 to ISO 18	Isolate lithics, ground stone, ceramics, shell, faunal bone	Not Significant	Direct and Indirect	None
P-37-035821 – P-37-035833	MDV-ISO-001-P – MDV-ISO-012-P; MDV-ISO-014-P	Isolate lithics, ground stone, and a projectile point	Not Significant	Direct and Indirect	None
P-37-035877 – P-37-035879	ELM-I-1 – ELM-I-3	Isolate lithic, ground stone, and ceramics	Not Significant	Direct	None

* Significant resources are considered eligible for the NRHP, CRHR, Local Register, and/or RPO
† Indicates resource adjacent to APE

Figure 26
Project Impacts and Associated Cultural Resources

Confidential Figure
Bound Separately in Appendix G

5.2.1 CA-SDI-13609

Site CA-SDI-13609 is located adjacent to the Project APE. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. No impacts to this resource are anticipated since it is outside the area of direct impacts and Project APE and will be avoided.

5.2.2 CA-SDI-13652

Site CA-SDI-13652 was previously extended into the Project impact area. This resource was previously determined to be eligible for the CRHR, Local Register, and RPO. The project was initially designed to avoid the important portion of this resource as defined by ASM in 2005. In 2009, ASM expanded the site boundary into the proposed impact area. Further boundary determination testing indicated that the site does not extend into the project impact area. The portion of the site within the MUP area, but outside the area of direct impacts, will be formally designated as an open space easement.

5.2.3 CA-SDI-17300

This resource was previously determined to be eligible for the CRHR, Local Register, and RPO. No impacts to this resource are anticipated since it is outside the area of direct impacts and will be avoided. This site will be placed in a formally designated open space easement.

5.2.4 CA-SDI-20798

Site CA-SDI-20798 is located within the Project APE and within the area of direct impacts. Significance evaluation through archival research and documentation was conducted to evaluate the significance of this historic-age resource. This resource does not contain information required by the research design. CA-SDI-20798 is not eligible for the California Register and documentation has recovered what information is available from this site. This resource will be impacted by the project as currently proposed.

5.2.5 CA-SDI-20799

Site CA-SDI-20799 is located within the Project APE, but outside the area of direct impacts. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. No impacts to this resource are anticipated since the Project will be designed to avoid it.

5.2.6 CA-SDI-20800

Site CA-SDI-20800 is located within the Project APE, but outside the area of direct impacts. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. No impacts to this resource are anticipated since the Project will be designed to avoid it.

5.2.7 P-37-035816

Site P-37-035816 is located within the Project APE, but outside the area of direct impacts. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. No impacts to this resource are anticipated since the Project will be designed to avoid it.

5.2.8 CA-SDI-21861

Site CA-SDI-21861 is located within the Project APE and within the area of direct impacts. Significance evaluation through archival research and documentation was conducted to evaluate the significance of this historic-age resource. This resource does not contain information required by the research design. CA-SDI-21861 is not eligible for the California Register and testing has recovered what information is available from this site. This resource will be impacted by the project as currently proposed.

5.2.9 P-37-035818

Site P-37-035818 is located within the Project APE and within the area of direct impacts. Significance evaluation through archival research and documentation was conducted to evaluate the significance of this historic-age resource. This resource does not contain information required by the research design. P-37-035818 is not eligible for the California Register and documentation has recovered what information is available from this site. This resource will be impacted by the project as currently proposed.

5.2.10 CA-SDI-21862

Site CA-SDI-21862 is located within the Project APE, but outside the area of direct impacts. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. No impacts to this resource are anticipated since the Project will be designed to avoid it.

5.2.11 CA-SDI-21863

Site CA-SDI-21863 is located within the Project APE, but outside the area of direct impacts. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. No impacts to this resource are anticipated since the Project will be designed to avoid it.

5.2.12 P-37-034482

This resource is located outside but immediately adjacent to the Project APE and will not be directly impacted. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. P-37-034482 will be treated as significant for the purposes of this project and will not be directly or indirectly impacted by the Project.

5.2.13 P-37-034839

This resource is located outside but immediately adjacent to the project impact area and will not be directly impacted. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. P-37-034839 will be treated as significant for the purposes of this project and will not be directly impacted by the Project.

5.2.14 P-37-034840

This resource is located outside but immediately adjacent to the project impact area and will not be directly impacted. Although not formally evaluated, this resource will be assumed significant for the purposes of this analysis. P-37-034840 will be treated as significant for the purposes of this project and will not be directly impacted by the Project.

5.2.15 P-37-032955 through P-37-032976

Isolates P-37-032955 through P-37-032976 are not considered to be significant resources, therefore no impacts will occur (County of San Diego 2007b:4); however, these items will be collected and curated or repatriated.

5.2.16 P-37-035821 through P-37-035833

Isolates P-37-035821 through P-37-035833 are not considered to be significant resources, therefore no impacts will occur (County of San Diego 2007b:4); however, these items will be collected and curated or repatriated.

5.2.17 P-37-035877 through P-37-035879

Isolates P-37-035877 through P-37-035879 are not considered to be significant resources, therefore no impacts will occur (County of San Diego 2007b:4); however, these items will be collected and curated or repatriated.

5.2.18 Indirect Effects

No indirect effects will occur to potential historic built environment resources adjacent to the Project site since Project-related construction does not involve the construction of above-ground buildings or structures that might have visual impacts on the integrity of setting for nearby historic resources and the Project site will be returned to its natural state during the Revegetation Component of this Project. No indirect effects will occur to potential historic built environment resources adjacent to the Project APE.

Although adjacent archaeological resources are present, project activity will be limited to a fenced project area and increased use of the area will not result in indirect activity related to illicit collection and site disturbance. Because visual impacts will also be limited once the project is complete indirect impacts related to the integrity of setting for prehistoric resources are not anticipated.

5.2.19 Unknown or Buried Archaeological Resources

Given the high number of archaeological resources located within or near the Project APE, and the potential for buried archaeological resources located near the intersection of more stable landforms and alluvial sediments, there is potential for the presence of previously unknown, buried archaeological resources in the Project APE.

6.0 MANAGEMENT CONSIDERATIONS – MITIGATION MEASURES AND DESIGN CONSIDERATIONS

A total of 43 cultural resources were identified as a results of the records search and surveys as being either within or adjacent to the current Project APE. Seven of these resources are prehistoric sites (CA-SDI-13609, CA-SDI-13652, CA-SDI-17300, CA-SDI-20799, CA-SDI-20800, CA-SDI-21862, and CA-SDI-21863), seven resources are historic-era structures or features (CA-SDI-20798, P-37-035816, CA-SDI-21861, P-37-035818, P-37-034482, P-37-034839, and P-37-034840), and 29 are isolated resources (P-37-032964 through P-37-032976, P-37-035821 through P-37-035833, and P-37-035877 through P-37-035879).

Of these 43 resources, eleven sites (CA-SDI-13609, CA-SDI-13652, CA-SDI-17300, CA-SDI-20799 through CA-SDI-20800, P-37-035816, CA-SDI-21862, CA-SDI-21863, P-37-034482, and P-37-034839 through P-37-034840) will require mitigation measures during Project implementation. The mitigation measures are outlined below in Section 5.1.

Three of the 43 resources (CA-SDI-21861, CA-SDI-20798, and P-37-035818) were tested and evaluated for significance and recommended as not eligible for nomination to the California Register.

Twenty nine (P-37-032964 through P-37-032976, P-37-035821 through P-37-035833, and P-37-035877 through P-37-035879) of the 43 resources do not require mitigation, since isolates are not considered to be significant resources (County of San Diego 2007b:4); however, these items were collected and will be curated or repatriated.

There is potential for the discovery of previously unknown, buried archaeological sites within the Project APE.

6.1 Mitigated Impacts

Eleven sites (CA-SDI-13609, CA-SDI-13652, CA-SDI-17300, CA-SDI-20799 through CA-SDI-20800, P-37-035816, CA-SDI-21862, CA-SDI-21863, P-37-034482, and P-37-034839 through P-37-034840) will require mitigation measures during Project implementation. Mitigation to ensure they are avoided and protected will be implemented (also see Section 8).

The following mitigation measures are recommended to reduce direct and indirect impacts to archaeological resources to a less-than-significant level.

> **Mitigation Measure CUL-1:** Retention of a County-approved archaeologist
>
> The Project proponent shall retain a County-approved archaeologist, to carry out all mitigation measures related to archaeological resources.
>
> The County approved Project Archaeologist shall provide the contract or letter of acceptance to the County. It shall include an agreement that the archaeological 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 of acceptance shall include a cost estimate for the monitoring work and reporting. The Project Archaeologist shall provide evidence that a Kumeyaay Native American has been contracted to perform Native American Monitoring for the project.

Mitigation Measure CUL-2: Preparation of an archaeological mitigation and monitoring treatment plan

Development of an archaeological mitigation and monitoring plan (AMMP) shall be required prior to the issuance of grading or excavation permits and prior to any Project-related ground disturbing activities. The AMMP shall be prepared and implemented by the County-approved archaeologist. The AMMP shall include measures designed to avoid and protect known archaeological resources, and for the treatment of unknown archaeological resources that may be encountered during Project implementation. The AMMP shall address, at a minimum, the measures outlined below:

Protection of Known Significant Resources

A total of eleven known significant resources are located within or adjacent to the Project. Of these eleven, seven resources (CA-SDI-13652, CA-SDI-17300, CA-SDI-20799 through CA-SDI-20800, P-37-035816, CA-SDI-21862, and CA-SDI-21863) are located within the Project site and four resources (CA-SDI-13609, P-37-034482, P-37-034839 and P-37-034840) are located adjacent the Project. The following measures shall be incorporated into the AMMP to insure avoidance and protection of these resources.

1) Avoidance and Protection of Known Significant Resources within the Project Site

Seven known significant resources (CA-SDI-13652, CA-SDI-17300, CA-SDI-20799 through CA-SDI-20800, P-37-035816, CA-SDI-21862, and CA-SDI-21863) are located within the Project APE.

The following measures shall be incorporated into the AMMP to insure resources CA-SDI-13652, CA-SDI-17300, CA-SDI-20799 through CA-SDI-20800, P-37-035816, CA-SDI-21862, and CA-SDI-21863 are avoided and protected during Project construction and operation:

a) *Delineate Open Space Easement (OS)* – The Project proponent shall formally dedicate those portions of significant cultural resources CA-SDI-13652 and CA-SDI-17300 within the project area as OS. Temporary protective fencing and/or other markers shall be erected around OS prior to any ground disturbing activities nearby; however, such OS shall not be identified specifically as cultural resources, in order to protect sensitive information and to discourage unauthorized disturbance or collection of artifacts. OS shall be identified as an "Environmentally Sensitive Open Space".

b) *Delineate Environmentally Sensitive Areas (ESAs)* – The Project proponent shall avoid sites CA-SDI-20799 through CA-SDI-20800, P-37-034839, P-37-034840, P-37-035816, CA-SDI-21862, and CA-SDI-21863. The ESAs shall include a 50-foot buffer. Temporary protective fencing and/or other markers shall be erected around ESAs prior to any ground disturbing activities; however, such ESAs shall not be identified specifically as cultural resources, in order to protect sensitive information and to discourage unauthorized disturbance or collection of artifacts.

c) *Monitoring of Ground Disturbance within 100 feet of ESAs* – Full-time archaeological and Native American monitoring of ground disturbance within 100 feet of ESAs shall be conducted to insure that the site is not inadvertently impacted. The archaeological monitor shall work under the direction of the qualified archaeologist. In the event that cultural materials are discovered, the provisions for unanticipated discoveries of archaeological materials and/or human remains, as outlined below under the heading "Protection of Unknown Resources," shall be implemented.

d) *Monitoring of ESAs throughout Project Implementation* – In addition to the measure above, periodic archaeological monitoring of ESAs shall be conducted at times when no ground disturbance is scheduled to occur. The archaeological monitor shall work under the direction of the qualified archaeologist, who shall determine the timing of monitoring, in consultation with the lead agency and the County. The monitor shall inspect the ESAs and general vicinity to verify that: 1) protective fencing or other markers are intact; 2) no unplanned ground disturbance is taking place; and 3) the site is not being inadvertently impacted by Project-related activities, such as increased foot and vehicular traffic.

e) *Development of Long Term Management Plan* – A long-term management plan shall also be developed for those resources or portion(s) of resources that can be avoided during Project construction, in order to minimize future impacts during Project operation and maintenance. The management plan shall include that the boundaries of significant sites be appropriately delineated on Project maps with prohibitions against future excavation and/or disturbance.

2) Avoidance and Protection of Known Significant Resources adjacent the Project

Two resources (CA-SDI-13609 and P-37-034482) are located adjacent to the Project. The AMMP shall outline measures designed to insure that no direct or indirect impacts occur to these two resources (CA-SDI-13609 and P-37-034482). The AMMP shall include, at a minimum, the following measures:

a) *Monitoring of Ground Disturbance adjacent to the Resource.* Archaeological and Native American monitoring shall be conducted for any ground disturbance within the portion of the Project that is adjacent to resources CA-SDI-13609 and P-37-034482. The archaeological monitor shall work under the direction of the County-approved archaeologist. In the event that cultural materials are discovered, the provisions for unanticipated discoveries of archaeological materials and/or human remains, as outlined below under the heading "Protection of Unknown Resources," shall be implemented.

Protection of Unknown Resources

1) Archaeological and Native American Monitoring

The Project Archaeologist and Kumeyaay Native American monitor shall attend the preconstruction meeting with the contractors to explain and coordinate the requirements of the archaeological monitoring program.

a. The Project Archaeologist and Native American Monitor shall monitor all areas identified for development including off-site improvements.

b. An adequate number of monitors (archaeological/historical/Native American) shall be present to ensure that all earth moving activities are observed and shall be on-site during all grading activities for areas to be monitored.

c. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and Native American monitor(s) shall be onsite. Inspections will vary based on the rate of excavation, the materials excavated, and the presence and abundance of artifacts and features. The frequency and locations of inspections will be determined by the Project Archaeologist in consultation with the Kumeyaay Native American monitor. Monitoring of cutting of previously disturbed deposits will be determined by the Project Archaeologist in consultation with the Kumeyaay Native American monitor.

d. In the event that previously unidentified potentially significant cultural resources are discovered:
   1. The Project Archaeologist or the Kumeyaay 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.
   2. At the time of discovery, the Project Archaeologist shall contact the PDS Staff Archaeologist.
   3. The Project Archaeologist, in consultation with the PDS Staff Archaeologist and the Kumeyaay Native American Monitor, shall determine the significance of the discovered resources.
   4. Construction activities will be allowed to resume in the affected area only after the PDS Staff Archaeologist has concurred with the evaluation.
   5. Isolates and clearly non-significant deposits shall be minimally documented in the field. Should the cultural materials for isolates and non-significant deposits not be collected by the Project Archaeologist, then the Kumeyaay Native American monitor may collect the cultural material for transfer to a Tribal Curation facility or repatriation
      program.
   6. A Research Design and Data Recovery Program to mitigate impacts to significant cultural resources shall be prepared by the Project Archaeologist in coordination with the Kumeyaay Native American Monitor. The Research Design and Data Recovery Program shall include (1) reasonable efforts to preserve (avoidance) "unique" cultural resources or Sacred Sites; (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.

7. The County Archaeologist shall review and approve the Program, which shall be carried out using professional archaeological methods.

e. If any human remains are discovered:

1. The Property Owner or their representative shall contact the County Coroner and the PDS Staff Archaeologist.
2. 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.
3. If the remains are determined to be of Native American origin, the NAHC shall immediately contact the Most Likely Descendant (MLD).
4. 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.
5. The MLD may, with the permission of the landowner, or their authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.
6. Public Resources Code §5097.98, CEQA §15064.5 and Health & Safety Code §7050.5 shall be followed in the event that human remains are discovered.

f. In the event that previously unidentified cultural resources are discovered, all prehistoric archaeological materials collected during the archaeological monitoring program shall be submitted and curated at 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 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.

Historic materials shall be curated at a San Diego curation facility, as identified above, and shall not be curated at a Tribal curation facility or 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.

g. In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpreting the artifact and research data within the research context shall be completed and submitted to the satisfaction of the Director of PDS prior to the issuance of any building permits. The report shall include Department of Parks and Recreation Primary and Archaeological Site forms.

h. In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the Director of PDS by the consulting archaeologist that the grading monitoring activities have been completed.

▪

7.0 REFERENCES

Birkett, Charles V. The Fiftieth Year, *The Journal of San Diego History*, San Diego Historical Society Quarterly: Volume 8, Number 4, pp. 45-49, 1962.

Bowden-Renna, Cheryl and Rebecca McCorkle Apple. *Archaeological Site Visit for CA-SDI-13,652 and CA-SDU-17,300 and Literature Review for El Monte Valley Nature Park Project*. Document on file at County of San Diego, Department of Planning and Land Use, 2007.

Brackett, R.W. *A History of the Ranchos of San Diego County, California*, Union Title Insurance and Trust Company, 1939.

Byrd, Brian F., and L. Mark Raab. "Prehistory of the Southern Bight: Models for a New Millennium", in *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 215-227, 2007.

Chang, Howard. *Hydraulic and Sediment Study*, prepared for ESA, June, 2011.

Chartkoff, Joseph L., and Kerry Kona Chartkoff. *The Archaeology of California*, Stanford University Press, Stanford, California, 1984.

Cook, John R. *Cultural Resources Survey and Evaluation of the Proposed El Monte Golf Course Project*. Document on file at San Diego Archaeological Center, 1996.

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

Report Format and Content Requirements, Cultural Resources: Archaeological and Historic Resources, Land Use and Environment Group, Department of Planning and Land Use, Department of Public Works, 2007b.

Ehringer, Candace, and Madeleine Bray. *Phase I Cultural Resources Survey and Assessment for the El Monte Valley Mining, Reclamation, and Groundwater Recharge Project*, prepared for the Helix Water District by Laguna Mountain Environmental., 2011.

Gallegos, Dennis. A Review and Synthesis of the Archaeological Record for the Lower San Diego River Valley, *Proceedings of the Society for California Archaeology* 8, pp. 195-206, 1995.

_____Southern California in Transition: Late Holocene Occupation of Southern San Diego County, in *Catalysts to Complexity: Late Holocene Societies on the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, pp 27-40. Perspectives in California Archaeology Vol. 6, Cotsen Institute of Archaeology, University of California, Los Angeles, 2002.

Garcia-Herbst, Arleen, David R. Iversen, Don Laylander, and Brain Williams. *Final Inventory Report of the Cultural Resources within the Approved San Diego Gas & Electric Sunrise Powerlink Final Environmentally Superior Southern Route*. Document on file at South Coastal Information Center, 2010.

Haney, J. Site Record Update for CA-SDI-14274. Document on file at South Coastal Information Center, 2000.

Helmich, Mary A. The Butterfield Overland Mail Company, California State Parks. Electronic document accessed online at
http://www.parks.ca.gov/pages/22491/files/the_butterfield_overland_mail_stagecoach_days.pdf, on June 9, 2011, 2008.

Histoircaerials.com, Historic aerial photographs for the years 1953, 1964, 1968, 1971, 1980, 1989, 2003, and 2005. Electronic document accessed online at http://www.historicaerials.com/ on June 7, 2011.

Horne, Melinda C., and Dennis P. McDougall. *Cultural Resources study for the City of Riverside General Plan 2025 Update Program EIR*, Prepared for Cotton Bridges and Associates Urban and Environmental Consultants, on behalf of the City of Riverside Planning Department, Prepared by Applied Earthworks, Inc., 2003.

James, D., A. Pigniolo, K. Collins, and S. Briggs. Site Record for CA-SDI-13609. Document on file at South Coastal Information Center, 1993.

Jensen, Gary. Site Record for CA-SDI-4900. Document on file at South Coastal Information Center, 1979.

Kroeber, A. L. *Handbook of the Indians of California*. Bureau of American Ethnology Bulletins, No. 78. Smithsonian Institution: Washington, DC, 1925.

Lowell, Douglas L. The California Southern Railroad and the Growth of San Diego, Part 1. Accessed online at http://www.sandiegohistory.org/, June 9, 2011, *Journal of San Diego History* 31(4), 1985.

Luomala, Katherine. Tipai and Ipai. In *California*, edited by Robert F. Heizer, pp. 592-609. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, DC, 1978.

Miller, K. Site Record for CA-SDI-4913. Document on file at South Coastal Information Center, 1977.

Miller, K., B. Schiowitz, G. Toren, G., and L. Lilburn. Site Record for CA-SDI-4900. Document on file at South Coastal Information Center, 1977.

Ninyo & Moore. *Preliminary Geotechnical Evaluation El Monte Valley Mining, Reclamation, and Groundwater Recharge Project*, Lakeside, California, 2011.

Parker, Patricia L., and Thomas F. King
Guidelines for Evaluating and Documenting Traditional Cultural Properties. U.S. Department of the Interior, National Park Service, 1998.

Pigniolo, Andrew. Site Record for Well-1, on file at the South Coastal Information Center, San Diego State, University, San Diego, CA, 2015a

Site Record for Well-2, on file at the South Coastal Information Center, San Diego State University, San Diego, CA, 2015b

Pigniolo, A., S. Briggs, D. James, and K. Collins. Site Record for CA-SDI-13652. Document on file at South Coastal Information Center, 1993.

Pourade, Richard F. *The History of San Diego: Time of Bells*. Accessed online at http://www.sandiegohistory.org/ on June 9, 2011, San Diego Union-Tribute Publishing Company, San Diego, California, 1961.

Rensch, Hero Eugene, Cullamac, Alias. Del Capitan Grande. Accessed online at http://www.sandiegohistory.org/ on June 9, 2011, Journal of San Diego History 2(3), 1956.

Schroth, Adella, Nina Harris, Larry Tift, and Jenn Perry.
Site Record for CA-SDI-14273. Document on file at South Coastal Information Center, 1996a.
_____*Site Record for CA-SDI-14274*. Document on file at South Coastal Information Center, 1996b.

Smith, Brian F. *Monitoring of Archaeological Capping of Site CA-SDI-13,652, El Capitan Golf Course*. Document on file at County of San Diego, Department of Planning and Land Use, 2003.

_____*Site Record for CA-SDI-17,300*. Document on file at South Coastal Information Center, 2005a.

_____*Treatment Plan for the Capping of Site CA-SDI-17,300 at the El Capitan Golf Course Project*. Prepared for El Capitan Golf Club, 2005b.

True, Delbert L. An Early Complex in San Diego County, California, *American Antiquity*, 23(3):225-63, 1958.

US Department of the Interior, National Park Service. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation,* National Park Service, Washington, DC, 1995.

US Geological Survey (USGS)

_____*El Cajon 15-minute quadrangle*, USGS, Washington, DC, 1903

_____*Cuyacama 30-minute quadrangle*, USGS, Washington, DC, 1903

_____*La Jolla 15-minute quadrangle*, USGS, Washington, DC, 1930

_____*El Cajon15-minute quadrangle*, USGS, Washington, DC, 1939

_____*San Vicente Reservoir 7.5-minute quadrangle*, USGS, Washington, DC, 1955

_____*El Cajon Mountain 7.5-minute quadrangle*, USGS, Washington, DC, 1955

_____*El Cajon 7.5-minute quadrangle*, USGS, Washington, DC, 1955

_____*Alpine 7.5-minute quadrangle*, USGS, Washington, DC, 1955

Warren, C.N. The San Dieguito Complex: A Review and Hypothesis. *American Antiquity,* 32 (2):168-185, 1967.

Whitten, David. Glass Factory Marks on Bottles: Maywood Glass Company. Electronic document accessed online at http://www.myinsulators.com/glass-factories/bottlemarks3.html on June 15, 2011.

Williams, Brian. Site Record Update for CA-SDI-13,652. Document on file at South Coastal Information Center, 2009.

8.0 LIST OF PREPARERS AND PERSONS AND ORGANIZATIONS CONTACTED

Andrew R. Pigniolo
Principal Archaeologist
Laguna Mountain Environmental, Inc.

Monica Strauss
Co-principal
Manager, Cultural Resources Group
ESA

Candace Ehringer
Staff Archaeologist
ESA

Madeleine Bray
Staff Archaeologist
ESA

Michael Vader
Staff Archaeologist
ESA

Jon Spenard
Staff Archaeologist
ESA

South Coastal Information Center

San Diego Museum of Man

San Diego Archaeological Center

Native American Heritage Commission

Viejas Band of Kumeyaay Indians

Barona Band of Mission Indians

9.0 LIST OF MITIGATION MEASURES AND DESIGN CONSIDERATIONS

Resource	Significance[a]	Design Consideration	Mitigation Measure[b]	Less than Significant Impact?
CA-SDI-13609	Assume Significant	Mining and revegetation components	Avoidance and monitoring	Yes
CA-SDI-13652	RPO Significant	Mining and revegetation components	Avoidance – Open Space, protection and monitoring	Yes
CA-SDI-17300	RPO Significant	Mining and revegetation components	Avoidance – Open Space, protection and monitoring	Yes
CA-SDI-20798 (Helix-2)	Not Significant	Mining and revegetation components	None Required	Yes
CA-SDI-20799 (Helix-3)	Assume Significant	Mining and revegetation components	Avoidance, protection and monitoring	Yes
CA-SDI-20800 (Helix-4)	Assume Significant	Mining and revegetation components	Avoidance, protection and monitoring	Yes
P-37-035816	Assume Significant	Mining and revegetation components	Avoidance, protection and monitoring	Yes
CA-SDI-21861	Not Significant	Mining and revegetation components	None Required	Yes
P-37-035818	Not Significant	Mining and revegetation components	None Required	Yes
CA-SDI-21862	Assume Significant	Mining and revegetation components	Avoidance, protection and monitoring	Yes
CA-SDI-21863	Assume Significant	Mining and revegetation components	Avoidance, protection and monitoring	Yes
P-37-034482 (El Monte Pump Station)	Assume Significant	Mining and revegetation components	Avoidance and monitoring	Yes
P-37-034839 (Well 1)	Assumed Significant	Mining and revegetation components	Avoidance and monitoring	Yes
P-37-034840 (Well 2)	Assumed Significant	Mining and revegetation components	Avoidance and monitoring	Yes
P-37-032964 through P-37-032976 (ISO-7 to ISO-18)	Not Significant	Mining and revegetation components	Repatriate or Curate	Yes
P-37-035821 through P-37-035833	Not Significant	Mining and revegetation components	Repatriate or Curate	Yes
P-37-035877 through P-37-035879	Not Significant	Mining and revegetation components	Repatriate or Curate	Yes

[a] Per San Diego County guidelines, a resource can be assumed significant and avoided

[b] Where avoidance is stipulated, this means that mining and revegetation components of the project will be designed to avoid the cultural site.

APPENDICES

A Records Search Confirmation
B Resumes of Key Personnel
E Catalogue

CONFIDENTIAL APPENDICES

C Resource Forms (*Bound Separately*)
D Photo Logs and Photographs (*Bound Separately*)
F Native American Consultation (*Bound Separately*)
G Confidential Figures (*Bound Separately*)

APPENDIX A

RECORDS SEARCH CONFIRMATION

South Coastal Information Center
4283 El Cajon Blvd., Suite 250
San Diego, CA 92105
Office: (619) 594-5682
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scic@mail.sdsu.edu
scic_gis@mail.sdsu.edu

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: ESA

Company Representative: Madeleine Bray

Date Processed: 10/28/2010

Project Identification: Helix Water District El Monte Valley Mining, Reclamation, and Groundwater Recharge Project (209143.03)

Search Radius: 1 mile

Historical Resources: ND

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: ND

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: ND

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: ND

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
Address-Mapped GIS Shapes:	yes 16
GIS Shapes:	469
Searchable Pages:	222
Standard Pages:	998
Aerial Photos:	0
Quads:	6
Hours:	3
RUSH:	no

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South Coastal Information Center
San Diego State University
5500 Campanile Drive
San Diego, CA 92182-5320
Office: (619) 594-5682
www.scic.org
nick@scic.org

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM RECORDS SEARCH

Company: Laguna Mt Environmental

Company Representative: Andrew Pigniolo

Date Processed: 7/16/2015

Project Identification: El Monte Mining Survey #1512

Search Radius: 1 mile

Historical Resources: YES

Trinomial and Primary site maps have been reviewed. All sites within the project boundaries and the specified radius of the project area have been plotted. Copies of the site record forms have been included for all recorded sites.

Previous Survey Report Boundaries: YES

Project boundary maps have been reviewed. National Archaeological Database (NADB) citations for reports within the project boundaries and within the specified radius of the project area have been included.

Historic Addresses: YES

A map and database of historic properties (formerly Geofinder) has been included.

Historic Maps: YES

The historic maps on file at the South Coastal Information Center have been reviewed, and copies have been included.

Summary of SHRC Approved CHRIS IC Records Search Elements	
RSID:	1048
RUSH:	no
Hours:	1.5
Spatial Features:	206
Address-Mapped Shapes:	yes
Digital Database Records:	4
Quads:	4
Aerial Photos:	0
PDFs:	Yes
PDF Pages:	523

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APPENDIX B

RESUMES OF KEY PERSONNEL

MONICA STRAUSS, RPA

Manager, Southern California Cultural Resources Group

Monica Strauss is Manager of ESA's Southern California Cultural Resources Group and is based in the Los Angeles office. She has 15 years of experience in cultural resources management and has directed numerous archaeological investigations throughout Southern California and the Channel Islands. She directs prehistoric and historic field and research projects for public agencies and private developers and is proficient in CEQA and Section 106 compliance. She manages a staff of cultural resources specialists who conduct various types of compliance work including phase I surveys, construction monitoring, Native American consultation, archaeological testing and treatment, historic resource significance evaluations, and large-scale data recovery programs. Monica has prepared technical documents meeting the requirements of federal, State, and local agencies in support of CEQA and Section 106 as well as cultural resources components for General and Specific Plans. She provides senior oversight and quality control of archaeological resources-focused documents for ESA staff throughout the State.

Education

MA, Archaeology , California State University, Northridge

BA, Anthropology, California State University, Northridge

AA, Humanities, Los Angeles Pierce College

Years of Experience: 15

Professional Affiliations

Register of Professional Archaeologists (RPA)

Society for California Archaeology (SCA)

Society for American Archaeology (SAA)

Specialized Experience

Treatment of Historic and Prehistoric Human Remains

Archaeological Monitoring

Complex Shell Midden Sites

Groundstone Analysis

Qualifications

Exceeds Secretary of Interior Standards

CA State BLM Permitted

Certified in CA BLM Protocol

Relevant Experience

Patterson Fish Screen Project. Stanislaus County, CA. ***Project Director.*** ESA is retained by Montogomery, Watson Harza Americas (MWH) to provide cultural resources services in connection with the installation of a fish screen in Patterson Irrigation District (PID). ESA cultural resources staff conducted a Phase 1 Assessment in support of an MND and provided mitigation measures in the event resources were encountered during project implementation. Monica is currently facilitating discussions amongst all relevant parties to develop a satisfactory treatment plan for resources recently discovered.

Helix Water District (HWD)-El Monte Valley. San Diego County, CA. ***Cultural Resources Principal Investigator***. ESA is providing professional Environmental Consulting services in support of the HWD's El Monte Mining, Reclamation, and Groundwater Recharge Project. The project includes mining of approximately 10 million tons of aggregate from the El Monte Valley in San Diego County. Monica is currently directing the cultural resources component of this project to insure it complies with CEQA, Section 106 and the County of San Diego, Guidelines for Determining Significance. Duties involve providing oversight to the managements team and coordination with the client on key issues including Section 106 requirements and Native American issues.

Metropolitan Air Park Project. San Diego, CA. ***Cultural Resources Principal Investigator*****.** ESA is preparing a master development plan, EIR, and EA for Metropolitan Air Park at Brown Field Airport in the City of San Diego. The project involves a 50-year land lease from the City of San Diego for a 400-acre portion of the airport property to be developed into airport and non-airport related land uses. The project requires the approval of the City of San Diego and the Federal Aviation Administration, and is being processed as Master Planned

Relevant Experience (Continued)

Development Permit Project. Monica is currently directing the cultural resource component of this project. Her duties involve coordination with the City of San Diego to ensure compliance with the City of San Diego Historical Resources Guidelines and oversight of survey and identification methods and resource evaluations.

Sweetwater Reservoir Water Main Replacement. San Diego County, CA. *Cultural Resources Principal Investigator.* ESA was retained by Sweetwater Authority to prepare an IS/MND for the replacement of a 36-inch pipeline leading from Sweetwater Dam. Sweetwater Dam was originally constructed in the late 19th century and was subject to upgrades in 1917. ESA conducted a Phase 1 Cultural Resources Assessment including archival research, pedestrian, survey, historical research, Native American outreach, and the preparation of a technical report documenting archaeological and historic-architectural resources that might be impacted by the project. The study concluded that features that would be altered by the project that were contributing elements to the historic dam would need to be replaced in kind. Monica directed the team of researchers which conducted this work, assisted in evaluating project impacts to the dam, and facilitated in the development of appropriate mitigation.

Sunrise Powerlink Transmission Archaeological and Biological Monitoring Project. Imperial and San Diego counties, CA. *Cultural Resources Project Manager.* ESA was retained by Burns & McDonnell to conduct archaeological and biological monitoring during construction activities for a 120-mile long SDG&E transmission line. Monica is currently serving as lead archaeologist to a team of archaeological monitors who are attending compliance and field safety training and who will be on-call during construction activities.

Sorenson Park Gymnasium Archaeological Monitoring Project. Lake Los Angeles, CA. *Cultural Resources Principal Investigator.* ESA was retained by the County of Los Angeles, Department of Public Works to conduct archaeological and biological monitoring during ground disturbing activities associated with project construction. Monica is currently providing daily oversight to archaeological and Native American monitors, coordinated work schedules with the County Project Manager, and coordinated the details of the necessary monitoring work with the County Inspector and construction contractors. An Archaeological Resources Monitoring Report documenting the monitoring findings will be submitted, together with daily monitoring logs, at the close of the project

Cadiz Groundwater Project. San Bernardino County, CA. *Cultural Resources Principal Investigator.* ESA was retained by Cadiz Land Company, Inc. to prepare an EIR in connection with a water supply project in Cadiz Valley of the Mojave Desert. Monica directed a Phase 1 archaeological resources assessment including literature review, 42-mile long pedestrian survey, and Native American outreach to meet CEQA compliance requirements. An

Relevant Experience (Continued)

Archaeological Resources Technical Report was prepared that evaluated the California Register eligibility of over 40 historic-period archaeological sites that had been identified as a result of the investigation. The results of the technical report were incorporated into the EIR which included an impacts analysis and appropriate mitigation measures.

North San Pablo Bay Restoration and Reuse Project. Sonoma and Napa counties, CA. ***Cultural Resources Senior Oversight.*** ESA was retained by the Sonoma County Water Agency to prepare an EIR/EIS in connection with a project to expand the beneficial use of recycled water in the North Bay Region. To fulfill both NEPA and CEQA requirements, ESA conducted Extended Phase 1 cultural resources identification efforts to meet CEQA and Section 106 requirements. Extending across multiple counties, the project required extensive archival research and pedestrian survey, sub-surface archaeological testing, and coordination with Native American representatives. The Section 106 component of the work was coordinated with the U.S. Bureau of Reclamation. Monica provided senior oversight to ESA archaeologists; provided quality control reviews of the survey report, testing work plan, and testing report; and helped facilitate successful coordination with the Bureau of Reclamation.

SFPUC Seismic Upgrade of Bay Division Pipeline No. 3 & 4. Alameda County, CA. ***Cultural Resources Senior Oversight.*** ESA was retained by the San Francisco Public Utilities Commission to provide on-call environmental services, including environmental analyses and regulatory permits. The project proposes to replace the existing BDPL No. 3 with a new parallel pipeline across the main trace and two secondary traces of the Hayward Fault, and to subject BDPL No. 4 to a minor seismic upgrade. Because the projects would result in an unavoidable adverse effects to a National Register-eligible archaeological site, ESA archaeologists are leading the work to conduct testing and data recovery to mitigate the effects. Monica has provided senior oversight of the preparation of an Archaeological Research Design and Historic Property Treatment Plan designed to mitigate the anticipated effects.

Sacramento County Airport System On-Call Natural Resources Advisory & Consulting Services. Sacramento County, CA. ***Cultural Resources Senior Oversight.*** ESA is providing on-call natural resources support and consulting services for the Sacramento County Airport System. ESA archaeologists provided archaeological monitoring and survey during ground disturbing activities associated with routine discing activities. Monica provided daily oversight to archaeological monitors and provided direction when potential cultural resources were identified.

City of Calabasas Archaeological Resources Mapping. Calabasas, CA ***Project Director.*** ESA was awarded an on-call contract by the City of Calabasas to provide environmental compliance services. The City requested that ESA conduct a city-wide archaeological records search and prepare confidential archaeological resources maps and materials to assist the city in planning and

Relevant Experience (Continued)

permitting endeavors. Maps and documents were linked electronically for quick reference to parcel information. Monica directed archaeologists and GIS staff in the mapping of resources and development of procedures for map usage.

Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project. Kern County, CA. ***Cultural Resources Principal Investigator*****.** ESA was retained by GEI Consultants, Inc. to conduct a Phase 1 Archaeological resources Assessment in connection with a groundwater banking project designed to provide up to 500,000 acre-feet of total surface water storage capacity underground in a partially depleted aquifer. The project is being carried out by the Antelope Valley East Kern Water Agency with the assistance of a Challenge Grant from the Bureau of Reclamation. Monica directed archaeologists who conducted archival research, pedestrian survey, Native American outreach to identify the presence of archaeological resources. A technical report was prepared to meet CEQA and Section 106 compliance requirements.

Ocotillo Wind Farm Project EIR. Imperial County, CA. ***Project Manager.*** ESA has been retained by the Bureau of Land Management under an on-call contract to provide cultural resource services including compliance monitoring for projects under BLM jurisdiction. Monica is specially trained in BLM protocols and procedures. She is currently assisting BLM (El Centro Field Office) staff with general oversight of the 15,000-acre cultural resources study being carried out for the Ocotillo Wind Farm project. Monica has conducted peer-review of cultural resources documents to ensure conformance with BLM requirements and is providing oversight to survey staff who are conducting compliance monitoring of the survey effort.

LAUSD Central Los Angeles High School #9. Los Angeles, CA. ***Project Director.*** ESA is presently working on Date Recovery Report sections for LAUSD's Central High School #9, constructed in downtown Los Angeles. Between 2004 and 2009, Monica led a team of archaeological staff of ten who conducted archaeological monitoring and data recovery of archaeological materials in connection with the 19th century Los Angeles City Cemetery. She coordinated with the Los Angeles County Coroner and office of Vital Statistics to obtain disinterment permits and developed a mitigation plan incorporating components related to the future disposition of remains, artifact curation, and commemoration. She directed an extensive historical research effort to identify the human remains, and at the request of the client, participated in public outreach and coordination with media.

Bureau of Land Management Abandoned Mine Lands Archaeological Inventory. Lakeside, San Diego County, CA. ***Project Manager*****.** ESA has been retained to provide cultural resources services to the BLM in connection with the Abandoned Mine Lands program. BLM is proposing to close or remediate abandoned mines that pose a safety hazard. ESA prepared

Relevant Experience (Continued)

archaeological inventory reports documenting the abandoned mines, in compliance with Section 106 of the NHPA. Monica directed cultural resources staff in the survey, research, and evaluation of mining features identified in the areas proposed for remediation.

Bureau of Land Management On-Call Cultural Resources Services. Riverside County, CA. ***Project Manager.*** ESA has been retained by the Bureau of Land Management under an on-call contract to provide cultural resource services including compliance monitoring for projects under BLM jurisdiction. Monica is currently managing a number of projects for the BLM (Palm Springs South Coast Field Office) providing a wide range of cultural resources services for solar projects and other projects taking place on BLM lands in compliance with Section 106 and specified BLM protocols. Services that she and her staff provide under this contract include compliance monitoring and peer review, Phase 1 archaeological resources surveys, resource evaluations, the preparation of reports, and Native American consultation. Projects completed under this contract include Dos Palmas Phase 1 Survey and Archaeological Monitoring, National Monument Phase 1 Survey, Windy Pointe Archaeological Monitoring, and Fast and the Furious Phase 1 Survey.

West Kern Water District Groundwater Recharge Project EIR. Kern County, CA. ***Cultural Resources Principal Investigator.*** Monica managed a Phase 1 archaeological resources survey of a 500-acre Project area proposed for groundwater recharge basins and a 9-mile pipeline in Kern County. The Project was carried out in compliance with CEQA and Section 106 of the NHPA. The survey resulted in the identification of over 20 archaeological sites. She managed the preparation of a Phase 1 Archaeological Resources Survey Report and Cultural Resources EIR Section that addressed the potential for site eligibility and provided an impacts analysis and mitigation measures.

Canyon Hill Cultural Resources Assessment. Lake Elsinore, CA. ***Cultural Resources Principal Investigator.*** ESA was retained by Pardee Homes to prepare a cultural resources assessment for Phases 7 & 8 of the Canyon Hills Specific plan. ESA conducted a Phase 1 and Phase II Archaeological Resources Investigation, identifying resources that might be impacted by the project. Monica directed the Phase II Testing Program to determine California Register and National Register eligibility of a recorded prehistoric archaeological site. She co-authored the Phase II Testing Research Design and Phase II Testing Evaluation Report.

California Department of Water Resources On-Call Environmental Planning Services. East Branch Enlargement EIR. Antelope Valley, CA. ***Cultural Resources Principal Investigator.*** ESA was retained by the Department of Water Resources. Monica managed a Phase 1 archaeological resources survey for the enlargement of 100 miles of the California Aqueduct from the Tehachapi split through the Antelope Valley and Mojave River Basin to Silverwood Reservoir. The Project was carried out in compliance with

Relevant Experience (Continued)

CEQA and Section 106 of the NHPA. Monica managed the survey, report effort, and preparation of the EIR section that considered Project impacts to historic architectural and archaeological resources.

Morro Bay Cayucos Wastewater Treatment Plant, San Luis Obispo County, CA. *Cultural Resources Principal Investigator.* ESA was retained by the City of Morro Bay-Cayucos Sanitation District to prepare an EIR for the Morro Bay-Wastewater Treatment Plant upgrade. Monica directed a Phase 1 Cultural Resources Assessment to identify cultural resources that might be impacted by the project. The assessment included archival research, pedestrian survey, the relocation of a number of archaeological sites, coordination with interested Native American parties in the area, and the preparation of a Phase 1 Cultural resources Technical Report. Monica facilitated in meeting with Native American tribal members and City representatives to address concerns about buried resources.

Irvine Ranch Water District Baker Treatment Plant. Orange County, CA. *Cultural Resources Principal Investigator*. ESA was retained by the Irvine Ranch Water District to provide environmental compliance services. In support of an EIR for the upgrade of the IRWD's Baker Treatment Plant near Lake Forest, Orange County, ESA cultural resources staff conducted a Phase 1 Cultural Resources Assessment. Monica directed the archival research, a series of pedestrian surveys, and oversaw the preparation of Phase 1 Cultural resources Technical reports and the cultural resources section of the EIR.

CDFG Suction Dredging Permitting Project. Yolo County, CA., *Cultural Resources Senior Oversight.*
ESA was retained by Horizon Water and Environment LLC. to conduct a cultural resources constraints study to identify cultural resources within areas that would be impacted by the project. ESA conducted archival research and prepared section for an Initial Study and EIR. Monica provided senior technical oversight of the work and provided quality control review of the documents.

CPUC Devers-Mirage Project. Palm Springs, CA. *Cultural Resources Senior Oversight*. ESA was retained by the California Public Utilities Commission to prepare an EIR to evaluate the potential impacts from Southern California Edison's proposed Devers-Mirage 115 kV System Split project. ESA cultural resources staff reviewed and synthesized technical documents and prepared a cultural resources EIR section that provided an impacts analysis and mitigation measures. Because the project involved BLM lands, cultural resources studies were required to meet NEPA reequirements in addition to CEQA. Monica provided technical oversight of the cultural resources effort and conducted quality control review of the document.

Relevant Experience (Continued)

Prior to ESA

Hellman Ranch Archaeological Resources Monitoring and Data Recovery Project. Seal Beach, CA. ***Field Director.*** John Laing Homes constructed the Heron Point housing development in Seal Beach. Monica directed a large-scale excavation and monitoring program under the terms of a Mitigation Plan approved by the California Coastal Commission. She coordinated the daily excavation and monitoring activities of over twenty archaeological field personnel over a period of two years. She worked closely with a staff of eight Native American monitors and assisted in the preparation of remains artifacts for reburial. She also oversaw identification and cataloging activities that took place simultaneously on the job site in a field laboratory. On-site activities included hand excavation at four archaeological sites, construction monitoring, wet and dry-screening, and laboratory analysis, and also involved the evaluation of complex shell midden deposits and appropriate treatment of human remains.

San Clemente Island Section 106 Archaeological Testing and Evaluation Program. Los Angeles, CA. ***Project Director.*** Working for the U.S. Navy, Southwest Division, Monica directed a team of archaeologists who conducted testing of nine prehistoric archaeological sites on the northern end of San Clemente Island. Testing was conducted in accordance with guidelines set forth by the U.S. Navy and in compliance with Section 106. She authored a comprehensive technical report which considered the results of the testing program in relation to current California coast and San Clemente Island research questions and evaluated the sites for eligibility for the National Register.

State Route 90 Connector Road and the Admiralty Way Widening Archaeological Resources Phase 1 Projects. Marina del Rey, ***CA. Project Director.*** Monica directed a Phase 1 Cultural Resources Study for the County of Los Angeles, Department of Public Works in compliance with Section 106. Monica worked closely with Caltrans archaeologists and Native American representatives to reach agreement over the impacts and the appropriate treatment of a significant archaeological site located in the project APE.

South Region Elementary School #1 Archaeological/Paleontological Monitoring Project, ***Los Angeles, CA. Project Director.*** Monica directed archaeological/paleontological monitoring conducted during school site construction for LAUSD. She managed archaeological/paleontological monitors, conducted client coordination, and responded to and evaluated discoveries including two early 20th century residential refuse deposits. She provided oversight to staff conducting artifact analysis and the preparation of an Archaeological Monitoring report documenting and evaluating the recovered materials.

Alameda Street Improvement Archaeological Monitoring and Assessment Project, ***Los Angeles CA. Project Director.*** Monica directed archaeological

Relevant Experience (Continued)

monitoring conducted during the construction of roadway improvements in downtown Los Angeles. She responded to the discovery of historic resources including the *Zanja Madre* and the historic brick Alameda Street. She developed mitigation recommendations to address impacts to these resources from the project including an adaptive re-use of the recovered brick materials in the landscape design of the project. Monica provided oversight to laboratory analysts who catalogued the artifact collection.

Metro Universal Phase 1 Archaeological Resources Project, *North Hollywood, CA. Project Director.* Working as a consultant for Thomas Properties Group, Monica directed archaeological resources assessment for the proposed Metro Universal project to be constructed adjacent the historic *Campo de Cahuenga* in North Hollywood. She conducted extensive literature review and archaeological survey and prepared and archaeological technical report and EIR section. Working with project engineers, she developed a scaled approach to identify varying degrees of cultural resources sensitivity across the project site and determined appropriate mitigation measures. She worked with engineers and landscape designers to inform the design to best enhance existing cultural resources. Monica attended monthly meetings with the *Campo de Cahuenga* Board of Representatives and the Thomas Properties team to address cultural resources concerns.

First Street Trunk Line Archaeological Monitoring and Assessment Project, *Los Angeles CA. Project Director.* As a consultant to the City of Los Angeles, Department of Water and Power, Monica directed archaeological and paleontological monitoring of utilities installations ona continuous basis for over one year. She responded to monitoring discoveries including historic-period utility pipes and determined the appropriate mitigation in the form of recordation.

Main Street Archaeological/Paleontological Monitoring and Assessment, *Los Angeles, CA. Project Director.* Working for the City of Los Angeles, Bureau of Engineering, Monica directed archaeological/paleontological monitoring during the construction of a police parking facility in downtown Los Angeles. She managed monitors and conducted client coordination. She responded to discoveries of over a dozen in tact historic building basements and other refuse deposits to determine appropriate treatment. She provided oversight to specialists conducting analysis of the artifacts recovered and managed the preparation of a report that documented the findings and evaluated the resources.

Olive View Medical Center Emergency Services Expansion Monitoring and Assessment Project, *Los Angeles, CA. Project Director.* Working for the City of Los Angeles, Department of Public Works, Monica directed archaeological monitoring and a Phase I cultural resources assessment in support of an EIR for medical center expansion in Sylmar. Two historic resources were identified and determined not significant under CEQA. Monica responded to a discoveries

Relevant Experience (Continued)

made by construction personnel and determined prehistoric artifacts were present in native soil within the project area.

Temple Street Widening Archaeological Monitoring and Assessment Project, *Los Angeles, CA. Project Director.* Working for the City of Los Angeles, Department of Public Works, Monica directed archaeological monitoring conducted during the widening of Temple Street in downtown Los Angeles. She conducted extensive coordination with general and sub contractors and responded to discoveries including and segment of the zanja irrigation ditch and a large historic refuse deposit to determine appropriate treatment. She developed mitigation and monitored the implementation of mitigation for the zanja including concrete capping and the installation of an interpretive plaque.

Exposition Corridor Transit Project – Phase 2 Phase 1 Archaeological Assessment Project, *Los Angeles CA. Project Director.* Working for DMJM Harris, Monica directed archaeological, historic architectural, and paleontological resources assessment in compliance with CEQA and Section 106 regulations. Project involved archaeological, paleontological, and historic architectural survey of 6- mile alignment, production of APE maps, consultation with SHPO and the preparation of technical reports and EIR sections.

Van Norman Chloramination Station Archaeological/Paleontological Monitoring Project, *San Fernando CA. Project Director.* Working for the City of Los Angeles, Department of Water and Power, Monica directed archaeological/paleontological and Native American monitoring during project construction. Resources identified during monitoring were assessed for significance under CEQA.

Lang Ranch Community Park Phase 1 Archaeological Testing and Assessment Project, *Thousand Oaks, CA. Project Director.* Working for the Conejo Park and Recreation District, Monica directed a Phase I archaeological survey of the 46-acre project area. Project work involved the archaeological testing at two artifact isolate locations to determine presence of sub-surface deposits and coordination with Native American representatives. Monica prepared an Archaeological Resources Technical Report and EIR section with findings and recommendations for further work, pursuant to CEQA requirements.

Woodland Duck Farm Phase 1 Cultural Resources Assessment Project, *Avocado Heights, CA. Project Director.* As a consultant to the San Gabriel & Lower Los Angeles Rivers and Mountains Conservancy, Monica directed a Phase I cultural resources evaluation of the historic-era Woodland Duck Farm property. She conducted a California Register eligibility assessment for several duck farm buildings and archaeological features identified as a result of the survey. Monica directed extensive background research concerning the history of the duck farm and poultry farming in general and prepared a Cultural

Relevant Experience (Continued)

Resources Technical Report and MND section with findings and recommendations for further work, pursuant to CEQA requirements.

San Clemente Island Section 106 Archaeological Resources Testing and Evaluation Project, Los Angeles County, *CA. Project Director* Working for the U.S. Navy, Southwest Division, Monica designed a research strategy and directed a testing program in strict accordance with guidelines set forth by the U.S. Navy and in compliance with Section 106. She authored a comprehensive technical report which considers the results of the testing program in relation to current California coast and San Clemente Island research questions and evaluates the sites for eligibility for the National Register.

San Gabriel River Discovery Center at Whittier Narrows Phase 1 Cultural Resources Assessment Project, *Los Angeles County, CA. Project Director.* CLIENT: City of Los Angeles, Department of Public Works. Directed a Phase I cultural resources evaluation of the historic-era Discovery Center. Conducted a National Register and California Register eligibility assessment for several historic-era buildings identified as a result of the survey. Conducted background research concerning the history of the duck farm and poultry farming in general including consultation with local Native American representatives. Prepared a Cultural Resources Technical Report with findings and recommendations for further work, pursuant to NEPA and CEQA requirements.

Hellman Ranch Monitoring Project, *Orange County, CA. Archaeological Monitor.* Working for John Laing Homes, Monica conducted archaeological monitoring during the initial rough grade phases of construction at Hellman Ranch. She coordinated with a team of monitors and Native American representatives. She worked with equipment operators according to predetermined monitoring protocols

Home Depot Monitoring and Assessment Project – Lake Elsinore, *Riverside County, CA. Project Director.* As a consultant to Twining Laboratories, Monica directed archaeological monitoring of Caltrans road-widening in the vicinity of a historic cemetery and coordinated her findings with Caltrans.

Public Safety Facilities Master Plan Phase 1 Archaeological Resources Evaluation Project, *Los Angeles County, CA. Project Director.* Working for the City of Los Angeles, Department of Public Works, Monica directed a Phase I archaeological resources evaluation of an approximately five-square block area in downtown Los Angeles. Project work involved an extensive investigation of the area during the cities' early pueblo years and specifically the Zanja Madre irrigation system. Monica prepared a technical report with findings and recommendations for further work, pursuant to CEQA requirements.

Ivy Street Bridge Phase 1 and Extended Phase 1 Archaeological Resources Testing and Evaluation Project, *Murrieta, CA. Project Director.* Working for

Relevant Experience (Continued)

T.Y. Lin and the City of Murrieta on a project that proposed to construct a bridge over Murietta Creek, Monica directed an Extended Phase I Testing Program in compliance with Section 106 review. She coordinated with Caltrans to meet Section 106 compliance and evaluated project effects on a nearby ethnohistoric Native American site. Monica coordinated extensively with Native American representatives and developed appropriate mitigation to be carried out prior to and during construction.

Lake Hodges Archaeological Resources Evaluation Project*, San Diego County, CA. Research Assistant.* Working for the San Diego County Water Authority, Monica conducted laboratory analysis of the groundstone tool collection recovered as a result of testing at a number of sites near Lake Hodges. She prepared a report that documented the findings of her analysis.

Haiwee Dam Phase 1 Archaeological Resources Evaluation Project*, Lone Pine, CA. Field Archaeologist.* Working for the City of Los Angeles, Department of Water and Power, Monica participated in archaeological field survey involving the identification and recording of prehistoric and historic archaeological sites and structures in preparation for the construction of a new dam.

Arroyo Seco Bike Path Phase 1 Cultural Resources Evaluation Project*, Los Angeles, CA. Project Director.* Working for the County of Los Angeles, Department of Public Works in connection with a project to make improvements to the Arroyo Seco Channel, Monica managed all aspects of Section 106 review in accordance with Caltrans Cultural Resources Environmental guidelines. Monica and her team evaluated the Arroyo Seco Channel, identified character-defining features, informed the design of channel improvements to retain such features, and addressed the channels' potential for eligibility as part of a larger Los Angeles Country water management district. She developed the research strategy, directed the field teams, and prepared cultural resources assessment documentation for approval by Caltrans and FHWA, as well as the cultural resources section for a Mitigated Negative Declaration.

LMXU Archaeological resources Evaluation Project*, San Diego County, CA. Archaeological Researcher.* CLIENT: Confidential. Working for a confidential client, Monica conducted artifact analysis of groundstone artifacts recovered during excavations at sites in San Diego County.

I-5 Manchester*, San Diego County, CA. Archaeological Researcher.* CLIENT: Dokken Engineering for the City of Encinitas. As a consultant to Dokken Engineering for the City of Encinitas, Monica participated in identifying and compiling historic properties within the project area.

North Baja Pipeline Project*, Imperial County, Ehrenberg, AZ to Mexican Border. Archaeological Surveyor/Excavator.* As a consultant to Pacific Gas & Electric, Monica conducted survey, mapping, and excavation of prehistoric sites

Relevant Experience (Continued)

for the installation of a natural gas pipeline from Blythe, California, to Yuma, Arizona.

Public Outreach and Education

2008. Public Outreach speaker at Chinese Historical Society meeting. Project: Central Los Angeles High School #9. Client: Los Angeles Unified School District.

2006. Guest lecturer at Laurel Hall Elementary and Middle School regarding archaeology in southern California, North Hollywood, CA.

2003. Volunteer lecturer and field advisor at San Clemente Island Field School.

2003. Key speaker at Seal Beach Historical Society community outreach meeting regarding findings from the Hellman Ranch Archaeological Sites, Seal Beach, CA.

2002. Guest lecturer at Rosemead Elementary School regarding career opportunities in cultural resources management, Rosemead, CA.

1998–2000. Appointment at California State University, Northridge, Anthropology Department. Directed undergraduate peer student advisement center, counseled students regarding course selection graduation reparation, and employment opportunities.

CANDACE R. EHRINGER, RPA

Senior Associate II

Candace Ehringer is an archaeologist with over 12 years of experience in cultural resources management in California. Her strengths include managing field surveys, archaeological monitoring, lab analysis, and coordination with Native American representatives. Candace has experience with archaeological sites in both California's desert and coastal environments, and has worked in Los Angeles, Orange, Riverside, San Bernardino, San Diego, Kern, Inyo, Alameda, Sacramento, Stanislaus, and Ventura counties. She authors and provides senior level review of documentation in support of CEQA, NEPA, and Section 106 compliance. In addition to her knowledge of prehistoric site contexts, Candace has developed extensive expertise with identification and classification of all types of historic materials, including ceramics, glass bottles, garment-related items, and coffin hardware.

Education

M.A. Anthropology,
California State University

B.A. Anthropology,
East Carolina University

Years Experience – 12

Professional Affiliations

Register of Professional Archaeologists

Society for California Archaeology

Society for Historical Archaeology

Qualifications

Meets Secretary of Interior Standards

CA State BLM Permitted

Certified in CA and NV BLM Protocol

Relevant Experience

Metropolitan Air Park. San Diego County, CA. *Archaeological Surveyor*. ESA is preparing a master development plan, EIR, and EA for Metropolitan Air Park at Brown Field Airport in the City of San Diego. The project involves a 50-year land lease from the City of San Diego for a 400-acre portion of the airport property to be developed into airport and non-airport related land uses. The project requires the approval of the City of San Diego and the Federal Aviation Administration, and is being processed as Master Planned Development Permit Project. Candace conducted survey of the project area in conformance with City of San Diego Historical Resources Guidelines to identify evidence of archaeological materials in support of the cultural resources technical report in compliance with CEQA and Section 106.

Helix Water District (HWD)-El Monte Valley, San Diego County, CA. *Cultural Resources Project Manager*. ESA is providing professional Environmental Consulting services in support of the HWD's El Monte Mining, Reclamation, and Groundwater Recharge Project. The project includes mining of approximately 10 million tons of aggregate from the El Monte Valley in San Diego County. The project will augment HWD's water supply by up to 4,000 acre-feet per year and support new riparian habitats along the San Diego river. Candace's duties involve managing the project including survey, Native American coordination, historical research, and the preparation of a CEQA and Section 106 compliant technical report. The project approach will be in conformance with the County of San Diego, Guidelines for Determining Significance.

BLM Ocotillo Wind Farm Project EIR. Imperial County, CA. *Project Support Staff*. ESA has been retained by the Bureau of Land Management under an on-call contract to provide cultural resource services including compliance monitoring for projects under BLM jurisdiction. Candace is specially trained in BLM protocols and procedures and is currently assisting BLM (El Centro Field

Relevant Experience (Continued)

Office) staff with general oversight of the 15,000-acre cultural resources study being carried out for the Ocotillo Wind Farm project.

BLM Santa Rosa & San Jacinto Mountains National Monument. Riverside County, CA. *Field Director*. The BLM Palm Springs-South Coast Field Office contracted with ESA to conduct a Class III survey of 394 acres in the northeastern extent of the Santa Rosa and San Jacinto Mountains National Monument. The survey resulted in the identification of seven new prehistoric and historic archaeological resources. Candace served as the field director and authored the technical report.

BLM Dos Palmas Preserve Tamarisk Eradication. Riverside County, CA. *Field Director*. The BLM Palm Springs-South Coast Field Office is removing tamarisk (*Tamarix* spp.) on public lands within the Dos Palmas Preserve Area of Critical Environmental Concern that continue to infest affected public lands and deteriorate the watershed. Since this project is being funded by a federal American Recovery and Reinvestment Act grant, the National Environmental Protection Act process requires that a project take into consideration its effect on cultural resources that may be present within the area of impact. ESA conducted a survey of two parcels, resulting in the recordation of several prehistoric and historic resources. ESA provided monitoring services for the tamarisk removal process. Candace assisted with management of the archaeological survey and monitoring.

BLM Genesis Solar Project Support Services. Riverside County, CA. *Principal Investigator.* Candace is managing the cultural resources oversight fieldwork for the BLM for the Genesis Solar Project. This concentrated solar electric generating facility located in Riverside County, California and would consist of two independent solar electric generating facilities with a nominal net electrical output of 125 megawatts (MW) each, for a total net electrical output of 250 MW. The project site is located approximately 25 miles west of the city of Blythe, California, on lands managed by the BLM.

BLM Solar Millennium Palen Project Support Services. Riverside County, CA. *Principal Investigator.* Candace served as principal investigator and report co-author for the cultural resources field verification efforts for the BLM Palen Project. This project would be a concentrated solar thermal electric generating facility with two adjacent, independent, and identical solar plants of 250 megawatt (MW) nominal capacity each for a total capacity of 500 MW. It would also utilize solar parabolic trough technology to generate electricity. The project site is located approximately 10 miles east of Desert Center, along Interstate 10 approximately halfway between the cities of Indio and Blythe, in Riverside County, California.

BLM Solar Millennium Blythe Project Support Services. Riverside County, CA. *Principal Investigator.* Candace served as principal investigator and report co-author for the cultural resources field verification efforts for the BLM for the

Relevant Experience (Continued)

Blythe Project. This project would be a concentrated solar thermal electric generating facility with two adjacent, independent, and identical solar plants of 250 megawatt (MW) nominal capacity each for a total capacity of 500 MW nominal. It would utilize solar parabolic trough technology to generate electricity. The project site is located approximately two miles north of Interstate-10 and eight miles west of the City of Blythe in an unincorporated area of Riverside County, California.

Cadiz Groundwater Conservation And Storage Project. San Bernardino County, CA. *Crew Chief*. ESA is preparing an Environmental Impact Report (EIR) for the proposed Cadiz Groundwater Conservation and Storage Project, which will capture groundwater and transport it from a wellfield to the Colorado River Aqueduct (CRA) via a 44-mile-long pipeline. A total of 43 cultural resources were recorded and evaluated for significance. Candace served as a crew chief and report author for the project.

Sacramento County Airport System On-Call Natural Resources Advisory & Consulting Services. Sacramento County, CA. *Field Archaeologist.* ESA is providing on-call natural resources support and consulting services for the Sacramento County Airport System. Candace served as an archaeological monitor/surveyor during field disking.

San Juan Water District (SJWD) Solar Array. Sacramento County, CA. *Field Archaeologist.* ESA provided environmental compliance services and prepared the IS/MND for a 3.5-acre solar (photovoltaic) array that will be used to power the SJWD water treatment plant, shop, and two pump stations. Candace conducted an archaeological resources survey of the 3.5-acre project area.

West Stanislaus Fish Screen Feasibility Study. Stanislaus County, CA. *Field Archaeologist.* The West Stanislaus Irrigation District (WSID) wants to perform a feasibility study to determine if the current diversion form the San Joaquin River can be screened. The project will be funded in part by the U.S. Bureau of Reclamation - Central Valley Project Improvement Act, CDBA (Calfed) and California Department of Fish and Game. Candace conducted an archaeological resources survey and provided recommendations regarding resource avoidance.

California Department of Water Resources (DWR) East Branch Extension Phase II. San Bernardino County, CA. *Report Author*. ESA is preparing an EIR assessing potential impacts of the East Branch Extension Phase II Project, which will install 6 miles of pipeline across the Santa Ana River near Redlands. The new pipeline will increase water delivery capacity to the San Gorgonio Pass Water Agency serving the cities of Banning and Beaumont. The project includes construction of the Citrus Reservoir, a 26-acre lined storage reservoir that will require excavation and hauling off site of 1.8 million cubic yards of material over a three year construction period. Candace authored a cultural resources

Relevant Experience (Continued)

technical report in support of CEQA and Section 106 compliance, providing DWR with eligibility recommendations for identified cultural resources.

SFPUC Seismic Upgrade of Bay Division Pipeline No. 3 & 4. Alameda County, CA. ***Technical Analyst.*** The proposed project will replace the existing BDPL No. 3 with a new parallel pipeline across the main trace and two secondary traces of the Hayward Fault, Interstate 680, and Mission Boulevard in Fremont. The BDPL No. 4 is adjacent to the BDPL No. 3 and will undergo minor seismic upgrades. The goal of the proposed project is to improve the seismic and hydraulic reliability of SFPUC's water supply transmission system serving the San Francisco Peninsula area. The improvements would result in an unavoidable adverse impact to National Register-eligible site CA-ALA-576. Candace authored an Archaeological Research Design and Treatment Plan/Historic Property Treatment Plan designed to mitigate anticipated project-related effects to site CA-ALA-576.

Antelope Valley Water Bank Initial Recharge and Recovery Facility Improvement Project Archaeological Survey. Kern County, CA. ***Field Director*****.** Candace led the archaeological survey and authored the subsequent technical report in fulfillment of CEQA and Section 106 requirements. The Antelope Valley Water Bank is a groundwater banking project designed to provide up to 500,000 acre-feet of total surface water storage capacity underground in a partially depleted aquifer. The Antelope Valley Water Bank Project contributes to accomplishing the goals of making more water available through recharge and recovery to meet existing and future water requirements during periods when water supplies fall short. The project is being carried out by the Antelope Valley East Kern Water Agency with the assistance of a Challenge Grant from the Bureau of Reclamation.

Port of Los Angeles Marine Oil Terminal Engineering Maintenance Standards (MOTEMS) Project Historic Resources Evaluation. Los Angeles County, CA. ***Technical Analyst.*** As part of ESA's on-call environmental services contract with the Port of Los Angeles, Candace provided historic research in support of the evaluation of approximately 16 timber wharves. The wharves date to circa 1925 and would be subject to alterations, including new piling, decking, and fendering systems, in order to accommodate greater shipping loads, as well as seismic and life/safety improvements. Two sets of timber wharves at Berths 150-151 and 163-164 were identified as eligible for listing in the National Register and California Register as contributors to two marine oil terminal districts.

BLM Abandoned Mine Lands Cultural Resources Evaluation: Spangler, Rademacher Hills, and Randsburg South Locales, San Bernardino and Kern counties. ***Field Archaeologist.*** The BLM proposes to conduct remediation of physical safety hazards associated with Abandoned Mine Lands (AML). Remediation would consist of backfilling or closing off mine shafts, adits, and prospects. These remediation measures would ensure public safety on BLM

Relevant Experience (Continued)

lands by preventing public exposure to the dangers associated with abandoned mine features. Candace served as an archaeological surveyor for this project.

Irvine Ranch Water District (IRWD) Tustin Wells Project MND/EA. Orange County, CA. *Technical Analyst.* Candace conducted a Phase I cultural resources study for the Tustin Wells Project. She led the cultural resources survey and authored a technical report in support of a MND/EA. The lead federal agency was the Bureau of Reclamation.

West Kern Water District Groundwater Recharge Project EIR. Kern County, CA. *Technical Analyst.* Candace co-authored the technical report for the Phase 1 archaeological resources survey of a 500-acre Project area proposed for groundwater recharge basins and a 9-mile pipeline in Kern County. The project is being carried out in compliance with CEQA and Section 106 of the NHPA. The survey resulted in the identification of over 20 archaeological sites.

Canyon Hill Cultural Resource Assessment. Lake Elsinore, Riverside County, CA. *Field Director.* Candace assisted in the creation of a research design for archaeological testing at site CA-RIV-1021 and served as field director during testing. As a report-co-author, she assisted with determining the significance of the site under CEQA and Section 106 of the NHPA.

Olivas Adobe Monitoring. Ventura County, CA. *Technical Analyst.* The City of Ventura contracted with ESA to provide archaeological monitoring during improvements to the historic Olivas Adobe. Olivas Adobe, constructed in 1847, is currently a City museum. Candace monitored improvements to the small adobe located in the courtyard.

DWR, East Branch Enlargement (EBE) EIR. Antelope Valley, Kern County, CA. *Technical Analyst.* Candace served as a research assistant for a Phase 1 archaeological resources survey report for the EBE project. The project consists of the enlargement of 100 miles of the California Aqueduct from the Tehachapi split through the Antelope Valley and Mojave River Basin to Silverwood Reservoir. Cultural resources studies are being carried out in compliance with CEQA and Section 106 of the NHPA. A total of 99 cultural resources were identified as a result of the survey.

San Juan Capistrano Recycled Water Pipeline Mainline. San Juan Capistrano, Orange County, CA. *Technical Analyst.* Candace compiled information regarding two archaeological sites located within the project area. The information was used to assist project planners design a pipeline route that would avoid impacts to the sites.

Extension of Historic Streetcar Service Environmental Impact Statement (EIS). Alameda County, CA. *Technical Analyst.* ESA is working with the National Park Service (Denver Service Center) in cooperation with San Francisco Municipal Transportation Agency, and Federal Transit Administration

Relevant Experience (Continued)

to complete an EIS to analyze the proposed extension of the historic streetcar line from Fisherman's Wharf through the San Francisco Maritime National Historical Park and Fort Mason Center in Golden Gate National Recreation Area. Candace assisted in writing the cultural resources EIS section.

Prior to ESA

Los Angeles Unified School District (LAUSD), Central Los Angeles High School #9. Los Angeles County, CA. ***Field Archaeologist, Lab Director, Contributing Report Author.*** The project involved identifying and excavating 171 burial features. The cemetery dated to the mid to late 19th century and reflected the growing Protestant population of Los Angeles. The majority of features was located in the private section of the cemetery, and was from upper-middle-class families. Analysis of this cemetery provides a rare opportunity to compare other excavated 19th-century cemeteries, which typically represent people of lower socioeconomic and/or marginalized status, to the presumed ideal of Victorian mortuary practices. Candace directed grading to facilitate detection of soil changes indicative of burials, trained incoming staff, excavated burial features, and maintained a field specimen log. She also served as one of the principal field photographers.

As lab director, Candace's responsibilities included assessing artifact conditions and conservation needs, developing and implementing artifact cleaning procedures, identifying historic coffin hardware and personal artifacts, creating a 19thcentury coffin hardware typology, library research, developing and maintaining an artifact catalog using Excel and Access, and cataloging over 3000 artifacts. Other duties included overseeing the cleaning of skeletal remains, as well as photo-documenting bone pathologies and traumas for the project osteologist. Candace contributed to report chapters regarding coffin hardware, personal artifacts, trends in 19th-century mortuary practices, field and lab methods, and mortuary feature analysis.

Las Encinas Hospital, Pasadena, Los Angeles County, CA. ***Technical Analyst.*** Candace conducted an archaeological field survey and archival research of Las Encinas Hospital grounds. The hospital, once known as the Southern California Center for Nervous Diseases, has been in operation as a mental health facility since 1904. Prior to this, the area was part of the Sunny Slope Ranch owned by Leonard Rose. During the survey, several historic artifact scatters and building foundations associated with the ranch and hospital's early years were recorded. Candace authored a technical report, providing recommendations for further work and mitigation measures, in compliance with CEQA.

City of Los Angeles, Echo Park Lake Rehabilitation. Los Angeles County, CA. ***Technical Analyst.*****.** Candace conducted a field survey of a 33-acre recreational park located in Echo Park and archival research at UCLA Aerial Photography Archive and Los Angeles Public Library. She authored the

Relevant Experience (Continued)

historical context report section documenting the development of Echo Park. Echo Park was one of Los Angeles's earliest public parks, established in 1892. The design was implemented by Joseph Tomlinson, Los Angeles's first Superintendent of Parks, and modeled after the picturesque English style.

City of West Hollywood, 8801 Sunset Boulevard Specific Plan EIR. Los Angeles County, CA. ***Project Archaeologist.*** The applicant proposes to construct approximately 52,031 square feet of commercial and retail space, plus parking. The site houses the former Tower Records Sunset building. Candace conducted a field survey and co-authored a technical report in support of the EIR. The Tower Records Sunset site was found to be historically significant for its contribution to the development of West Hollywood's rock music scene.

City of West Hollywood, Sunset Time Specific Plan EIR. Los Angeles County, CA. ***Project Manager.*** The applicant proposes to construct up to 149 hotel rooms, 40 residential condominium units, 5 low-income affordable housing units, and up to 35,456 square-feet of commercial and entertainment space. Historically, the area was a mix of residential housing and commercial uses. During the 1920s and 1930s, the area currently occupied by the House of Blues was the site of one of the many nightclubs that flourished along the Sunset Strip during that time period. Candace conducted a field survey and prepared a cultural resources technical report and EIR section with findings and recommendations for further work, pursuant to CEQA.

City of West Hollywood, Movietown Plaza Specific Plan EIR. Los Angeles County, CA. ***Project Manager.*** The applicant proposes to construct approximately 371 residential units and approximately 32,300 square feet of retail/commercial uses on a site currently occupied by a strip mall. The site was first developed when film studios moved into the area. In the 1920s and 1930s, the site was occupied by Educational Films Studio, a producer of one-reel comedies. Shirley Temple began her film career at this location. The site was later occupied by Eagle-Lion Studios, which produced B-movies. Candace conducted a field survey and prepared a cultural resources technical report and EIR section with findings and recommendations for further work, pursuant to CEQA.

DMJM-Harris, Exposition Light Rail. Los Angeles County, CA. ***Technical Analyst.*****.** Participated in archaeological field survey of several proposed routes for the new Exposition Light Rail. Prepared DPR 523 forms for all historic resources observed, including the railroad right-of-way and railroad-related components such as switches and cantilevered signals. Conducted extensive research into the history Los Angeles's railroad systems and their role in the development of Santa Monica, West Los Angeles and Culver City. Historic railroads covered include the Los Angeles & Independence, the Southern Pacific, the Los Angeles Pacific, the Pacific Electric, and the Santa Monica Air Line. Assisted in the preparation of an Archaeological Resources Technical Report and EIR section with findings and recommendations for further work,

Relevant Experience (Continued)

pursuant to CEQA and Section 106 requirements.

City of Los Angeles, Bureau of Engineering, Temple Street Widening Project. Los Angeles County, CA. ***Archaeological Monitor.*** Candace served as an archaeological monitor during road construction and utilities relocation for the Temple Street Widening Project. The Zanja, part of Los Angeles's first irrigation system, was discovered during grading. Candace documented the Zanja segment and helped develop measures to insure its protection during on-going construction.

LAUSD, South Regional Elementary School (SRES) #1. Los Angeles County, CA. ***Technical Analyst.*** Candace conducted the lab analysis and co-authored the report on an artifact assemblage recovered during archaeological monitoring of South SRES #1 in south-central Los Angeles. The area was first settled circa 1909 and was the home of several domestic, religious, and retail establishments. The artifact assemblage consisted of early 20th-century domestic and vocational refuse. The technical report provided findings and recommendations for further work, pursuant to CEQA.

Excel Paving, Alameda Street. Los Angeles County, CA. ***Technical Analyst.*** Candace provided archaeological monitoring of street construction at Alameda Street in downtown Los Angeles. The project resulted in the identification and recovery of over 300 historic-era artifacts. In addition, segments of both narrow-gauge and standard gauge rail lines, sections of brick foundations, and brick irrigation features were documented. A large section of late 19th to early 20th century brick pavement and part of the Zanja were also uncovered and documented during construction.

BLM Spangler Hills Open Area. Kern County, CA. ***Field Archaeologist.*** The Spangler Hills Off-Highway Vehicle Area (OHV) offers over 57,000 acres of open public land for recreational use. The area is managed by the Bureau of Land management. Archaeological survey was required to determine the effects of OHV activities on known and unknown cultural resources. Candace surveyed selected portions of Spangler Hills, locating, recording, and mapping various types of archaeological sites.

City of Seal Beach, Hellman Ranch Monitoring and Data Recovery. Orange County, CA. ***Crew Chief, Lab Analyst.*** Candace supervised a team of archaeologists charged with monitoring construction activities, archaeological testing, and excavation of over 30 Native American burials and associated features at Hellman Ranch in Seal Beach, CA. The Hellman Ranch area (Landing Hill) was occupied by the Gabrielino for over 6,000 years. Excavation revealed an extensive mortuary complex, including large amounts of cremated human remains and broken, or "killed," ground stone.

Candace was responsible for implementing and overseeing work delegated by field directors. She contributed to lab analysis by sorting artifacts and beginning

Relevant Experience (Continued)

initial classification of lithic debitage, and assisting with artifact and osteological photo-documentation, and providing key support to visiting osteological and faunal specialists.

County of Los Angeles Coroner's Crypt. Los Angeles County, CA. ***Research Assistant.*** In support of an MND, Candace conducted extensive historic research of the area now occupied by the Los Angeles County Corner and authored the cultural resources section of the MND. The County was proposing additions to the current Medical Examiner's facility. This area was the location of Los Angeles's first county hospital, and has been in continuous use as medical facilities since the 1870s.

City of Los Angeles, Asphalt Plant No. 1 Project. Los Angeles County, CA. ***Crew Chief, Report Co-author.*** The Bureau of Engineering proposed modifications to an existing truck route and construction of new route at Asphalt Plant No. 1. Candace conducted a Phase I archaeological study. The study identified potential archeological issues and provided recommendations for further work, pursuant to CEQA.

County of Los Angeles, Department of Public Works, Morris Dam. Los Angeles County, CA. ***Field Archaeologist.*** Conducted field survey and prepared cultural resources section of a Mitigated Negative Declaration (MND) for a proposed access route to Morris Dam, located in the San Gabriel Mountains.

City of Temecula, Western Bypass Bridge. Riverside County, CA. ***Crew Chief.*** Candace led a Phase I survey of the one-acre project area. One previously recorded archaeological site was re-located and documented.

Conejo Park and Recreation District, Lang Ranch. Thousand Oaks, Ventura County, CA. ***Field Archaeologist.*** Candace participated in archaeological testing of a 46-acre project area. Project work involved the archaeological testing at two artifact isolate locations to determine presence of sub-surface deposits.

Twining Labs, El Toro. Tustin, Orange County, CA. ***Archaeological Monitor.*** Candace served as an archaeological monitor during the grading of new roadways. She was responsible for maintaining detailed daily reports and coordinating work schedules with on-site construction foreman.

Twining Labs, Home Depot Center. Lake Elsinore, Riverside County, CA. ***Archaeological Monitor, Report Author.*** Candace conducted on-site monitoring of controlled grading during the expansion of an existing roadway located next to a cemetery. She prepared daily monitoring logs and co-authored a negative final report for the client.

Seep Spring, China Lake Naval Air Weapons Station. Kern County, CA.

Relevant Experience (Continued)

Crew Chief. Candace led a team of field archaeologists in locating, describing, and mapping archaeological sites at Seep Spring. She was responsible for creating the field schedule, assigning tasks to crew, and collating site records, field notes, photographs and sketch maps.

Bierman Caves, China Lake Naval Air Weapons Station. Kern County, CA. ***Field Archaeologist.*** Candace was a member of a survey team entrusted with re-locating and recording previously discovered rock art sites at Bierman Caves, as well as recording any new, undiscovered rock art sites.

Santa Ysabel Ranch Testing and Data Recovery at CA-SLO-2084. San Luis Obispo County, CA. ***Field Archaeologist.*** Candace assisted with archaeological testing, which included excavation units and monitoring of mechanical trench excavation.

State of California, Owens Valley PM10 Planning Area Demonstration of Attainment State. Inyo County, CA. ***Field Archaeologist.*** Candace was a member of an archaeological survey team that covered large portions of the Owens Valley Dry Lake Bed. She assisted with the documentation and mapping of several large lithic scatters and historical sites.

A.F. Gilmore Company, The Grove at Farmers Market Monitoring Project. Los Angeles County, CA. ***Archaeological Monitor.*** Candace **s**erved as an archaeological monitor responsible for collecting historic artifact isolates, maintaining paperwork, and coordinating work schedule with on-site construction crews.

BLM Ancient Searles Lake, Christmas Canyon ACEC. San Bernardino County, CA. ***Field Archaeologist.*** Member of survey team charged with locating, describing, and mapping archaeological sites. Several test units were conducted as part of the Phase I survey. Participated in lab analysis.

BLM Dove Springs Open Area. Kern County, CA. ***Field Archaeologist***. Candace was part of a survey team covering portions of a BLM open area to determine the effects of off-road vehicles on archaeological sites. She assisted with the documentation and mapping of several archaeological sites.

PROFESSIONAL PAPERS AND PRESENTATIONS

Ehringer, C. 2008 Mortuary Consumerism in 19th-Century Los Angeles: Coffins, Caskets and Trimmings from City Cemetery. Oral paper presentation at the Society for American Archaeology 73rd Annual Meeting, Vancouver, BC.

Ehringer, C., L. Kry, S. Dietler, and M. Strauss. 2008. After the Bones Are Gone: The Role Of Personal Effects in Identifying Unmarked Historic Burials. Poster presentation at the Society for Historical Archaeology Annual Meeting, Albuquerque, NM.

Relevant Experience (Continued)

Strauss, M., S. Dietler, and C. Ehringer. 2008. Death Lends a Hand: Archaeological Excavations of Los Angeles's City Cemetery. Oral paper presentation at the Society for Historical Archaeology Annual Meeting, Albuquerque, NM.

Ehringer, C. 2004. Roosters and Raptors: Cultural Continuity and Change at Big Dog Cave, San Clemente Island, California. Oral paper presentation at the Society for California Archaeology Annual Meeting, Riverside, CA.

Ehringer, C. 2000. Ceremony and Ritual at Big Dog Cave, San Clemente Island, California. Poster session, Student Research and Creative Activity Symposium, California State University, Northridge, CA.

Ehringer, C. 1992. Alternative Medicine and Herbal Remedies in Rural North Carolina. Oral presentation at the Southern Anthropological Society Annual Meeting, Saint Augustine, FL.

PUBLIC OUTREACH AND EDUCATION

2009. Candace developed and conducted an archaeological lab practicum for high school students during "Student at Work Day."

2007 to 2009. Candace served as the Society for California Archaeology liaison to the Society for American Archaeology. As a liaison, Candace attended SAA meetings as the SCA representative, prepared written reports for the SCA newsletter, and contributed to the SAA Council of Affiliated Societies semi-annual newsletter.

2006. Candace was a guest lecturer at Santa Monica College. She led a discussion on "The Archaeology of Religion" using the Gabrielino belief system as an example.

2004. Candace co-led and directed teams of volunteers surveying, mapping, and recording sites at Bierman Caves, China Lake Naval Air Weapons Station, CA.

ANDREW R. PIGNIOLO, M.A., RPA
Principal Archaeologist
Laguna Mountain Environmental, Inc.

Education
San Diego State University, Master of Arts, Anthropology, 1992
San Diego State University, Bachelor of Arts, Anthropology, 1985

Professional Experience

2002-Present	Principal Archaeologist/President, Laguna Mountain Environmental, Inc., San Diego
1997-2002	Senior Archaeologist, Tierra Environmental Services, San Diego
1994-1997	Senior Archaeologist, KEA Environmental, Inc., San Diego
1985-1994	Project Archaeologist/Senior Archaeologist, Ogden Environmental and Energy Services, San Diego
1982-1985	Reports Archivist, Cultural Resource Management Center (now the South Coastal Information Center), San Diego State University
1980-1985	Archaeological Consultant, San Diego, California

Professional Affiliations
Register of Professional Archaeologists (RPA; formerly called SOPA), 1992-present
Qualified Archaeology Consultant, San Diego County
Qualified Archaeology Consultant, City of San Diego
Qualified Archaeology Consultant, City of Chula Vista
Qualified Archaeology Consultant, Riverside County
Society for American Archaeology
Society for California Archaeology

Qualifications
Mr. Andrew Pigniolo is a certified archaeology consultant for the County and City of San Diego. He has received 40 hour HAZWOPPER training and holds an active card for hazardous material work. Mr. Pigniolo has more than 30 years of experience as an archaeologist, and has conducted more than 700 projects throughout southern California and western Arizona. His archaeological investigations have been conducted for a wide variety of development and resource management projects including military installations, geothermal power projects, water resource facilities, transportation projects, commercial and residential developments, and projects involving Indian Reservation lands. Mr. Pigniolo has conducted the complete range of technical studies including archaeological overviews and management plans, ethnographic studies, archaeological surveys, test excavations, historical research, evaluations of significance for National Register eligibility, data recovery programs, and monitoring projects.

REPRESENTATIVE PROJECTS

Centinela Solar Project, Imperial County, California *(KP Environmental, Inc.)* Mr. Pigniolo served as the Principal Investigator for a cultural resource survey of more than 240 acres of agricultural land near Mt. Signal, California. The survey was conducted in multiple phases based on crop conditions and surface visibility within various parcels. The project included surveys of highly impacted agricultural lands. Historic-age agricultural features were identified within several parcels. Cultural resources within the proposed project area were recorded during the survey and recommendations for impact avoidance were made. This project was conducted under both Federal and State environmental requirements.

Princess Street Monitoring and Data Recovery Project at the Spindrift Site *(City of San Diego)*. Mr. Pigniolo served as a Principal Investigator of an archaeological monitoring and data recovery program at the Spindrift Site in the community of La Jolla in the City of San Diego. The effort was initially to provide archaeological monitoring of a utility undergrounding project. The presence of the major prehistoric village site within the project alignment quickly became evident prior to construction monitoring and a data recovery plan was prepared prior to the start of work. Monitoring was conducted until the site was encountered. The data recovery plan was immediately implemented, so that data recovery could progress while construction excavation continued on other portions of the project. Data recovery included the excavation of 25 controlled units and the water screening of 100 percent of the archaeological site material impacted during trenching. More than 40 fragmented human burials were encountered. Working with Native American monitors and representatives, the remains were repatriated.

Hill Street Undergrounding Project, Point Loma, California *(City of San Diego).* Mr. Pigniolo served as Principal Investigator of an archaeological monitoring project of utility undergrounding in the community of Point Loma. The project was located in an urban environment under city streets. Archaeological monitoring identified two prehistoric sites with high levels of integrity. Testing included the excavation of four units to evaluate the significance of these resources and mitigate project effects. A hearth feature, shell and a variety of prehistoric artifacts were recovered and additional impacts to the sites were avoided by reducing trench depth.

Center City Development Corporation Area 1 Utility Undergrounding Project, San Diego, California (*City of San Diego*). Mr. Pigniolo served as Principal Investigator of an archaeological monitoring project including the undergrounding of residential and commercial utilities in the community of Logan Heights in San Diego. The project was conducted under CEQA and City of San Diego guidelines. Historic streetcar lines were encountered along with sparse historic trash deposit, but adverse impacts did not occur and no further work was recommended.

Mission Hills Sever Group 664 Project *(Lamprides Environmental Organization)* Mr. Pigniolo was the Principal Investigator for an archaeological monitoring project for a sewer line replacement in the community of Mission Hills in the City of San Diego. The project included archaeological construction monitoring in an urban environment. The project was located near the Old Town area of San Diego, but steep slopes and previous pipelines in the area resulted in an absence of cultural materials encountered.

City of San Diego Sever Group 783 Project, San Diego, California *(Orion Construction Company)* Mr. Pigniolo was the Principal Investigator for an archaeological monitoring project for a sewer line replacement in the eastern portion of the City of San Diego. The project included archaeological construction monitoring in an urban environment. Shallow soils and previous pipeline disturbance in the area resulted in an absence of cultural materials encountered (2006-2007)

All American 105 Race Project, West Mesa, Imperial County, California *(Legacy 106, Inc.)* Mr. Pigniolo served as Principal Investigator, report author, and crew chief for an archaeological survey for a proposed off-road vehicle race course in the West Mesa area of Imperial County. The survey covered Bureau of Land Management (BLM) lands and included close coordination with BLM staff. The survey included a proposed 7.5 mile course with a very short time-frame. The goal was project alignment adjustment and realignment to avoid resource impacts where possible. A variety of prehistoric cultural resources including 10 sites and 7 isolates were encountered. Human remains were identified and avoided. The race route was realigned to avoid significant resource impacts allowing the race to proceed on schedule.

Victoria Loop Road Survey, Alpine, San Diego County, California (*Alpine Fire Safe Council*) Mr. Pigniolo served as Principal Investigator of an 85-acre cultural resource survey in the Alpine area of San Diego County. The survey identified six cultural resources within the project area including prehistoric lithic scatters, an historic well, and historic artifact scatters. All resources were flagged and marked for avoidance during the vegetation treatment program. The Bureau of Land Management served as Federal Lead Agency for the project.

Spirit of Joy Church Project Testing Program, Ramona, San Diego County, California (*Spirit of Joy Lutheran Church*) Mr. Pigniolo served as Principal Investigator and Project Manager a cultural resource testing program at site CA-SDI-17299. The site was a sparse temporary camp. The project included surface collection and subsurface testing. Subsurface deposits were not identified within the project area and the site material was recovered during testing. Construction monitoring was recommended to address alluvial soils within other portions of the project area.

Alpine Fire Safe Council Brush Management Monitoring Project, Alpine Region, San Diego County, California (*Alpine Fire Safe Council*) Mr. Pigniolo served as Principal Investigator for a cultural resources monitoring and protection program on four project areas surrounding Alpine, California. Cultural resources identified during previous surveys within the vegetation treatment areas were flagged for avoidance. The project included hand clearing and chaparral mastication near residential structures to create a fire buffer zone. Vegetation removal was monitored to ensure cultural resources obscured by heavy vegetation were not impacted by the project and that all recorded cultural resources were avoided. The Bureau of Land Management served as Lead Agency for the project.

APPENDIX C

RESOURCE FORMS

(*Confidential - Bound Separately*)

APPENDIX D

PHOTO LOGS AND PHOTOGRAPHS

(*Confidential - Bound Separately*)

APPENDIX E

CATALOGUE

2016 El Monte Testing Surface Artifact Collection Catalogue

Site	Cat#	Level (cm)	Class	Item	Type	Subtype	Cond.	Submat.	Material	Count	Weight (g)	Comments
CA-SDI-21861	1	Surface	Debitage	Angular Waste	Core Reduction	None	Interior	Porphyritic	SPV	1	11.6	dark charcoal gray with white bands (quartz?)
CA-SDI-21861	2	Surface	Historic	Glass	Window	-	Fragment	Colorless	Glass	1	5.2	patinated surface but edges are not battered/water-tumbled from river transport
CA-SDI-21861	3	Surface	Historic	Glass	Bottle	Alcohol	Base	Olive green	Glass	1	19.3	3/8" thk base fragment; weathered on int/ext but not on more freshly chipped edges; not water-tumbled
P-37-032965	1	Surface	Flaked Tool	Flake Tool	Retouched Flake	None	Fragment	Porphyritic	SPV	1	415.5	light bluish-gray with fine porphyry; 4-cm long edge has several 3-cm long flks removed; no use; aborted during trimming (seems too large for "flake" originally recorded as this isolate)
P-37-032967	1	Surface	Faunal Bone	Bone	Mammal	Large	Fragment	-	Bone	1	10.7	badly weathered (whitened); partially buried; shell originally recorded with bone, not relocated
P-37-035827	1	Surface	Debitage	Angular Waste	Core Reduction	None	Interior	Porphyritic	SPV	1	3.8	not the flake that was recorded at this location; coarsely porphyritic;
P-37-035833	1	Surface	Debitage	Angular Waste	Core Reduction	None	Interior	Porphyritic	SPV	1	10.7	larger than the flake originally recorded at this location
P-37-035877	1	Surface	Debitage	Angular Waste	Core Reduction	None	Interior	Aphanitic	SPV	1	1.4	dark charcoal gray; ventral surface slightly water-tumbled
P-37-035878	1	Surface	Ceramic	Vessel	Body Sherd	-	-	-	BrownWare	1	2.5	coarse quartz temper; found near location of P-37-035828 (not relocated)
P-37-035879	1	Surface	Groundstone	Mano	Bifacial	Shouldered/ Shaped	Whole	-	Granitic	1	1115.9	well shaped (vertical sides); pecked, both faces prior to last usage; no or fine black crystals - off-white variety
P-37-035879	2	Surface	Historic	Ceramic	Plate	-	Base	-	Porcelain	1	6.6	small plate; Japanese Export ware; Phoenix Bird transfer print; interior/decorated side is heavily weathered (under side not)

Other isolates listed in 2016 report were either not relocated in 2016 or were found to not be humanly modified items

APPENDIX F

NATIVE AMERICAN CONSULTATION

(*Confidential - Bound Separately*)

APPENDIX G

CONFIDENTIAL FIGURES

(*Bound Separately*)